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EMPLOYEE CREATIVITY FACTORS AND WORK PERFORMANCE OF VIRTUAL WORKING APPROACH DURING COVID-19 IN THE UAE PUBLIC SECTORS

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Universiti Utara Malaysia

DOCTOR OF PHILOSOPHY
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2023

EMPLOYEE CREATIVITY FACTORS AND WORK PERFORMANCE OF VIRTUAL WORKING APPROACH DURING COVID-19 IN THE UAE PUBLIC SECTORS

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A thesis submitted to the Ghazali Shafie Graduate School of Government
In fulfillment of the requirement for the Doctor of Philosophy
Universiti Utara Malaysia

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ABSTRAK

Peluang kerja maya membenarkan organisasi mengekalkan bakat sambil memupuk a masyarakat. Kemajuan teknologi telah menawarkan alat interaksi yang berbeza, yang membantu maya pekerja dalam mengambil bahagian dalam interaksi sosial dan mewujudkan hubungan yang baik dengan orang lain pekerja dalam organisasi. Selain itu, kemajuan teknologi telah meningkatkan keupayaan untuk pekerja berinteraksi dengan rakan sekerja di seluruh dunia. Kajian ini bertujuan untuk mengenal pasti pengaruh faktor kreativiti pekerja terhadap prestasi maya pekerja dan untuk menilai peranan penyederhanaan kemahiran teknologi pekerja terhadap perhubungan antara faktor kreativiti pekerja dan prestasi maya pekerja. Untuk tujuan ini reka bentuk penyelidikan kuantitatif dan pendekatan deduktif telah diaplikasikan. Sampel daripada kajian ialah 349 kakitangan Pihak Berkuasa Persekutuan untuk Sumber Manusia Kerajaan menggunakan persampelan rawak mudah. Instrumen kajian ialah soal selidik yang mengandungi empat bahagian: maklumat demografi, kreativiti pekerja, prestasi maya dan teknologi kemahiran. Teknik Makro Proses telah digunakan (SPSS-26v) untuk mencari kesan penyederhanaan. Keputusan menunjukkan bahawa faktor kreativiti pekerja positif dan sangat mempengaruhi prestasi maya pekerja, manakala kemahiran teknologi positif menyederhanakan perhubungan antara kreativiti pekerja dan prestasi maya pekerja. Disimpulkan bahawa dengan kemahiran teknologi yang semakin meningkat, pekerja boleh menggunakan kreativiti mereka untuk meningkatkan prestasi maya dan boleh mencapai objektif organisasi mereka. Batasan penyelidikan dan cadangan masa depan juga disebut pada akhir penyelidikan untuk sarjana dan penyelidik.

Kata kunci: Faktor Kreativiti, Prestasi Maya, Kemahiran Teknologi, Proses Marco, FAHR

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ABSTRACT

Virtual work opportunities permit organizations to retain the talent while cultivating a society. Technological advances have offered different tools of interaction, which help virtual employees in taking part in social interactions and create good relationships with other employees in the organization. Additionally, technological advancement has enhanced the ability for employees to interact with co-workers around the world. This study aimed to identify the influence of employees' creativity factors on employees' virtual performance and to evaluate the moderating role of employees' technological skills on the relationship between employees' creativity factors and employees' virtual performance. For this purpose quantitative research design and deductive approach has been applied. The sample of the study was 349 employees of the Federal Authority for Government Human Resources using simple random sampling. Instrument of the study was questionnaire comprised four sections: demographic information, employees' creativity, virtual performance and technological skills. Process Macro technique was applied (SPSS-26v) to find the moderation effect. Results showed that employees' creativity factors positive and strongly influence the employees' virtual performance, while technological skills positive moderate the relationship between employees' creativity and employees' virtual performance. It is concluded that with the increasing technological skills, employees can utilize their creativity to enhance the virtual performance and can attain their organizational objectives. Research limitations and future recommendations also mentioned at the end of the research for scholars and researchers.

Keywords: Creativity Factors, Virtual Performance, Technological Skills, Process Marco, FAHR

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LIST OF ABBREVIATIONS

FAHR: Federal Authority for Government Human Resources

TR: Employee creativity factors - trait.

PR: Employee creativity factors - process.

PS: Employee creativity factors - press.

PT: Employee creativity factors - product.

EVWP: Employee virtual work performance.

ETS: Employee technological skills.

PLS: Partial Least Squares.

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CHAPTER ONE

INTRODUCTION

1.1 Research Background

Employee creativity is a highly desired characteristic for most jobs; as well as it is a responsibility that falls into both sides (employee and the work). Organizations need to provide an environment where workers are comfortable and not afraid to express their new ideas and opinions about working styles and conditions (Leach, 2020). In addition, employers need to keep in mind that it is hard to judge if an employee's suggestions will lead to failure or a success. By following suggestions that is new and out of routine, it might yield more favourable outcomes (Porter et al., 2017). The organization should define the "success and failure value" and incorporate this concept into the organization's culture; they can acknowledge success and failure as a natural step in any system and instead of frustrating employees, the organization can use those experiences that happen to motivate employees and learn to avoid the mistakes in the future (Shannon, 2019). The employees plan or desire to include job creativity; in fact, they count on job creativity supported by the organizations (Ortmann & Sydow, 2018).

Furthermore, in this study the employee performance of virtual working is studied which concentrates on how the job creativity is executed and the employees can

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either raise the option of increase the productivity of the organizations (Afonso et al., 2019). Employee's creativity maintains individuals' interest in their job and allows them to expand their skill, which in return boosts their self-confidence (Pukkeeree et al., 2020).

There is a common understanding among scholars which is the non-clarity of how different factors interact in predicting employee creativity in a work environment (Cai et al., 2020). One of the primary discoveries to this day is that the effects of employees' individual characteristics on creativity are influenced by contextual variables (Ismail et al., 2019). Such as 'good relations with supervisors' which has proven to be an effective variable on an increasing employee's creativity (Cai et al., 2020).

According to Yu and colleagues (2019), employee's creativity has actually concentrated on the communication between each contextual parts; and focused on employees along with fairly higher beneficial information with higher effectiveness, positive outlook, stamina. Research showed that highest levels of creativity can be observed when the contextual factors like 'manager support for creativity' and 'project attributes' are each high (Yu et al. 2019). Another findings also highlighted that several contextual variables can easily place in a substantial stimulating influence on the alliance between the individual components of employees and their creativity (Thundiyil et al., 2016). The range of possible contextual variables influences on employee creativity, little quality exists worrying merely how different facets participate in forecasting employee creativity (Liu et al. 2016).

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An organization needs to provide advanced business techniques targeted at enhancing employee creativity (Zhang et al., 2018). The employee creativity as well as to establish a structured scheme to clarify why singular as well as several organizational elements have an unique impact on the relationship in between personal variables and employee creativity (Akoi & Yesiltas, 2020). The employee creativity initiative focuses on the examination and evaluation of the result of crisis on the quality elements of anxiety and frustration of the employees (Naz, 2020). A crisis affects an organization in several ways such as socio life, migration, behavioural changes and reprioritizing; but most importantly, it affects productivity, work development, as well as creativity (Luetz et al., 2020). During a crisis, the top priority becomes to maintain the work; and employees are obliged to deal with severe economic repercussions, negative changes in labour rights, decreased wages, loss of creativity, poor working relationships either with the administration team or among working teams (Epstein & Buhovac, 2014).

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The effect of crisis is more extreme on the performance of employees working in a virtual environment (Zegwaard et al., 2020). The employee creativity in organizational crises are unpredictable and can be considered a high concern to the companies (Kaiser, 2020). Technological customization affects employment and the relative requirement for skills and development favour brand new company tasks, procedure innovation and the using of new technologies that enriches the employees and dilemma control (Cirillo et al. 2020). The employee technological skills raise the complementarities in between innovation and skills, opting for the employment in addition to earnings of the high-skilled workers (Azzopardi et al. 2020). Skills go well with, because capital raises the performance of professional employees fairly a lot more than it carries out to unskilled workers (Sojourner, 2020). The work

separation decreases along with period as employees compile details individual principal cities and suppose a better decrease in the concerns of splitting up along with time period in present day organization when paired up along with modern technology intense association (Budzinski & Kuchinke, 2018).

Moreover, the employee creativity is become important when an organisation face a crisis that broadly defined as a low probability event or situation perceived by people as highly salient, unexpected, and potentially disruptive; the COVID-19 situation is a live example for the situational crisis (Qin et al., 2021). In the situation of covid crisis, employees creativity become essential to provide solution out of the box to overcome the bad consequences and excellence the employee performance to keep the organisation performance in the suitable level (Elias, 2021). In the domain of COVID-19 crisis management, team members' discussions about the contents, regardless of valence, related to the crisis, affects team processes and outcomes (Gibbs & Egermann, 2021). The COVID-19 crisis revealed that the uncertain conditions affect the focal person's emotional and behavioural outcomes, which affect their creativity and performance; however, it is particularly difficult to collect data during or after crises, which make it difficult to explore by scholars (Qin et al., 2021).

1.2 Problem Statement

Organizations require to providing employees with a better quantity of adaptability and creativity as they need to realize the expense advantages for flexible job plans (Geszler, 2020). While, the virtual work opportunities permit these organizations to retain solid talent while cultivating a society that values the employee virtual work performance in any circumstances (Lekchiri & Eversole, 2020). Today the world is

facing uncertain crises of Covid- 19 where the organizations are unable to perform its 100%. So there is a need to provide basic skills to the employees about creativity in term of employees' trait, creativity in performing the tasks, creativity of press as well as creativity in products of services that are produces. These skill also expected to enhance the employees performance at workplace. Similarily there is another issue regarding to the work physically at the workplace while the world is avoiding the social interaction. In these senerio the virtual working style is highly promoted and supported by every organization.

Numerous organizations have tried to develop training programs and online resources to enhance the situation of the virtual performance and support their employees for creativity (Martinez et al., 2020). There were minor distinctions in just how these organizations identify virtual workers, as an employee who invests at the very least part of their time functioning away (Duggan et al., 2020). Several research studies revealed that virtual working helps employees accomplish a far better job life stability. employees can benefit from the time that previously used for transportation and they can also save more money (Sharkey, 2019). It is vital to support the worth of providing a full time virtual employee with opportunities to participate in face-to-face communication with managers as well as associates (Collins et al., 2016).

Technological advances and skills development have offered different tools of interaction, which help virtual employees in taking part in social interactions and create good relationships with other employees in the organization (Asi & Williams, 2020). Additionally, technological advancement has enhanced the ability for employees to interact with co-workers around the world and many organizations have incorporated strategies to overcome isolation in their training programs for

virtual employees (Hirschi & pain, 2020). Nonetheless, due to decrease in face-to-face and social interactions, employees might start to feel tough job routin in term of task completion thus negatively affecting their mental health, which in turn affects their work performance (Johnson et al., 2020). Therefore, it is necessary for organizations to have informal check-ins with their virtual worker to support and encourage them to join business tasks which develop good relationship with colleagues and overall organization (Noordermeer, 2020). There continues to be a requirement to determine ways for virtual work performance of the employees to form the trusting relationships that have been constructed creativity in the overall organization and its services (Breuer et al., 2020).

An employee in a virtual work environment needs the assistance and resources necessary to build the ability and become successful in a way that allows them to balance the needs of both the real physical as well as their virtual work performance (Ioannidis & Makridis, 2020). Additionally, the employees in virtual arrangements may be left out from developmental opportunities, as a result of the expanding quantity of online training; the majority of organizations recommended that the growth chances are the same for all employees despite their work arrangement (Degbey & Einola, 2020). Accordingly, there is a greater demand for a continuous communication with employees and supervisors to guarantee their awareness of the virtual worker's skills developmental needs and rate of interests (Tortorella et al., 2019). Although there are many virtual training resources available online for these employees, most organizations do not require their employees to avail the trainings that available to improve the creativity (Van Wart, 2020).

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The functional costs of the organization can easily enhance when employees that are working in various geographic areas and deal all the situations with creative ideas (Kariithi, 2020). Near all the conveniences that working online job possesses, there are few limitations for instance: online institutions partnership could be so much more difficult to obtain, particularly when members work for different segmentations or systems (Garcia et al., 2019). The digital working performance offers real-time interaction in between individuals (Tang & Bradshaw, 2020). There is actually a higher risks involved when the job need creativity, and the nature of job is virtual (Reitenbach et al., 2020). So basically this study tris to find the link between creativity at workplace in term of different areas and its relationship with virtual work performance of the employees. This research also contain importance as the world is moving towards virtual working conditions so creativity might be an importance dimension to increase the productivity of the employees as well as the organization. second most important aspect of the study is advanced technology that is being used from last decaded to improve the working performance of the employees who are involved in virtual nature of the job. Technological skill may played its role to improve the creativity and also enhance the performance of the employees who working online. So the study also found the problem to link the technological changes to improve the employees skills with creatieve nature of working conditions and its impact on employees virtual work performance.

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1.3 Research Questions

In consistent with the research aim, the study is exploring the following questions:

RQ1: What are the factors of employee's creativity that have an influence on the employee's virtual work performance?

RQ2: What are the factors of employee's creativity that have an influence on the technological skills??

RQ3: What are the influences of the technological skills on the employee virtual work performance among employees of Federal Authority for Government Human Resources (FAHR)?

RQ4: What are the moderation impacts of the employees' technological skills on the relationships between employee's creativity factors and the employee virtual work performance?

1.4 Research Objectives

In consistent with the research aim, the study is exploring the following objectives:

i. To identify the employee's creativity factors that have influence on the employee virtual work performance

ii. To assess the factors of employee's creativity that have an influence on the technological skills

iii. To examine the influences of the technological skills on the employee virtual work performance among employees of Federal Authority for Government Human Resources (FAHR).

iv. To evaluate the moderation impacts of the employees' technological skills on the relationships between employees' creativity factors and the employee virtual work performance.

1.5 Significance of the Study

This research conducted about the role of employee creativity factors on the employee performance of virtual working approach during the crisis in the UAE

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public sector (employees of Federal Authority for Government Human Resources (FAHR). From the theoretical point of view, this research has been conducted to examine the role of employee creativity factors in the UAE public sector that is the main concern of this research. Besides, this study helps to identify the importance of the creativity measurement (trait, process, press, and product) in employee virtual work performance and highlighted that employee technological skills as moderation improve the virtual performance of the employees. The relationships of this particular study have many contributions: such as this will add to the theoretical knowledge of conceptualising the employee performance in online virtual work based on creative personnel factors and technology skills. In addition, from the mythological point of view, this research will come out with well-structures, valid, and reliable questionnaire that contribute to the methods use in such studies.

In addition, this research will make a connection between the related theories and the topic of employee performance in the online virtual environment. For instance, institutional theory asserts that the institutional environment can strongly influence the development of formal structures in an organization. For this particular study, employee creativity press and employee creativity process is dependent on the institutional environment; besides, employee creativity is a complex phenomenon that goes beyond the formal structure. In addition, resource based view theory is strongly relate to this study because the employees and their creativity is the major and most value resource in any organisation.

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These factors of employee virtual work performance for the UAE public sector will act as a guideline for work performance. From the practical point of view, this study can be very useful to the UAE's public sector in regard to the performance of employees in the context of virtual work and its improvement; because when UAE public sector know and are aware of the value of virtual work performance and how to implement it in their organizations, they will eventually avoid any possible risk towards the success of an organization and improve the overall performance of it. Consequently, improving employees' creativity and correcting any mistakes that happened previously.

1.6 Conceptual Framework and Research Hypotheses

The main aim of this study is to investigate the moderating effects of the employee's technological skills on the different influences from the employee's creativity factors and employee's performance in the virtual environment in the UAE public sector.

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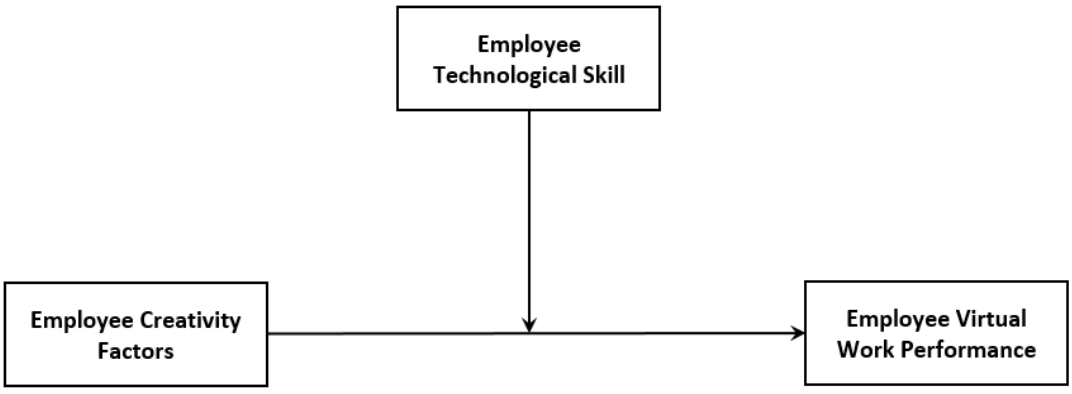

Figure 1. 1 Conceptual Model of the Study

- Employee's creativity factors have a significant positive impact on the employee's performance in the virtual environment in the UAE public sector.
- AI adoption has a positive moderation impact on the relationship from employee's creativity factors and employee's performance in the virtual environment in the UAE public sector.

1.7 Research Scope

The factors of employee creativity to improve employee virtual work performance are a very important aspect of this particular research. The scope of this study is narrowed down to focusing only for employee creativity factors to improve employee virtual work performance. The targeted area of this research is mainly the UAE public sector who is working in Federal Authority for Government Human Resources (FAHR). However, Employee's work performance covers a variety of risks and obstacles. Therefore, to narrow down the dispersed, this research is only focusing on the employee's work performance who is working virtually. The following characteristics define the scope of this particular study.

- The conceptual framework landscape is limited to individual creativity factors, individual technological skills and employee performance in virtual environment.
- Population is employees of Federal Authority for Government Human Resources (FAHR) in different states of the UAE. Estimate count is 3750 and the sample size is 349.
- The study is using quantitative approach to answer the research questions
- The study is cross sectional and to be conducted in 2021.

1.8 Definition of Key Terms

- **Trait:** A worker trait is an aptitude or ability required for an employee to perform a job, worker traits differ from learned skills, and worker traits assess factors such as the individual's personality, physical abilities, educational development, temperaments, and general preparedness to enter the workforce (Washington, 2019). For this particular study, the employee trait is the qualities of the employee that needed to perform his work duties such as self-confidence, integrity, and teamwork.
- **Process:** process helpful brand new hires adjust to social and performance elements of their brand new tasks swiftly and efficiently, and know the perspectives, knowledge, skills, and behaviours demanded to (Shahzad et al. 2020). For this particular study, the employee process in creativity is the thinking styles and mechanism that used by the employee to generate new ideas and solutions.
- **Press:** The term creativity press refers to practical relevant suggestions creativity as the production of premium quality, exquisite and initial solutions to troubles (Burch et al., 2019). The employee creativity press is the productive treatment of creativity in different contextual factors (Obiwulu et al. 2019). For this particular study, the employee press in creativity is related to the time, place, and organisational contextual factors that affect the employee creativity.
- **Product:** The product considered employee creativity "as the creation of a valuable and useful product, service, idea, procedure or process by individuals working in a complex social system" (Streb & Głód, 2020). For this particular study, the employee product in creativity is the outcome

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of the employee in creating new ideas, whether it is valuable, and the ability to have ideas bank.

- **Employee Technological Skills:** Technological skills are the know-how and capacities to perform field-specific, specialized tasks, these skills permit a supervisor to work with work, solve problems, correspond efficiently, and know the big picture because of the front-line work that have to be actually performed (Weeden & Siegel, 2020). For this particular study, the employee technological skills are the employee abilities in dealing with modern technology.
- **Employee Virtual Work Performance:** Employee virtual work performance implies individuals function coming from office making use of present day technology to obtain things performed, each conventional. office-based, and digital company (Raghuram et al., 2019). For this particular study, the employee virtual work performance is the employee performance in performing his duties and task besides to his efficiency in using online environment to facilitate his performance.

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1.9 Structure of the Study

The context body of the thesis is formulated of five chapters as the following:

- Chapter One - It is to introduce the study, outlining the problem statement and stating the research questions and objectives.
- Chapter Two - This chapter reviews the accessible past related studies in view of justifying the earlier stated research questions and research objective of this study. Discusses the relevant literature related to the current study. Therefore, the present study focuses on the role of employee

creativity factors on the employee performance of virtual working approach during crisis in UAE public sector (employees of Federal Authority for Government Human Resources (FAHR)) is used to explain the employee technological skills and its impact on employee virtual work performance.

- Chapter Three - This chapter reviews the theoretical framework, and the conceptual framework stemmed. The conceptual framework is discussed, and therefore serves as the footing for the hypotheses tested by this study. This chapter also discusses the research methodology of this study. It details the steps and methods involved in answering the research question of this study and verifying its elicited hypotheses.
- Chapter Four - This chapter proposed the statistical analysis findings of the data collected. The process of data screening, demographic analysis, descriptive statistics, structure model assessment, measurement model assessment, and moderation assessment are presented in a well interpretation description.
- Chapter Five - This chapter illustrates the summary, conclusions, extra discussions, limitation, implications, and recommendation of the research.

1.8 Summary of the Chapter

This chapter of the thesis discussed in details the background of the current study. with increasing demand of virtual performance this study aimed to explore the impact of individual factors on virtual performance. This chapter identified the research gap based on previous work of researchers and established the research objectives. To achieve these research objectives further hypotheses have been

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designed based on theories. Key terms are defined to gain the detail understanding of the topic. While more, the first chapter of the current thesis ended on significance of the research.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter aims to review existing studies relevant to the research topics. Focusing first on creativity in public-sector organisations, creativity in the UAE, underpinning theories, conceptuall framework, and research hypothesis development. Secondly this chapter discussed the role of employee creativity factors on the employee performance of virtual working approach during crisis in UAE public sector. Next section is related to the Employee Virtual Work Performance and its effect between Employee Creativity Factors on the Employee Performance of Virtual Working.

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2.2 Creativity in Public-Sector Organisations

The phrase 'public sector' is on a regular basis interchangeable along with social management, civil service and government bodies (Mau, 2019). According to the Bouckaert & Kuhlmann (2016) showed the general public sector as the aspect of a nation's financial activity, which is generally possessed and regulated through authorities and also established the major domain names of any kind of public sector core government, local federal government, public business and also social institutional physical bodies. Hence, it is actually continuously crystal clear that federal government facilities are part of public-sector organizations. Creativity

participates in a critical task in public-sector companies as in private-sector companies (Colnar & Dimovski, 2017). Depending on to Hofmann et alia (2019), revealed that the main variable for this is the nature of public-sector organisations, which are actually trained as rule-based organizations along with minimal possibility for creativity. According to many public-sector organisations which have taken notice of productivity, advancement and creativity, creativity has actually been actually encouraged as a method for social managements, authorities and non-governmental. to improve in to flexible, delicate devices that function more effectively for their wards (Dube, 2019).

Creativity is the most investigated piece of research and is straightforwardly connected to a thought of implications in organization. The critical source of empowering development, expanding seriousness, and acquiring an high performance for organizations is innovative execution of the skills. The instrument of inventive execution development has been read up for quite a while (Hemant and Regina, 2015). It seems, by all accounts, to be uncontroversial to say that it is to be imaginative in one's work performance (Anderson, Potočnik, and Zhou, 2014). Tracking down a reasonable meaning of imaginative articulation in execution of the tasks, then again, is troublesome. Deviations from the specific or outings from the work, previously remembered to be reasonable portrayals of execution development, have been progressively tested as numerous functioning customs have been examined, and a less exacting comprehension of the idea of a score has been perceived (Paul, 2007; Parker, van den Broeck and Holman, 2017). Notwithstanding this, the idea that creativity is a change of, or take-off from, some sort of standard keeps on holding influence. These movements or take-offs ought to be seen as

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indications of creativity (Gong, Huang, and Farh, 2009). The expression "creativity" is famously challenging to characterize, as most definitions prohibit occasions that are either unexpected or foreordained. From a workplace stance, the scholars (Altschuller, and Benbunan-Fich, 2010) inspected creativity in the public sector working environment. They reported that a meaning of creativity as mental cycles that outcome in remarkable and unique arrangements, thoughts, conceptualisations, speculations, or items. There is a qualification to be made between inventive parts of execution of the work that are the consequence of purposeful interpretative choices and those that are the result of oblivious side effects of fundamental skills development. So, Bledow, Rosing and Frese (2013) concluded that it would be challenging to contend that imaginative elements are expressive parts of public sector work environment execution since they seem (Amabile, 1994), by all accounts, to be an oblivious and maybe even compulsory indication of the employees' parsing of the work structure. Yet, it is faultless to view them according to the demand of the organizations. The employees' cognizance of the metrical design is communicated by the worldly, dynamic, and articulatory components of their creativity.

This study also considered the Baltes et al. (2002)'s idea about creativity in organizations that five components of the exhibitions look for deliberately differed understandings with regards to creativity in the public sector work environment. It has been asserted that unreservedly given suggestions at work were utilized to work and foster unexpectedly moving execution (reported by Feng et al., 2018). Employees, levels of work, and various tasks all showed extensive aberrations in creativity, bringing about various impression of the work done. In this present circumstance, apparently these differentiations address an imaginative utilization of

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articulation in execution. Whether the following exhibitions are unmistakable and quantifiable yet to be seen (Cheung, Chau, & Au, 2008). It's quite significant that there was proof that the creative person knew about endeavouring to explain these different ideas; however this is in accordance with other proof for the connection among creativity and cognitive mindfulness. Previous research also showed that the principal attributes of creativity, curiosity and uniqueness are vital to the strong thought of creativity that actually rules the functioning society (Brett, Bihar, and Kern, 2006). The amazing appearance of the totally new, apparently out of the blue, is portrayed as creativity. More contemporary meanings of creativity are essentially more able to incorporate impact and recombination, which has a captivating bearing on presentation of creativity (Balthazar, Waldman, and Warren, 2009).

In an organizational setting, creativity can undoubtedly become boundless. As different basic responses to organizational results according to different points of view. This is a confounded peculiarity that is intensely dependent on the results of organizational performance. Employees' qualities and occupation performance awareness's uncovered that basically every firm practices creativity in their public sector working environment. As per the discoveries, it has even endeavoured to resolve the issue of creativity corresponding to the work and climate of the organization, bringing about a compulsory performance assessment (Orlikowski and Scott, 2008). Dahl (2004) have taken a gander at assortments of kept performances in view of creativity in work and used them to explore the connection among shared characteristic and peculiarity in translation in various explorations. Dede (2010) checked out at employee performance under verifiably shifted settings in probably the most requesting jobs at global organizations. The discoveries uncovered that as

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variety develops at lower progressive levels, the idea of creativity changes also (Kirkman et al., 2013; Panteli, and Dawson, 2001). This could be deciphered as the sign of exceptionally all inclusive (yet inconsistent) performance practice rules, or as an impression of firmly established general mental limitations that should control performance (Barkley, Cross, & Major, 2014; Denzin, 1984). The qualification between these clarifications is notable, however it stays easy to refute about reasonable inventive sans culture mental limitations are forces, and its inconsistent nature about the performance shows. The standards of creativity in the public sector work environment should be dependent upon the restrictions of employees, as well as filling in as a storage facility of shared public sector work environment social practices. In an organizational setting, creativity creates from the crash of one or the other unintentional or arranged curiosity with additional gradually arising standards and customs. Facca, Soper, and Schmidt, (2012) revealed obviously on this common reliance with regards to creativity and addresses the related issue of the undertaking's performance interest. Methodical examination has been led to decide the degree to which performance can be affected by, or straightforwardly imitated (Dam¸ 2019). As per studies, the essential objective of organizations is for employees to have the option to mirror imaginative strategies to work on their performance. Baartman and de Bruijn (2011) found that when the expressive profile of the objective performance keeps a conventional relationship with the organizational gathering structure, characteristic creativity impersonation is more precise and stable. At the point when the goal is plainly discernable from the organization because creativity is best in the beginning phases of the essential advancement of a public sector organization's objective (Ford, 2015). All the more officially in practically all strategies and practices that utilize viable exhibitions the ramifications for how such a methodology

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is executed More extensively, the huge and broadly accessible strategy can possibly essentially affect organization. Albeit a mind-boggling measure of impact might make pounding impacts, the prophetically calamitous alerts regularly seem to rise out of a viewpoint imbued in an origination of creativity (Nevado-Peña et al., 2019). The business employee relationship, which was basically the sole model for learning preceding the appearance of the framework and which is as yet drilled in many societies all over the planet, is one method for seeing impact and imaginative autonomy as not totally unrelated. One more method for pondering the effect of creativity's temperament is as a wide and various setting, or custom, from which new understandings can arise or be motivated (Ayyagari, Grover, and Purvis, 2011). Creativity is an estimation of a singular's capacity to accomplish objectives, and it very well might be utilized to help employees become more imaginative, evaluative, and chiefs. Gale et al. (2002)'s objective was to fathom mental exploration on creativity, and he exhibited that grasping the course of creativity introduced a model of imaginative reasoning that included critical thinking information and inspiration. The Kirkman et al. (2014) found that mind and creativity were both used to appreciate inventive reasoning at work. Fearnley and Amora, (2020) investigated the utilization of inventive preparation programs and endeavoured to dissect employee certainty levels. They took a gander at inventive employees, item, and climate while zeroing in on preparing strategies. They reached the conclusion that the imaginative preparation program needs significantly more work, however that staff are good to go to utilize specific strategies. Sánchez (2017) depicted a review to further develop how things are finished and the capacity to accomplish organizational objectives. As per the findings, advancement is affecting the way that an organization deals with its tasks. To build a high level cycle, the Darr (2014) suggested that administration

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investigate a pattern in learning plan. As per a review, preparing abilities are important for encouraging ground-breaking learning and creativity. Cunning getting the hang of, as per Gallie et al. (2004), works on the capacity to perceive creativity and helps in the improvement of supervisors and pioneers. Kirkman et al. (2013) did a review to decide the changing job of performance in creativity through the utilization of proof and documentation. As per the discoveries, creativity supports performance and the age of inventive thoughts, the two of which have cultural ramifications. Creativity is incorporated into organizational strategies. Previously Derosa, Smith Hantula (2007) noted how individuals approach creativity in the public sector working environment and coordinated the scholarly local area into new examples of connection in light of time task. The examination supported the social event of information, information, and suppositions. As indicated by the research, creativity is certainly not a mastered expertise, but instead one that should be learned and created all alone (Garrison, 2011; Montoya-Weiss et al., 2005). The review was depicted by Sarker, Sarker, and Schneider (2009) as a method for supporting employees' creativity and development, as well as a thought for showing peers in creativity and advancement. With inventive reasoning instruments, thoughts produced more potential for progress and welcomed leap forwards, as indicated by this review. Davis (2000) led a concentrate on creativity in the public sector working environment, which included dynamic scholarly cycles, for example, critical thinking, mental capacity, direction, and evaluation. The review found that having innovative personalities at work is basic. This concentrate additionally found that employees in imaginative organizations could apply expected learning strategies in the learning and performance process. Garrison (2011) expected to decide the degree to which employees' degrees of creativity and the ability to understand individuals on

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a profound level impacted their organizational achievement. The example size was 300 individuals, and the information was gathered utilizing five gadgets. In Nigeria, the review found no critical relationship among creativity and the five qualities of activities. There was no massive contrast among orientation and undertaking accomplishment, creativity, or the capacity to appreciate individuals on a deeper level, as indicated by the review. De Jong, and Elfring (2010) endeavoured to research the connection among creativity and employee performance in another review. To concentrate on the affiliation, information was accumulated, and performance was estimated as an organizational accomplishment (Gong, Zhou, & Chang, 2013). The review found that employee creativity and performance are connected, and that creativity might have an effect and be incorporated into work rehearses through inventive strategies and arrangements. Leite, Gruber and Hodgkinson (2020) examined the connection between an employee's imaginativeness and their accomplishment on a performance metric. The scientist utilized the T-test with the assistance of SPSS to accomplish the examination points. The review found a powerless however significant negative connection among creativity and performance, as well as a backwards connection between employee creativity and accomplishment. An imaginative individual doesn't necessarily in all cases must be a high-flier in the calling. The connection among creativity and business was portrayed by the Dayan and Di Benedetto, (2010), and this study zeroed in on the viability of incorporating different reasoning practices in the business organizational setting. Employees who took a business abilities program were demonstrated to be more imaginative and greater at different reasoning than the people who worked in a customary setting, as per the review (Handel, 2008). The examination likewise found that it helped with the age of a great many thoughts in an organizational climate. As

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indicated by studies, creativity is characterized as the improvement of novel and gainful thoughts (Frey, & Rahbari, 2016). It is vital for the organization's endurance and seriousness. Expecting that an employee's creativity helps the public sector organization's work results, scientists have zeroed in their endeavours on finding out about the effect on the organization, as well as what and how the employee ought to direct their work (Kim, & Lee, 2006). Advancement is critical to its organizations, to the degree that it affects the work adequacy and satisfaction of its employees.

2.3 Creativity in the UAE

The United Arab Emirates is located in the Arabian Gulf. It is a country with a population of different nationalities and ethnicities who share the goal of finding good jobs and improving their standard of living (Alghais, 2018). The oil industry is considered one of the most critical sectors for the UAE economy (Al-Shammari, 2020). The UAE includes the seven emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al-Qaiwain, Ras Al-Khaimah and Fujairah (Agrawal et al., 2020).

According to Mohamed et al (2019), suggested that employee creativity will definitely be used to explore creativity in the UAE situation and the UAE strives to enhance employee creativity in the general public sector with numerous initiatives. According to the employee creativity, Emiratis will develop a tough as well as a very competitive economy and a society that has its own identity and enjoy the best standards of living within a nurturing as well as sustainable setting (Hopkyns, 2020). Additionally, the process is striven to apply technology in seven fields: renewable energy, transport, education, health, technology in UAE (Ahmed & Sisodia, 2020).

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These consist of new legislation, advancement incubators, and expenditure in specialized skills, public sector incentives as well as worldwide research alliances (Rahman & Al Joker, 2018). The UAE National Charter for 2021 hinges on four major principles, determined, united; having a powerful alliance, a strong economy navigated through UAE nationals characterised by innovation as well as knowledge (Zhao, 2020). When Sheikh Mohammed bin Rashid Al Maktoum unveiled the UAE Government strategy, he asked for that government employees to alter their way of thinking and embrace a lifestyle that promotes creativity, commitment, development as well as performance (Kennedy et al., 2017).

There is a continued focus on the overall quality of management and creativity work environment in the UAE public sector, with many organisations adopting premium platforms including the emirate government superiority system, sheikh Khalifa government superiority system as well as the Ajman excellence system (Lasrado, 2018). The authority aims to facilitate government companies' access to comfort and happiness, meet the region’s standards and desires to reach the highest levels, enhance efficiency and effectiveness in providing government services, and enhance government directions related to technology (Lea, 2020). The employee or even organisation should give suggestions related to production that can contribute to decrease expense, increasing organisational earnings or even simplifying work processes, as well as methods and approaches for implementing these suggestions (Moriones et al., 2020). The focus on creativity amongst UAE employees in the public sector signifies that it is valued at the highest possible degree (Lari et al., 2020).

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Since new components will continually be expected for the organization's viability, creativity is a necessity. Such a support is valuable in consolidating the gifts and capacities to go about responsibilities in the numerous different ways that the term imaginative can be applied (ARN News Network, 2020). It infers that assorted sorts of organizations all over the planet have innovative qualities. While large numbers of the imaginative components of vital arranging have a place with new classes of abilities that show up in a plan not recently experienced, organizations (Goos et al., 2010). Likewise it exhibited that a considerable lot of the innovative components of key arranging have a place with new classifications of abilities that show up in a course of action not recently experienced (Ebrahim, Ahmed, and Taha, 2009). This type of uniqueness can be deciphered with regards to chance mishap or modification, as per more extreme creativity. The most broadly investigated piece of organizational creativity performance is the way of life that advances imaginative activities (Baer and Oldham, 2006). The vibe of creativity is one component that is intently attached to its thought. It seems uncontroversial to say that carrying out the responsibilities requires creativity. As per studies, creativity is the most discussed point in different nations since it gives new ways to work and upgrades the gifts and limits of employees, bringing about extraordinary organizational performance (Ertmer, & Ottenbreit-Leftwich, 2009, Dennis, and Kinney, 1996). It is exhibited that deviations from the specific and take-offs from the proclaimed measurements are utilized to convey imagination in nations. When remembered to be reasonable characterisations of creativity have been progressively tested as different nations' customs and societies have been considered, and as experts have recognized a less exacting perspective on the idea of creativity (Ministry of Human Resources & Emiratisation, 2020). In any case, the thought that creativity is a change of genuine principles to

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oddity in the work environment isn't without merit. As opposed to imagination, certain nations' strategies can't be veered off from, a standard of some sort or another, and it keeps on ruling (Bai and Liu, 2013). The degree to which these changes or deviations should be visible as an outflow of creativity contrasts from one country to another. The opening and presence of creativity are not estimated, in this manner it is hard to make sense of, however it could be found in the performance of firms in a similar industry. UAE is a created country that keeps on prospering because of the achievements of its organizations, both public and private (ARN News Center, 2020). Employee and organizational creativity could both be viewed as remarkable. Most of firms in the UAE business referred to creativity as a performance part, as well as the consideration of Phenomenon that is either unexpected not entirely set in stone. Garrison et al., (2010) examined creativity in the UAE according to the point of view of employees, expressing that creativity is the mental capacity to produce novel thoughts, ideas, plans, and potential open doors, while development is the capacity to enhance a better approach for thinking. Various pictures show up to somebody when they are innovative (Escueta et al., 2017). Individuals can't think in new ways on the off chance that they need creativity. Their ways of behaving, designs, designs, ideas, and discernments are completely impacted by their absence of creativity (Gough, Ballardie, and Brewer, 2014). Subsequently, the multiplicative discernment design, as well as valuable and plan new ideas, are undeniably reflected in the creativity design.

There are the individuals who are perky and impart common feelings, rousing and motivating others. As per report by Attar, Rateb and Sweis (2010), individuals in the UAE, are imaginative, daring people, and contenders. Nonetheless, their quality

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shifts extraordinarily starting with one individual then onto the next. Their innovation and creativity decide their creativity. An individual's capacity to tackle an issue in an imaginative manner is alluded to as creativity (deWinstanley, & Bjork, 2004). So innovative individual can take care of explicit issues by applying imaginative information. An individual priority the chance to be innovative and utilize their creative mind. Creativity stimulates a gathering of thoughts that are expected consistently. Individuals should genuinely want to make a genuinely new thing to be inventive, and they should likewise have the ability to do and rise out of this craving (Christensen, Lægreid, and Rykkja, 2016). One of the qualities of creativity that UAE employees have is more prominent transparency, opportunity, and hazard taking. This exhibits their independence, dependability, and responsibility (Kock, and Lynn, 2012). As Walden (2016) found an association between creativity qualities and performance. While there is a powerless positive connection among performance and the characteristics of difficulties, opportunity, enthusiasm, and hazard taking, there is a negative relationship be tween's performance working and the qualities of receptiveness and struggle. One more review found areas of strength for a between task performance and creativity by Henttonen, and Blomqvist (2005). The concentrate likewise exhibited a positive and direct relationship between staff creativity and functional achievement.

Fundamentally, an inventive individual can utilize that to do extremely powerful exercises at work. The Savoia and Sen (2012) found that employees at lower levels who were effectively engaged with the work being finished in the enterprising industry were more imaginative and had higher unique reasoning abilities. The discoveries showed major areas of strength for a between creativity characteristics

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and performance. Specialists guarantee that when people are engaged to utilize their gifts, their creativity increments, making abilities the most fundamental viewpoint in an organization's adequacy (Zhou and Shalley, 2008; Gekara and Thanh, 2018). As indicated by a few scholastics, when top administration gives employees more power, creativity among employees would increment (Mo, Ling, and Xie, 2019; Walton, 2006). Employees' creativity can be expanded in the work environment by giving them more opportunity to accomplish their objectives and giving them criticism on how they got it done. This will further develop performance beyond anything someone could ever imagine. The research that were drawn from the connection between's employee creativity and firm performance had an expansive effect and were helpful together, exhibiting that while learning new data calls for a few tedious advances, people at last foster imaginative strategies that are both inventive and viable and decidedly affect organizational performance (Khatiwada, & Veloso, 2019; Harrison and Rouse, 2015). The main measuring stick by which to gauge an organization's key qualities is its picture. As rises and falls with market contest, a business can further develop performance by giving employees the instruments they need to take care of their responsibilities competently and fulfil clients (Evans, 2014). Because of contemporary review, people presently realize that abilities are right now more huge than having surplus assets. The organization's information, abilities, and ability to use the maximum capacity of its staff (Liao, 2006). In the UAE, creativity is characterized as a plan in which an employee makes an imaginative development in which business related issues are settled in a legitimate way through a bit by bit process. Others characterize creativity as the limit of people to make supportive answers for address difficulties and take care of issues all alone (Komlenov, Budimac, & Ivanovic, 2010). An imaginative employee is one

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who can produce new ideas or thoughts for the administrations to be built, the surge of correspondence, and understanding it similarly that would influence the work finished by the employee during his functioning hours. Creativity is characterized as the development of novel thoughts (Germain, 2011). It has for quite some time been noticed that groups and huge organizations will generally esteem employees' advancement more than more modest ones. Because of the way that they work in groups, employees are consistently procuring new data and capacities that the business needs from them to comply with time constraints. Creativity is basically engaged with the formation of progress in items (Scott, Leritz, & Mumf, 2004). To expand the capability of human work and successfully achieve objectives, new methodologies should be presented by an individual or gathering of people working in an organization. As per Wang, and Noe, (2010), in the time of advancement and globalization, organizations that wish to contend with their opponents should utilize social butterflies that are imaginative and open to working in groups. The employees that are generally respected for achieving positive change are those with proactive mentalities (Weible et al., 2021). An innovative employee has the ability to comprehend the organization, should be delicate so he can resolve the issue, should have a sharp memory with the goal that he can recall his task for quite a while, and should be delicate to others' sentiments. In view of the speedy changes in technology and culture achieved by globalization, an employee who is imaginative would be one who can expect and adjust to any turns of events (George & Zhou, 2002). As per Konradt and Hoch (2007), an employee's creativity is normally characterized as having new thoughts for his work and working techniques. He should likewise be versatile to work in a group as opposed to alone to finish a task. An employee that is innovative will have more noteworthy understanding abilities and be more versatile,

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permitting him to get new technology rapidly assuming it is brought to the organization (Savoia, & Sen, 2012). This large number of standards shows that labourers are engaged to get done with responsibilities at their own speed and find out about new possibilities and state of the art technology thus. These progressions are presently a typical piece of life (Graf et al., 2007). People can change their creativity to deliver novel thoughts. A labourer might want to be in touch at the most noteworthy or least level in any event, when the person has huge potential; creativity in the UAE relies upon the specialist or circumstance. Employee might apply all of their capacities, abilities, and information to convey unique outcomes (Lai et al., 2012).

2.4 Employee Creativity Factors

2.4.1 Creativity - Trait

Creativity is not only the outcome of personal traits like skills, personality, education, intellectual aspects or inspiration however it also possesses a social size that ought to be represented in research studies (Taylor & Kaufman, 2020). Supports the necessity for a far better contextualization of creativity in research studies as well as aims out that various societies look at creativity differently and have divergent inceptions for what creativity is composed of and its social function (Sarraf, 2020). The trait is usually viewed as a good construct by nearly all lifestyles yet variant across cultures may be noted concerning its own loved one importance, social role and functionality as well as kinds and domain of importance (Hanushek et al., 2020). Psychological research assumes that creativity is a private trait, to be understood through analysing individuals and implies that incentive is necessary (Flesia et al. 2020).

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The theoretical designs lately utilized in investigation to conceive employee creativity focus usually on exclusive characteristics and company attributes as significant influencers of imaginative behaviour (Alikaj et al., 2020). Scientists have actually pinpointed a collection of primary personality types that are actually relatively secure around fields and lead to some folks being actually extra imaginative, where these characteristics feature broad interests, self-reliance along with a solid feeling of self (Van & Hirst, 2020). The Trait in organizations is a complicated device and performed at a private level; like specific aspects, activity circumstance, social circumstance also at a personal level there were research studies of the impact of individual values, self-concepts and identification, thinking styles, knowledge, psychological states as well as traits (Kimia & Allameh, 2020). According to the trait focused on the significance of the communications between personal attributes (including personality type as well as intellectual types) and context qualities (such as leadership connections with administrators and associates), engage to influence specific employee creativity (Dust et al. 2020).

Existing research has incorporated only the job of private emotional attributes to a limited level although scholars acknowledge the possible benefits of favourable psychology on creative; remarkably little bit of is recognized concerning how to make the most of the effects of positive psychological factor for creativity even with the beneficial effects of creative self-efficacy (Chen & Padilla, 2019). Depending on Huang et alia (2019), claim that the vital element of employee creative performance the mixed results on whether creative self-efficacy moves the impact of the circumstance to creativity require even more examinations of creative self-efficacy as a moderator. The irregular outcomes on standard psychological thinking about

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creativity research call for additional expeditions of other motivational systems that link the context to creativity (Said-Metwaly et al. 2020).

The traits employee creativity describes the generation of unique suggestions or solutions to complications by employees (Ivcevic et al. 2020). According to the RBV, innovation is an intangible, uncommon, unparalleled, non-substitutable source that may be a beneficial resource of competitiveness for employee creativity traits organizations (Elidemir et al. 2020). The employee's intellectual methods, intrinsic and prosaically motivation, self-efficacy, have an effect on, and feeling of purposeful job are predictors of individual creativity (Hur et al. 2020). The conscientiousness is linked with characteristic adjectives like professional. organized, reliable, ambitious, as well as hardworking while agreeableness possesses qualifiers such as kind, obliging, considerate, useful, considerate, as well as hospitable (Khan, 2020). The imaginative creative, sophisticated, refined, sophisticated while extraversion is related to adjective traits like friendly, passionate, daring, prevalent (Saucier & Iurino, 2020).

The employee’s traits as a result represent a method of change, it relates to the psychological growth, and growth of people and employee creativity are extremely essential in today's competitive organizational settings (Pandey et al., 2020). Often having ‘unsuitable’ employees proves to bring undesired tensions as well as worries in the institution (Waqas et al. 2020).

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Although details of staff member's qualities like conscientiousness have been connected to a wide array of employee outcomes, what continues to be not clear is the mother nature of the connection between employees, workplace preferences, as well as functionality (Neneh, 2019). It is possible that individuals are mostly shown in specific aspects of the workplace, and the direct effects of individuals on office results are entirely or even partially moderated by such inclinations (Neneh, 2019).

2.4.2 Creativity - Process

A person or group of few individuals collaborating might define the creativity process as the capacity to take something brand-new right into life as well as amiable viewpoints and creativity as the production of unique and useful concepts (Samson & Umar, 2020). According to the creativity process we're putting a connection in between novelty and creativity as well as states that a creative process need to advance something brand new as well as it pertains to both the process of tip creation or even problem solving as well as the genuine idea or even remedy (Tang et al., 2020). The creativity process was pointed, as creativity is the interaction of at minimum three factors are individual. environment as well as process (Sharif, 2019). The employee creativity relates to the capabilities, capacities, as well as motivation; the process describes the psychological activities required to reach some creative side as well as the environment means the psychological as well as physical settings of an individual (Zimmerman et al., 2020).

The creativity process ideas as observed as the production of unfamiliar and practical concepts in any type of domain name as well as advancement as the successful implementation of creative ideas within an organization (Shalley & Gilson, 2017).

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Whereas there is a sturdy enthusiasm with managers being used virtual teams to enrich creativity process in their organizations, quite couple of research studies have empirically reviewed creativity in a virtual work context, as well as fewer still have appeared at how market variations affect creativity or development in virtual contexts (Davidaviciene et al., 2020). Just recently, the researchers have suggested that the majority of job in organizations is currently virtual to a better or even lesser level; relying on the volume of opportunity the employees invest collaborating on an activity, the extent to which they make use of technology to support their communications, and their temporary and geographic separation (Ackerman & Kanfer, 2020).

Specifically, the effects creativity process by investigating how various process problems as well as an input element identify whether group variations harm or even profit creativity in virtual work (Pitafi et al., 2020). The effects of the creativity process as well as input variables that is very likely to calculate the extent of cognitive amplification and blend of numerous perspectives on a joint duty, which are crucial to equating the potential perks of group differences into actual performance benefits (Lee et al., 2018). The employee's imagination process factors that assist in favourable substitutions and the building of a beneficial partnership are very important in determining the quality of interactions in virtual teams (Gerards et al. 2020).

The effects of creativity process specifically true for problem solving, which takes advantage of various perspectives however requires partners to resolve their differences in attitudes as well as values to reach an opinion on remedies (Pitafi et al.

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2020). The staff's creativity-relevant process regulated the partnership in between the average creativity of its members and the crew's imaginative outcome, processes, and inputs that facilitate relevant information elaboration might be the key to lowering the negative impacts and emphasizing the perks of group differences in virtual interactions (Martins & Shalley, 2011).

The staff's process skill-sets have been located to be significant to leveraging its participants' creative resources and interaction trends in research teams possessing essential effects on their creative performance (Martins & Shalley, 2011). The attribute of the communication process in virtual corporations likewise may have an effect on how participants move toward a duty along with affecting their focus to the heuristic aspects of the activity (Qian et al., 2020).

The certain creativity process factors analysed as moderators of the results of market variations on creativity are the level to which virtual collaborators invest opportunity creating relationship before starting job on the activity, impartiality of involvement in their task-related conversations, as well as level of experienced process conflict (Chua & Jin, 2020). The creativity process factors has been specified as aggregate initiatives to create products or processes by taking unique and helpful methods as well as research study on staff creativity has illustrated both positive and bad components (Song et al., 2020).

When the creativity process factors options are demanded in intricate circumstances, a team approach is valuable due to the fact that of the need for assimilation of tips and viewpoints (Salazar et al., 2019). The creativity process, job, and situational

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variables have an effect on team creativity through assisting in cognitive, motivational. and social processes and creativity can seem dangerous considering that it launches novel ideas, which are probably to become denied through team members (Han & Bai, 2020). As a result, the creativity process members that indicate emotional safety and security serve as vital contextual variables connected to creativity and an emotionally safe setting raises the probability that staff members really feel complimentary to recommend creative ideas without anxiety of bad interpersonal consequences, so they usually tend to perform more creatively (Jahanshahi et al. 2020). The higher creativity process conflict, the better the increase in process losses, which negatively impacts the joint creativity of demographically various digital partners (Setkhumbong et al. 2020).

2.4.3 Creativity - Press

The term creativity press refers to practical pertinent suggestions creativity as the production of premium quality, exquisite and initial solutions to troubles (Burch et al., 2019). The creativity press is the productive treatment of creativity and therefore artistically is claimed to spark innovation (Obiwulu et al. 2019). The new good creativity press, it creates tons of concepts, and afterwards chooses the absolute best of these for progression as well as technological change and boosting company complication, recognizing how employee creativity develops in significantly digital environments is quite significant for organizations (Verhoef et al., 2019). Still carry out not recognize much about just how technology helps creativity in journalism is applicable for service, as its result on organizational including expertise sharing activity and social networking (Muafi, 2020).

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Previous research studies have forgotten the task of on the web social technologies as well as press in creativity systems have infiltrated folks's everyday lives, the inquiry is whether boost creativity tools and becoming even more creative that depends on just how people utilize certain technology attributes and people's specific characteristics (Korzynski et al., 2019). The creativity press possesses a secondary impact on creativity through boosting individual originality (Mohamed et al., 2019). The creativity press management, which relates to a consistent profile page of presence for acquiring, sharing, as well as organizing info, content, and concepts and after that transforming info right into organizational knowledge (Coldevin et al. 2019). The capacity press to hook up to other individuals extra simply, and hence enhance the "social" edge of creativity focus on communication design network by means of social technologies to improve creative end results (Alacovska et al., 2020). Press help along with human creativity may be utilized for the perk of wellness and well-being control and the variety of attainable contextual influence on employee creativity, little bit of clearness exists regarding just exactly how different variables engage in forecasting employee creativity (Dirani and so on, 2020). The methodically testimonial empirical researches on astrologers of employee creativity and to create a structured planning to particular why singular along with several contextual variables possess an unique influence on the relationship in between exclusive factors and employee creativity (Cai et al. 2020). The employees' functionality in associations is led because of the visibility of job gadgets and ability-enhancing methods in press and motivation-enhancing process and opportunity-enhancing methods (Fernández and the like, 2020).

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2.4.4 Creativity - Product

The employee creativity product may be determined as "the ability to take one thing brand new into presence as well as the production practical tips through an individual or even tiny team of individuals interacting (Evers & Ewert, 2020). Workplace creativity is generally described in the perspective of organizational products, processes, services, and procedures and concentrates on the development of novel as well as practical suggestions and the principles of innovation, creative thinking, variant reasoning and different production are typically used reciprocally (Wilson et al. 2020). Divergent thinking is the capability of generating new as well as varied ideas and typically deemed delivering an estimation of the possibility of creative products as well as the ability of seeking and finding one true solution to a trouble by taking a novel strategy (Bloom et al., 2019).

This work suggested that many of the definitional variety cultivated coming from differential concentration paid out to components within four overlapping parts of creativity, specifically the individual. media, product and treatment (Keung, 2020). When analysts execute search for to set apart the constructs, the difference tends to become in the direction of creativity as a process added anxious together with ideas, and modern technology as a process even more stressed in addition to the actualisation of ideas (Mehta & Dahl, 2019). Also, the employees need to become inspired to assess their beliefs and presumptions regarding detailed and development parts, because this was actually found to nourish creativity (Davis et al. 2017). Numerous study studies preserved the expectation that creativity is actually boosted when employees have high items in their day-to-day project as well as demand over their exact own job (Breidenthal et al. 2020).

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Creativity and the innovative products are not exclusively the result of mental and mental processes aided through human interaction as well as cooperation, however they are actually completion result of the social history of individuals and the socio-cultural atmosphere through which they help make as well as reside (Lorenz et al., 2018). The circulation of investigation on creativity in the office, an often-cited definition states that creativity is the creation of tips that are each helpful and unknown product and action (Kiernan, 2020). As creative to the size, it is unfamiliar in addition to suitable, handy, practical or even appropriate action to the project along with the activity is actually heuristic rather than mathematical (Hall et al., 2020).

One of the most company creativity analysts enroll to such product-oriented definitions depending on to which creativity pertains to the capability to create practical and one-of-a-kind concepts in any kind of domain name (Amigoni, 2019). The product alignment identifying very most meanings of creativity in operating atmospheres is actually limiting, considering that it mirrors an inclined view of creativity (Sharif, 2019). Creativity is actually normally viewed as a good construct in nearly all lifestyles, there are actually certain variations all over lifestyles concerning its own family member importance, social activity and feature and, kinds as well as domain names of relevance and product (Broumas, 2020). Consequently, in this particular analysis study the level of an employee's imagination and gives a superb index for evaluating creative production (Zameer and the like, 2020). The employees are the substantial source for new product and services growth ideas in tourist and goodwill institutions that include different individuals' necessities along with requirements (Bhushan, 2019). A company that needs technology requires its

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personal employees certainly not just for hitting performance objectives, but likewise for producing brand new company suggestions (Lestari et al., 2020). Employee creativity is the manufacturing of unique and possibly beneficial ideas for taking care of conditions, and for producing brand-new products, companies, procedures, units, work approaches (Cai et al. 2020).

The artistic employees that are set up in typical efficiency steered organisations with professional constructs, time constraints, strict requirements, daily identical tasks, standardised work environments, and thus on, may certainly not be stimulated to present the intended creative practices (Salto, 2020). With concentrating on workplace for employee creativity, the comfort designs self-control may aid organizations to much better use its own interior information (employees) for product (Nazir & Islam, 2020). Efficiency online is actually assessed in relation to tier ranking to evaluate feasible relationships to creativity along with procedures for market values that originated coming from several resources (Ali and so on, 2020).

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2.5 Covid-19 Crisis in the UAE Public Sector

Legislatures all over the world have made an extensive variety of strategy moves because of the COVID-19 plague, which has uncovered the slightness of legislative foundations (Boin, & Lodge, 2021). The structure and level of progress of strategy reactions to the pandemic have differed enormously (Abbas et al., 2021). the UAE's capacity to deal with the COVID-19 issue through its arrangement abilities in different sectors. Specifically, the exploration takes a gander at the UAE's utilitarian, scientific, monetary, ideal data sharing, and political limits in managing the pandemic. The review's decisions exhibited that despite the fact that COVID-19 truly

affects the UAE, the nation has effectively halted the infection's spread and diminished its casualty rate (Brooks et al., 2020).

In light of brought together direction, joint effort, coordination with different divisions, effective correspondence with occupants (Lin, Standing, and Liu, 2008), the designation of satisfactory monetary assets, and an elevated degree of public confidence in the public authority, the UAE government has carried out coercive control and relief strategies rapidly. The world is at present managing one of the most exceedingly awful and most uncommon crises in mankind's set of experiences (Aksoy, Ganslmeier, and Poutvaara, 2020). Nations, areas, and domains have been affected by the COVID-19 pandemic, which has generally spread rapidly (Worldometer, 2020). The COVID-19 pandemic has affected for all intents and purposes each circle of society, including the wellbeing business as well as the travel industry, schooling, framework and building, common flying, and the creation and appropriation of food (Capano et al., 2021). It likewise represents a danger to the country's economy, which has not seen such fast development since the Great Depression.

Oppositely, the emergency has given a phenomenal chance to extend how someone might interpret improvement and has likewise prompted quite possibly of the most exceedingly terrible worldwide aggregate disappointment ever (Grant and Berry, 2011). Coordination at the local and overall levels is desperately required to address the social effects of COVID-19 and resolve the worldwide emergency it has ignited. One thing is presently completely clear: COVID-19 will be the characterizing strategy limit challenge of the on-going time. The world is as yet overwhelmed in a

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lot of vulnerability because of the pandemic. Something other than a human misfortune, the pandemic has uncovered the shortcoming of political organizations and the meaning of public strategy in emergency the board while likewise creating bits of knowledge on the most proficient method to deal with comparable conditions (Wu, Ramesh, & Howlett, 2015). Most of occupants depend on their administration to deal with various hardships and difficulties, subsequently public strategies have a significant impact in settling cultural worries (Lingo and O'Mahony, 2019). Whether it is a later issue like environmental change and illegal intimidation or a more regular one like water, power, lodging, security, and occupations, people shift focus over to their administration as an issue solver (Peter, 2015). The COVID-19 pandemic, nonetheless, varies from different issues in that it requires suitable information, productive arrangements and strategy plans, as well as fast mediations to stop the sickness' spread.

As mentioned by Alandijany, Faizo and Azhar (2020), The COVID-19 pandemic and the drop in costs, which have both caused an assortment of social and wellbeing changes, have constrained organizations to manage a double emergency. Costs are a country's principal kind of revenue (Woo, 2020). Previously, Heffner (2004) viewed as the world's most significant hall for work development abroad. For example, the UAE's populace is extremely broadened, with exiles making up about portion of the aggregate. The COVID-19 pestilence has shown that no nation has responded quickly and sufficiently enough to contain the emergency at its on-going degree, despite the monetary, territorial, and segment assortment of the UAE. Among UAE substances have the most cases (Gaines, and Martin, 2014).

While most the state administrations have battled to track down answers for the pandemic's social, monetary, and wellbeing challenges, the UAE government has shown remarkable arrangement and administration abilities by taking on moderate approach choices and acting rapidly to stop the infection's spread all through the district (Boin, & Hart, 2010). As states manage a more extensive scope of worries, political capacity has become a main issue (Xu, Jiang, & Walsh, 2016). The capacity of policymakers to make and carry out successful arrangements is seriously hampered by the intricacy of numerous cutting edge cultural worries and the rising requests of the general population (Handel, 2008). Individuals have a characteristic inclination to anticipate that their administration should safeguard their lives and vocations during seasons of calamity, to offer compelling reaction and recuperation endeavours, and to convey the vital illustrations. The COVID-19 issue has changed the financial and political scene and tried the capacity of chiefs to take on sound arrangement (Hebbar, 2020). The pandemic's multifaceted nature is at fault. Disregarding the serious level of vulnerability, key arrangement choices have been made by legislatures all over the planet. Thus, the pandemic has set out a window of freedom to assess how states plan and do strategy reactions to crises, as well as the degree to which residents acknowledge and stick to legislative mandates (Kay, & Honey, 2020). By underscoring the strategy limit way to deal with issue the executives and tending to various deterrents and ambiguities that have been enhanced because of the COVID-19 emergency, this data adds to the group of writing currently in presence.

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The UAE government has had the option to take various drives to battle the pestilence because of strategy capacities that have been made conceivable by an approach limit based procedure. In light of cultural hardships or potential outcomes, public approaches are laid out (Yakasai, Akintunde, and Olatoye, 2015). The most common way of going with strategy choices shifts relying upon the earnestness of the circumstance and isn't something similar across all approach spaces. Social issue the executives and goal rely upon the crossing points of public strategy stages or cycles and a close relationship with distinguishing the cultural issue and communicating requests for government activity, setting plans and talking about issues and issues with contrasts between individuals, gatherings, alliances, and organizations, creating strategy plan and execution to determine crises, making emergency stories, and strategy legitimation in creating political help (Yang, Nguyen, & Le, 2018).

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These conditions make significant limit issues for policymakers connected with deft navigation, public mindfulness, pertinence, risk, learning, and change, as well as broad cooperation and coordination between the public and confidential sectors in answering crises (Yuan, & Woodman, 2010). In a state's policymaking processes, the possibility of limit isn't new. The course of state reinforcing and financial improvement was the primary focal point of early endeavours to get a handle on the state's capacity. Later examination on the state's capacity to make strategies has stressed organizational and administration points of view, covering a scope of subjects like financial unfairness, public wellbeing, and political debasement. The capacity of public sectors to arrange and complete public help conveyance and fruitful approach results is alluded to as strategy limit (Yoon, & Lim, 2011).

As indicated by a few scholastics, including the Drayton et al. (2010), strategy limit ought to likewise incorporate the capability of legislatures to execute and settle on favoured game-plan effectively. For public sector organizations to work really, Schweitzer, and Duxbury (2011) proposed an essential triangle that integrates public worth, authenticity and backing, and organizational capacity. Along these lines, Kyllonen (2012) expressed that the preconditions of parts of administration, for example, receptiveness, law and order, data sharing, cultural certainty, and authenticity, rely upon the plan and ability of precise strategies. There is no doubt that the viability of strategy improvement and execution focuses to the presence of various vital capabilities (Zhang, Gong and Zhang, 2017). The accentuation on arrangement accomplishments may not precisely mirror this overflow limit, which might be utilized, in circumstances where limit is set up to address strategy difficulties or possible crises. All in this manner, a superior technique would should be considered to concentrate on capacity in its structures and systems. Political, organizational, mechanical, framework, military, and monetary limit are only a couple of the various types of limit that have been recognized in the writing that is currently accessible.

Political capability is fundamental for policymakers in emergency the board, as per a new agreement among specialists of public strategy and public organization. Extraordinary crises influence the groundwork of strategy capacities and raise significant issues with respect to capacity, authenticity, and public certainty (Zhang, and Kathryn, 2010). The capacity to administer is connected to the capacity of the public authority to decide, plan strategies for designating assets, and really deals with the vital assets for the accomplishment of results. The capacity of the state and

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society to arrange public help and endorsement for strategy execution is one more part of strategy and administration ability. Great approach plan and execution for surprising and new crises, for dealing with ambiguities, for facing major problems, and for measuring up to individuals' assumptions are both critical and tremendous undertakings for policymakers (Lin, Standing, and Liu, 2008). Since strategy abilities change altogether across capabilities, levels of government, and districts. Significant level administration and managerial capacity are fundamental for a vote based system to succeed and solidify, as well with respect to authoritarian states to acquire political authenticity over the long haul (Glückler, and Schrott, 2007). Conversely, an absence of limit is viewed as a main consideration in strategy disappointment and not great outcomes. High limit levels are connected to higher results and key results (Littlejohn and Margaryan, 2014).

There are three levels of strategy limit with regards to overseeing crises and acting: useful, insightful, and political. The autonomous and particular interaction for creating arrangements benefits from the reliance, different contemplations, and commitment of these three limit levels. Useful capacity, in any case, is worried about preparation, navigation, and execution on the ground (Zhang et al., 2018). The viability of actual capital and human resources (cutting edge wellbeing labourers, clinical staff, and different experts) as well as the accessibility of monetary capital can help lessen the impending dangers of crises like the current pestilence. With laid out coordination and correspondence among all degrees of government, insightful limit ensures that approach creation is both in fact sound and implementable (Liu, Wang and Ren, 2017). This is fundamentally expected because of the objective based approach improvement's developing importance, which requires the abilities of the

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various authorities associated with all periods of direction, including the execution and assessment of strategy choices (Shaheen, 2010). Thirdly, a pioneer's political still up in the air by the political commitments they expect in executing strategy and illuminating the public. Better guideline in emergency the board and reaction to advancing circumstances and occasions at every one of the three levels is expected considering the present COVID-19 pandemic. The COVID-19 pandemic has incited nations to form and establish an extensive variety of strategy measures. The construction, timing, speed, and level of strategy reactions taken by state run administrations because of the COVID-19 issue have contrasted starting with one country then onto the next (Kay, & Honey, 2020).

A few countries have utilized a coercive strategy to compel its occupants to follow emergency the executive's techniques by upholding full or halfway lockdowns, shutting their lines, as well as confining versatility inside their limits. 33% of the total populace has been dependent upon social limitations (Autor et al., 2003a). In March 2020, the Indian government forced an extensive lockdown that restricted travel at the public, commonplace, and neighbourhood levels. A few countries, similar to Singapore, Vietnam, South Korea, Hong Kong, and Taiwan, have likewise settled and executed institutional strategy measures, expanded catastrophe readiness, ordered that occupants stick to emergency relief measures, and effectively resolved pandemic-related issues (Zhou and Shalley, 2008). Because of their sluggish reaction times and inappropriate utilization of their functional and practical emergency the executive's abilities, the US and the UK got unforgiving analysis from their residents.

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The COVID-19 pandemic is a transnational crisis that keeps on adversely affecting numerous functional regions and states while presenting new administration troubles. States have expanded their practical dexterity and global joint effort to work on their capacity to break down the issue (Gulf News, 2020). Wellbeing trained professionals and examination specialists, as well as other worldwide organizations like the WHO, have furnished these states with direction. Global organizations, different government offices, the business sector, and neighbourhood organizations have all assisted with working with strategy collaboration to try research projects and strategy intercessions (Liu et al., 2011). During the emergency, various gatherings have been involved, and productive strategy activities are earnestly required. The encounters and information on numerous countries are being shared, which has incredibly worked on comprehension of the infection and its effect at different stages.

Be that as it may, an absence of scientific and educational abilities could dial back the public authority's reaction to the issue. There are various occasions when various nations, including China's, have been not able to effectively accumulate and spread COVID-19 data on time or to go to proactive lengths to deal with the emergency, sabotaging the aggregate reaction to the pandemic at the worldwide level (Lakshmi, and Sekhar, 2019).

Wellbeing experts, specialists, public wellbeing specialists, neighbourhood government authorities, social researchers, legitimate experts, and other profoundly talented modelers who might better comprehend the present and future dangers and effects of the pandemic are among the political networks that make worldwide wellbeing strategies (Liu, Chen and Yao, 2013). The capacity of neighbourhood

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administrators and legislators to decide, by the by, will decide how COVID-19 might be alleviated.

Moreover, the strategy decisions coming about because of this capacity can manage various difficulties beyond public wellbeing and emergency the board and avoidance. Accordingly, most of strategy reactions to COVID-19 have featured both the positive and negative parts of past arrangement methodologies as well as new issues (Gulf Today, 2020). Also, on the grounds that COVID-19 is a one of a kind sickness, more exact data is expected to fathom the idea of the pandemic. To support and speed up current arrangement reactions, a few nations are utilizing man-made reasoning, enormous information, and resident information. Numerous countries have utilized these advances to work on their scientific capacities, increment public mindfulness, and fabricate their data sets to track and screen the infection dependent upon the situation at the commonplace level (Santoro et al., 2018).

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Lawmakers face the most difficult assignments in the present modified universe of crises and misfortunes (Rice, 2016). Pioneers and their organizations are regularly surprised by crises. A fruitful emergency the board framework depends, be that as it may, on political initiative and quick political judgment (Lloyd, and Kerr, 2008). Through better coordination of joint effort with the different degrees of government and organizations to grasp what is happening and convey suitable public administrations, such a framework prepares policymakers to deal with crises. The choice between halting the infection's spread and annihilating it was made because of the turmoil welcomed on by the COVID-19 plague. In such manner, choices

included social and financial expenses and advantages and introduced relevant issues on how policymakers should address these expenses and advantages (Moo, 2020).

Most strategy arrangements have been investigated and evaluated involving serious structures and the inconvenience of fault because of more prominent commitment by individuals, common society organizations, and the media (Lodge, & Wegrich, 2014). For example, the strategies used to carry out lockdowns changed observably among states in the US. For their divided methodology and slow arrangement reactions in handling the main flood of COVID-19, certain public states have drawn cruel public judgment. These ineffectual arrangement estimates undeniably raised worries about these nations' emergency the executive's capacities, political ability, strategy investigation abilities, and political judgment (Yoon & Lim, 2011).

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As a matter of fact, there is a huge opportunity for state pioneers to support the public authority's strategy drives by considering the assessments of contending ideological groups, pressure gatherings, and normal people (Goh, and Wasko, 2012). A scope of different offices and assets are expected at both the functional and framework levels to appropriately execute these strategies, hence even elevated degrees of individual political limit can't ensure their viability (Santovec, 2013). Monetary limit and data and correspondence limit are two different limits that are covered. The endeavours made by the UAE to control the COVID-19 pandemic considering these five capacities are talked about in the part that follows. A record number of individuals have been influenced by the COVID-19 pandemic, including inhabitants of the UAE (Xu, Jiang, & Walsh, 2021). Most of states, including that of

the UAE, initially answered the emergency likewise with a solid obligation to restricting or stopping the infections spread both locally and globally. Thus, on January 29, 2020, the UAE detailed an instance of COVID-19 as the primary GCC country. The UAE government's National Emergency and Crisis and Disasters Management Authority divulged its COVID-19 activity plan in 2020 and incorporated a rundown of wellbeing safeguards (OECD, 2020).

Solid navigation and strategy limit are vital in the midst of emergency. The gifts or capacities expected to do different arrangement capabilities are alluded to here as practical ability (Lowry et al., 2010). The UAE made significant decisions in exceptionally unsure and squeezing circumstances regardless of having no related knowledge overseeing pandemic crises. The public authority of the UAE has had the option to carry out successful arrangements at different levels of the Emirates thanks to the concentrated dynamic limit of the country (Shuaib, 2013). The method involved with settling on a choice moved rapidly (Hale et al., 2020). UAE government pioneers worked intimately with wellbeing specialists and experts all along (Godinho, 2020). The UAE government has focused on the significance of a helpful procedure based on a serious level of certainty among legislative and neighbourhood regulatory pioneers. Including area, air, and ocean passage destinations, the connection between populace development and infection observing is fundamental (Larry, and Livingston, 2010). This is particularly significant for the UAE in light of the fact that it fills in as a huge centre point for global strategies, exchange, and transportation, requiring the improvement of legislative frameworks and limits (Gulf News, 2020).

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2.6 Employee Virtual Work Performance

The employee virtual work performance systems that fall short to generate communication satisfaction amongst employees are going to not nurture job satisfaction or even affective organizational commitment despite the quantity of the relevant information that is broadcast (Doleman et al. 2020). The employee virtual work performance dispersed within organizations is going to be increasingly complicated along with globalization and working costs may increase when employees that are operating in different geographic sites locate it difficult to correspond (Anner et al., 2020). The employee virtual work performance may cause problems and support misinterpretation or even multiple misinterpretations of information by employees that can cause collective activity within organizations to become chaotic (Okechukwu et al. 2017).

The employee virtual work performance partnership could be harder to achieve, specifically when participants help various teams or even systems as well as the difference between merely working together as well as really teaming up along with one an additional (Loosemore et al., 2020). Employee virtual work provides real-time communication between individuals, but it lacks the aspect of direct interaction and additionally virtual collaboration might supply a selection dependable and convenient conference alternatives but system failure as well as equipment malfunction might restrict its own use (Toivonen, 2020). The employee virtual work performance is the type in obtaining traits done in an organization whether that is by means of computer-mediated communication or even in person since it supplies a vehicle enabling employees to choose, collaborate, as well as accomplish outcomes as developed due to the organization (Wang et al., 2020).

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The employee virtual work performance technology enables employees to hook up and this connectivity has allowed employees to communicate directly everywhere they are situated around the world, at marginal price (Parker & Grote, 2019). The employee virtual work performance developments like info communication technologies global ability pool, and a powerful business environment allow organizations to operate throughout further ranges; and the dawn of virtual firm resulted in a reorientation of business communication from the work schedule in communication platforms consisting of the incorporation of computer-mediated communication (Saiz & Salazar, 2017). The virtual employees need to have the skill of communication to engage their employees by using varied communication channels and the effectiveness of virtual employees depends upon effective communication and a supportive environment inside the firm and the much larger institution (Newman et al., 2020).

The employee virtual work performance and knowledge sending in between digital employees may minimize headache and time needed to have to complete a job and know-how development is among the very best vital characteristics for modern companies dued to the fact that proficiency is actually a crucial foundation of very competitive perk (Chen & Wei, 2020). The employee virtual work partnership is largely made use of in enterprise for its own innovation, performance, and capacity to obtain and even keep one-upmanships (Hameed et al. 2020). The association generally utilizes on the web alliance innovation to promote problem taking care of in between employees within the organization, and to team up along with however another company (Sokiyna & Aqel, 2020). The virtual collaboration boosts earnings scopes by improving working effectiveness and performance within the company,

either through introducing services or via the improved sharing of expertise via digital ways (Chehade et al. 2020).

Digital job arrangements have ended up being prevalent all over institutions, having said that the result of these agreements on the essential relationship in between manager and employee has actually obtained insufficient attention (White and so on, 2020). Research study signifies that a virtual environment affects relationships in between team members as well as mind-sets of employees toward their organization and for team, cohesiveness and instance identity are reduced and performance analyses of team members that reside in electronic teams as compared to in normal teams (Rezvani and the like, 2019). Furthermore, online employees often feel much less connected to their organizations than employees that operate commonly in a face-to-face environment (Wörtler and so on, 2020). The virtual environment impacts the top quality of manager employee relationships, trailblazers who neglect to conform and realize to these distinctions take the opportunity of estranging a building field of the work pressure (Gagné et al., 2019). Besides connecting with online and normal job relationships, one will surely presume depend on and acknowledged help to contrast between free-agent along with ordinary online relationships (Nye, 2020).

To keep an upper hand in the present truly advancing business environment, it should continually foster new ideas. Utilizing data and correspondence technology on a wide scale, the overall public sector has been a trailblazer in presenting creative techniques and setups for remote work performance in the computerized age (Granter et al., 2019). Emergencies and technology progressions have connected to change the

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manners in which that individuals work. The expression "virtual work" was first utilized during the 1980s to depict utilizing far off PC hardware to get to office supplies without driving a customary transportation. The main virtual work performances were then executed start during the 1990s, with the improvement of interchanges and the far reaching utilization of the Internet (Bryant, Albring, and Murthy, 2009). These virtual work performances previously had a portion of the key qualities expected to work along these lines, including social variety, portrayed errands, and geological dissemination of individuals, correspondence, and reliance of undertakings (Abarca et al., 2020). Many firms have needed to change in accordance with the new business elements achieved by the advanced time to contend and get by in overall business sectors. With the quick progression of advancements like distributed computing, it is as of now not important to have actual servers, programming, and equipment foundations in the organization workplaces (Baard, Rench, and Kozlowski, 2014). All things considered, many cycles are presently finished by getting to individual hardware or terminals (PCs, and cell phones) associated with an inexorably quick Internet organization. This virtualization of organizational life and the advanced change of work relations remain closely connected. Virtualization technology makes all of this doable (Brahm, and Kunze, 2012).

On-going examinations have analysed how HR view distributed computing, how significant it is in help applications, and what online work preparing has meant for employee perspectives (Huang et al., 2015). Since it is turning out to be less significant for employees to be available at similar area, the advanced virtualization of already actual technology assets is likewise happening at the degree of HR

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(Alsharo, Gregg, and Ramirez, 2017). This proposes a huge issue for the new electronic administration of colleagues' work performance who are topographically more far off. Virtual work performances were at first evolved to work with cooperative creation and advancement among worldwide or provincial specialists who missing the mark on chance to venture out to finish the undertakings' specific responsibilities (Bresnahan et al., 2012). Online joint effort is currently a typical method for working for public organizations and comes all the more normally for global or provincial organizations as virtual work performance has progressed. The idea of virtual cooperation between employees, or virtual work performance, involves a work performance utilizing cooperative virtual technology while working from a few actual spots (Acemoglu, Daron, Autor, and David, 2011). Because of the turn of events and development of the advanced time concerning the speed of media communications, the force of PC gear, and the simplicity of variation to the utilization of virtual technology in crafted by computerized locals (brought into the world starting around 1990), as well as advanced travelers, this methodology has encountered consistent development throughout recent years (Baartman, and de Bruijn, 2013). Be that as it may, because of virtual work performance's absence of development toward the beginning of the twenty-first 100 years, organizations were questionable about the adequacy of this technique for working, making it challenging to have confidence in virtual work performances (Henseler, 2017). Studies directed in the mid-2000s uncovered a significant disappointment rate and a horrid level of virtual work performances that prevailed with regards to accomplishing their targets. Things had not fundamentally changed even a couple of years after the fact. Critical execution challenges with virtual work performance were referenced in 2004. (Bormann, Knutson, and Musolf, 1996). He et al. (2013) research work discovered

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that most members accepted up close and personal commitment was more useful than virtual correspondence, and that portion of the respondents felt overpowered and dazed by cooperation advances. Despite the fact that, this happened a couple of years prior, and as technology created and organizations turned out to be more developed using virtual performance instruments, these early decisions from the turn of the century were not generally viewed as being valid (Zhang and Kathryn, 2010). Utilizing worldwide programming work performance, a later report from 2010 found that really overseen virtual work performance utilizing virtual coordinated effort can surpass eye to eye work performance. Moreover, various explorations proposed that teaming up on virtual or somewhat dispersed work performance could help labourer proficiency. Thusly, it's vital to comprehend what could make a virtual work performance produce better performance results than an up close and personal work performance (Hargadon and Bechky, 2006). Various explorations that summed up input factor models, their collaborations with different variables isolated into socio-close to home and errand situated processes, and ultimately their cooperation's with yield factors have offered the arrangement.

Considering the pandemic and the contemporary computerized time, the significant objective of the exploration is to look at how critical viewpoints examined in the writing connect with each other through performance examination (Runco, 2004). The beginning of remote work in a virtual work performance is initially teleworking, notwithstanding the previously mentioned triggers of virtualization of organizational life, the computerized change of cycles, and the interrelations of partners as co-makers of significant worth. Considering the previously mentioned factors, the way that people are living in a rapidly growing computerized age and that a pandemic has

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made many individuals embrace remote work, and collaborating with an effective way to deal with limit and moderate the speed of disease spread (Rice, 2016). A gathering of people or partners cooperating across geological limits and perhaps various time regions while participating on an equivalent venture and intensely using data and correspondence innovations is alluded to as a virtual work performance. Obviously virtuality, which means a common objective and suggests physical and worldly distance between individuals, is one of the essential qualities (Khan, 2020). The cooperative utilization of technology for work is one more pivotal part of virtual work performance that separates it from customary up close and personal work performance. The advancement of virtual technology in this computerized period, along with the propensity toward globalization, has prompted this (Christensen, & Lægreid, 2020). The topographical scattering that accompanies virtual stir performances definitely raises a few social contrasts and makes framing social connections really testing. Every one of this prompts various issues with relational connections and gathering correspondence. The writing has taken a gander at various perspectives and stages that affect virtual work performance. These elements and stages have brought about a few models for investigating and connecting them to performance (Sánchez, 2017). Virtual work performances can in various models, going from more conventional to more contemporary.

Virtual work performance is inspected by some at the administration level and by others as a methodical Input-Process-Output (Mittal, & Dhar, 2015). This last model recommends changes to the model for breaking down virtual work performance. Based on before models checked out at eye to eye work performance. The qualities that significantly affect performance are picked and, thusly, are examined in the

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writing. Research studies inspect the elements that impact virtual work performance for the performance executive's models (Zhang, Gong, and Zhang, 2017). The different phases of the performance executive's models model, its adjustment, the factors delegated Inputs (associated with trust and correspondence), Processes (task-arranged and socio-close to home), and Outputs (performance). The characteristics of the errands that will be produced and co-made in a circulated way are investigated comparable to correspondence, as seen in virtual work performance models (Santoro, 2018). The connection among correspondence and task type and what it means for work performance have been concentrated on in the writing. It is critical to take a gander at the connection between the idea of the errand and the viability of correspondence that impacts work performance since virtual work performance generally depends on correspondence innovations to organize their work (Ayyagari, Grover, and Purvis, 2010). In the writing, task vulnerability has been conceptualized utilizing a few undertaking intricacy factors. Inconstancy, homogeneity, consistency, intricacy, and occupation analysability are a couple of the aspects inspected (Yuan & Woodman, 2010). By integrating the parts of occupation variety and undertaking analysability, the Brynjolfsson, and Lorin (2000)'s proposed model of data handling is exhaustive and effectively addresses the idea of virtual work performance. Trust is viewed as authority, soundness, and work performance strengthening in virtual work performance models (Scott, and Hunsaker, 2005). As indicated by one definition, initiative is the point at which an individual motivates others to make a move (Ballantine, Ferguson, and Ronald, 2013). Initiative is a significant organization between a pioneer and their devotees who work to execute changes to serve the two players. Performance in virtual work appears to likewise be impacted by character and correspondence qualities, which can support result, fulfillment, and drive (Gera

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et al., 2001). Clearly initiative is urgent for virtual work performance. As indicated by one review, correspondence affected who turned into a pioneer. The Chakrabarty, and Chand, (2016) found that what individuals imparted meant for who turned into a pioneer. The effect of the type of acknowledgment a pioneer utilizes to empower employees has likewise been researched in different examinations, alongside pioneer part trade, perspectives on steady administration, influential positions, and multifaceted authority (Bynander, & Nohrstedt, 2019). Administration conduct and traits are two of the most well-known points in research on virtual work performance authority. Here, the exploration has taken a gander at both moving and conditional initiative characteristics (Schepers et al., 2011; Coppola, Hiltz, and Rotter, 2004; Wrzesniewski, 2003).

The viability of virtual work gives off an impression of being impacted by character and correspondence qualities, and it can raise performance, fulfillment, and inspiration. Many researches have taken a gander at the connection among initiative and virtuality and found that when the pioneer is geologically eliminated from the work performance (Harrison and Rouse, 2015, Bormann, et al., 1996), the individuals from the work performance are more happy with their work performance and pioneer and accept that their chief is better ready to disentangle messages. Chen, Mathieu and Bliese (2004) found that while virtuality worked on the relationship between underlying scaffoldings and performance, it decreased the connection between progressive initiative and performance. Clearly virtual work performance is pivotal (Khaleej Times , 2020). Since they influence how a work performance answers hardships and eventually changes with them, they can essentially affect how an organization capabilities. Articles on work performance adaption study show this

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(Wilson, M. and Greenhill, 2004). As indicated by exploration, conventional initiative methods of reasoning are appropriate for a virtual group (Carmeli, Gelbard, & Palmon, 2013). A few characteristics of vote based and ref initiative styles make them ideal for virtual groups. The need for various meetings to acquire agreement could be one disadvantage. It is testing and tedious to hold gatherings for each choice in a virtual group (Hew, & Brush, 2007). Considering that this initiative style obviously characterizes colleagues' obligations and obligations, functional administration might be a savvy decision. The absence of correspondence will likewise be decreased since the pioneer makes the systems and organizational designs plain to see (Gruber, Gelman, & Ranganath, 2014). The colleagues' feedback and obligations might be somewhat not as much as what they would need, which is a disadvantage of this sort of initiative for virtual groups. Since it permits the colleagues a ton of opportunity and makes them responsible for their work and results, instructing is ideal for virtual groups (Woo, 2020). While working in a virtual group, colleagues can characterize their own objectives and advance freely. Be that as it may, there are sure difficulties with this administration style too. Since the group chief lets colleagues make and utilize their own, the group's methods, designs, and obligations aren't dependably precious stone self-evident (Hirst, Van Knippenberg and Zhou, 2009). Thus, the virtual group's prosperity can be somewhat hampered. The actual distance between colleagues can be changed over into a mental distance between them, as indicated by research in conventional groups. As indicated by this rationale, the virtual group's actual scattering might ruin attachment (Woodman, Sawyer, & Griffin, 1999). While working in a virtual group, colleagues can characterize their own objectives and advance freely. Notwithstanding, there are sure difficulties with this initiative style as well. Since the group chief lets colleagues

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make and utilize their own, the group's systems, designs, and obligations aren't consistently gem self-evident. Subsequently, the virtual group's prosperity can be marginally hampered (Wieser, 2020). The actual distance between colleagues can be changed over into a mental distance between them, as per research in customary groups. As indicated by Dillenbourg, Järvela, and Fischer, (2009), the virtual group's actual scattering might impede attachment.

2.7 Employee Virtual Work Performance Approach during Covid-19 Crisis

The impact of work-from-home (WFH) human asset (HR) rehearses on educator performance in the difficult Covid ailment 2019 conditions (COVID-19). Employees advanced education establishments made up the review's populace (mentioned by Bodin et al., 2019). The review filled an information hole on the impacts of various HR rehearses utilized by HR authorities while working from home during a lockdown to stop the spread of COVID-19. Preparing, performance surveys, profession arranging, employee contribution, set of working responsibilities, pay, and determination processes in HR significantly affect educator performance (Greenhow, Robelia, & Hughes, 2009). Moreover, it exhibits that there is a huge positive relationship between's the two factors. Chopra, (2008) s decisions offer a guide for improving HR systems to help great performance by teachers in the advanced education industry while working virtually. Working from home has become more ordinary because of any emergency (Rothwell, & Whiteford, 2009; Gong, Huang, & Farh, 2009; Clark, 1995). Most of the workforce is comprised of human resources, and the requirement for additional hours caused an adjustment of the elements of the workplace. Concentrates on creativity in have shown that human asset (HR) rehearses emphatically affect employee performance (Peñarroja et al., 2013).

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Employee performance can be connected with various HR strategies. Pakistan has been alluded to as an under-explored country concerning HR the executives (HRM) rehearses in light of the fact that it is an emerging country (Hertel, Geister, and Konradt, 2015). Organizations embraced the work-from-home culture during COVID-19 to get by, and it increments employee efficiency as well as permits greater adaptability in work courses of action and further develops work-life balance. One more concentrate by Chesley (2014) analysed employee performance-related HR practices, for example, profession arranging, performance assessment, preparing, pay, and employee support, albeit the review was just led in one city and public organizations (Lu, 2015). Any organization's performance depends on the performance of its employees, which is evaluated by HRM (Gong, Zhou, & Chang, 2013). An employee's still up in the air by what the person does or doesn't do. This changes employee performance into teacher performance as a variable on account of organizations (Salisbury, Carte, and Chidambaram, 2006; Campion, Medsker, and Higgs,1993; Zuboff, 1988).

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Employees have conformed to HR rehearses while working from home, and HR authorities have taken on HR techniques from home. The on going's review will likely inspect the impact of WFH HR rehearses on personnel performance and decide if these practices are connected with workforce performance (Rosenthal, Boin, & Comfort, 2001). The review's discoveries give a significant commitment to the group of earlier writing and offer HR chiefs guidance on the best way to further develop processes in these difficult times (Anderson, Potočnik, and Zhou, 2014). HRM is an arranged and extensive way to deal with dealing with an organization's most important resource its employees who separately and by and large add to the

fulfillment of its objectives (previously mentioned by Raw, Sawyer, & Griffin, 1993). There was commotion when the school system suddenly changed to the internet based medium. The advanced standards and reliability have brought on some issues for understudies similarly that they have for the web-based educating workforce (Hoch, and Kozlowski, 2014). Directors are utilized by schools and universities, which have a somewhat lower level of the board than colleges. While arranging, planning, and dealing with the workforce are assignments that instructive foundations do, they could conceivably have a coordinated HR office (Rosenberg, 2006). Putting forth the mission and objectives, motivating the workforce, choosing the most proper standards, and different obligations fall under the domain of top administration or the HR director (Khaleej Times, 2020). Enrolling and choice, preparing and improvement, straightforwardness, employee benefits, employee impetuses, pay and assessments, consistence, and end are instances of the best HR rehearse. The test of keeping up with organizations' consistent activity — which implied a world without direct connections started as the public authority's most memorable orders seriously forced social distance (Lowry et al., 2010). The change is unavoidable in light of the fact that to the COVID-19 pandemic. Social confinement was the main counteraction measure that the WHO suggested (Mahande, and Akram, 2021). Schools, universities, and colleges were shut in each country. Furthermore, the public authority deferred addresses, temporary positions, tests, and placement tests. Since changing in accordance with the automated schooling system was troublesome, it got the two understudies and teachers off guard (Lawless, & Pellegrino, 2007). Change takes time, yet the plague assisted India's school system with growing. For the two understudies and educators, online schooling has shown to be a lifeline. They utilized internet based devices including

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Zoom, Google Meets Facebook, YouTube, and Skype to offer illustrations live by means of video conferencing and give homework to understudies (Holmberg, & Rothstein, 2012). There are technological bunches that help interfacing and illuminating gatekeepers, teachers, and even understudies about class plans (Rico, and Cohen, 2016). The best choice is online training, which is certainly ideal than concentrating on nothing by any means. Driscoll (2005) has directed an experimental review to look at the segment factors that influence HR rehearses, the effect of illustrative factors on organizational responsibility, the connection between HR rehearses and organizational responsibility, and to make proposals for further developing HR practices and responsibility levels to all the more likely comprehend what HR rehearses mean for staff responsibility (Gong, Huang, and Farh, 2009). Rebuilding the personnel's devotion and training staff's type to work on the norm of guidance and understudy satisfaction is vital (Shalley, Jing, & Oldham, 2014). It is simply sensible to say that assuming an organization gives its staff the best guidance and working circumstances, understudy performance will be promptly affected. Each firm necessities a coordinated HR framework to be steady and thrive. Any organization's spine, HR (HR), upholds every organizational capability. Preparing and improvement, performance surveys, teamwork, HR arranging, compensation, wellbeing, and wellbeing are instances of HRM exercises that assist employees perform better by fashioning a mental association with the organization that holds them back from stopping (Ren, Deng, & Liang, 2018). Advanced education establishments need organizational responsibility since teachers support understudies' advancing as well as assist them with developing by and by. For teachers, working remotely has its advantages and downsides (Altschuller, and Benbunan-Fich, 2010). They can effectively execute WFH assuming the teacher and

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the school approach it properly and the two players know about the conditions. In spite of the distance, it is critical to further develop correspondences to forestall silly issues (Holtgrewe, 2014). A useful performance the executive's framework supports evaluating and upgrading both organizational and individual performance. Performance audit can't be kept away from by the organization on the grounds that doing so will prompt unfortunate business choices. Because of the pestilence, recruiting and choosing new employees was deterred, especially in confidential ventures to decrease inefficient spending (Rehman et al., 2010). It was found to be hard to oversee staff performance. Employees attempted to foster feasible objectives and frequently neglected to meet recently settled goals (Shalley, & Zhou, 2008). It was hard to follow performance, and sorting out the different assignments seemed bulky. Thus, the enterprise quit giving motivators, which affected pay the board. A few organizations went excessively far by constraining workers to go on vacation, and others were mulling over pay decreases. The pandemic greatest affected private organizations. Employee inspiration is destroyed when an organization stops remunerating its staff. COVID-19 can in any case influence HRM practices. At the point when employees left organizations either unreservedly or automatically, enrolling and choosing new staff turned out to be really difficult. Employee preparing programs have lessened, and this troublesome performance the board is because of the trouble of observing employees at home. Ventures ought to utilize electronic HRM (EHRM) and look at their HR arrangements since occupations in public organizations are safer than those in confidential ones (Howlett, 2005). The COVID-19 pandemic has no closure date, and accordingly, instructive establishments were constrained to make do and embrace web based showing methods rapidly. They applied the simultaneous and no concurrent learning approach

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(Rapp et al., 2020). On the web or remote discovering that depends on face to face collaborations among teachers and understudies are known as coordinated learning. Offbeat learning, then again, happens through internet based stages without constant cooperation's. Online educators should expect the job of facilitators now that internet learning is a reality and go past just giving information to work on understudies' learning. Various modules in Singapore involved a free rendition of Zoom for web based showing methods like the open-source learning the executive's framework (Handel, 2008). Since the last part of the 1990s, HEIs have utilized virtual schooling systems to help understudy learning. To give and sort out data, run courses, which incorporates participation, evaluations, grade the board, and declarations, and give specialized devices, they laid out virtual schooling system stages. Three distinct types of applicable readiness are important for web based educating. The most common way of picking, introducing, and organizing assets starts things out. Second, every hour of online guidance requires arranging, and third, online guidance is definitely more debilitating than homeroom guidance (Ketelhut et al., 2010).

It involves dealing with an assortment of understudy prompts, incorporating partaking in voice-based conversations and checking both public and confidential discussion boards. Since virtual study halls have made another way for relatives, especially children or pets, to cooperate with understudies, speakers who work from home face different challenges (Weible et al., 2021). Mixed discovering that happens solely online is as yet an original instructing strategy. The objective of this change is to give each understudy, paying little heed to geology or whether they are under isolation, an equivalent chance to succeed (Huang, Kahai, and Jestice, 2010). Understudies find it trying to interface on the web. With the coming of internet

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learning, the capability of the educator has transformed from that of an instructor to that of an aide, facilitator, organizer, trigger, challenger, and guide.

Understudies need to practice more discretion on the web. More profound virtual framework reception and the formation of a duration-situated learning worldview are being constrained by COVID-19. Arranging content to meet learning targets and organizing understudy encounters are two different ways that duration is utilized in module creation. The last option is critical since it shows a harmony among educators and understudies (Raja and Johns, 2015). Online associations need additional work from individuals participated in request to peruse non-verbal or social signs such motions, articulations, tone, and voice pitch. The change to online review has without a doubt been exceptionally burdening. The modules prescribed empowering understudies to take part in conversations and gathering exercises since nothing can substitute face to face guidance (Hew, & Brush, 2007). The support hypothesis expresses that lead is a component of its result. Reinforces are the outcomes that happen immediately and raise the probability that a conduct will be rehashed. Zeroing in on individuals and conveying frequently were the significant HR issues of the year 2020. Human brain research directs that when endeavours are not recognized, an individual turns out to be immediately disheartened and quits investing extra-mile energy (Huang et al., 2015). The transition to online training has been unpleasant on the staff, and they merit sufficient support, regardless of whether it's just a single email of appreciation. According to Wei, Thurasamy, and Popa, (2018), on the off chance that there is a prize for the ideal way of behaving, individuals are more disposed to participate in it (Radaelli et al., 2014).

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By remunerating employees for acts that advance the organization's main goal, supervisors can rapidly change their way of behaving. The outcomes of far off HR methods on internet showing personnel will be adjusted accordingly. Technology can be utilized by speakers and educators to convey addresses (Worldometer, 2020). WFH offers adaptability in how undertakings are finished. This gets a good deal on transportation. In any event, when stress is an issue, the employee can without much of a stretch vibe settled in their own current circumstance, which supports efficiency. Work fulfillment that outcomes from this without a doubt elevates educator obligation to the organization (Hülsheger, Anderson and Salgado, 2009). Then again, losing work inspiration while working from home could adversely affect employees' performance. Also, the cost of working from home should be paid by the person because of the everyday development in web and power use. HR directors and bosses the same have been compelled to reconsider HR jobs and execute best practices. The HR division is vital in advancing individuals associations and fashioning associations with the workforce. The choice to permit an employee to work from home rests with HR (Ra, 2018). One of the achievements in this debacle on a worldwide scale is the general outcome of WFH. HR is accountable for rousing, teaching, and creating employees, normalizing technology use for useful work, and overseeing workplace connections considering evolving conditions. As per research, there is a huge relationship between's HR methodology and employee performance (Khaleej Times , 2020). Driving firm performance and institutional objectives is the top worldwide justification for laying out a performance the executive’s cycle, as indicated by the discoveries of Mercer's 2019 Global Performance Management overview. With individuals being decentralized for a long time to come, performance the board will keep on being troublesome, yet it won't be unimaginable. Performance the board has

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forever been troublesome face to face (Hunter, Bedell and Mumford, 2017). Working all the more intimately with staff to oversee vulnerability and performance assumptions is perhaps more critical than any other time as organizations adjust to their new typical (Purvanova, and Bono, 2019).

To make a more spry workforce, organizations have rolled out significant improvements to how they maintain that employees should work during the beyond couple of years. These progressions range from hot-desking to changing whole groups over completely to a distant workforce (World Health Organization, 2021). Be that as it may, working remotely is definitely not a clever thought to any organization, and in Australia, the level of workers who regularly work from home has been consistently ascending beginning around 2015, with around 35% of Australians previously doing as such before the COVID-19 flare-up. The sudden shift to a workforce that is fundamentally virtual has expanded comprehension of and solace with remote work for some organizations (Weible et al., 2021). There is a more prominent need to keep employees associated, drew in, and in accordance with needs as this is valid across a bigger scope of sectors than any time in recent memory. Organizations should recall that while the COVID-19 pandemic endures, employees should conform to new working circumstances as well as manage developing disengagement from their more extensive informal community, a disturbance to their customary day to day routines, and often a more noteworthy need to really focus on their families (Ketelhut et al., 2010). In our current reality where working from a distance and adaptability are fundamental and mentioned by the two organizations and employees, this has out of nowhere become just an investigate how employees will work from now on (Pridmore, and Phillips-Wren, 2011).

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Organizations should make new strategies for performance the board in a virtual climate since there are less day to day communications among supervisors and their employees (Ichniowski et al., 2013). These strategies for overseeing performance in a virtual climate depend on the 2019 Global Performance Management Study by Mercer as well as industry-driving procedures from organizations who effectively moved to a more remote or virtual workforce before the COVID-19 pandemic: How organizations characterize and evaluate achievement has been changed by COVID-19 (International Monetary system, 2020). Since it is more subtle the way that an employee invests their energy during the day, achievement will really rely on how well they add to results and how rapidly they can change their course when essential. Since it very well may be trying to evaluate project inputs while working electronically, for example, time spent, it is more critical than any other time in recent memory to give close consideration to item quality (Pitagorsky, 2007). The framework utilized by efficiency apparatuses is yield cantered instead of result cantered. The enterprise asserts that by utilizing this technique for assessment, their quarterly targets generally incorporate components they have unlimited authority over (Shin, and Jing, 2003).

Estimation of results instead of span of work will turn into the new standard as individuals work an ever increasing number of on plans that suit them (Jain, & Jain, 2017). With a tenacious spotlight on improving employee relations and an exhaustive cognizance of their capacities, new open doors might emerge (Javed et al., 2018). Employees can invigorate novel thoughts, make new items, get done with preparing, or find out about different features of the organization when they have more prominent capacity. Employees who have an interest or an expertise hole that the

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organization has found are ideal possibility for learning open doors during times of diminished use (Handel, 2008). They might have recently had the potential chance to take an interest. Someone can begin by requesting that staff individuals think of thoughts for working on the organization as well as by perceiving the abilities they need to fill to prevail over the long haul. Numerous organizations are setting up a half breed virtual model that mixes time spent at home and in the workplace as they shift focus over to the post-pandemic future (Jarrahi, and Sawyer, 2013). This rational decision comes after the pandemic's huge efficiency gains. In spite of the fact that creation might have expanded, numerous workers say they feel worried and depleted. Pandemic-style efficiency increments probably won't rearward over the long haul in the event that leaders don't address the reasons for employee dread. This is because of the way that nervousness is known to bring down work performance, adversely influence relational associations with co-workers, and cut off work fulfilment (Jenson, Fisher, & Taylor, 2011).

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Employees feel they haven't learned an adequate number of about their organizations' arrangements for working game plans after COVID-19, which is the undeniable wellspring of their trepidation (Dhanusha, 2021). Employees grumble that insufficient organizations have given explicit rules, rules, assumptions, and methodology, regardless of the way that many have expressed an overall expectation to embrace cross breed virtual work from here on out (Shuffler et al., 2010). Moreover, employees are worried because of the absence of remote-applicable subtleties. Regardless of whether their thoughts haven't full grown, organizational pioneers should connect with their staff all the more every now and again as they map out the way into the post pandemic world. Employee prosperity and efficiency

have expanded at organizations that have grown more natty gritty standards and techniques for the future workplace (Woo, 2020). Organizations that impart arrangements and practices that are more unambiguous and remote-important have greater development. Almost five fold the number of workers are probably going to report higher efficiency assuming that they feel remembered for more intensive correspondence (Simon, 2006). Pioneers ought to contemplate expanding the recurrence of their employee refreshes both to examine what has not set in stone and to make sense of what is as yet dubious on the grounds that talking about the future could impact performance results today. The work conditions and strategies, as they would see it, will advance the best degrees of efficiency, social cohesiveness, and prosperity (Boudreau, Gefen, and Straub, 2001). In their main five joint effort strategies, in excess of 33% of respondents positioned clear hours and assumptions for cooperation; a few other cooperation strategies (reported by Pieterse, Van Knippenberg and Schippers, 2021), for example, devices that permit employees on location to take part in distant gatherings and rules for documentation, likewise got a ton of help (as reported by Grimes, & Warschauer, 2008). Employees likewise put a high worth on joint effort devices, preparing for those innovations, and repayment for office sets for remote work. More over a fourth of all respondents positioned miniature network arrangements from little group exercises to a tuning in and answering methodology as their top strategies (Grosser et al., 2018).

2.8 Employee Technological Skills

The employee technological skills improvement affects employment and the loved one need for skills and while new products taken by product innovation favour new business activities, process innovation as well as the adoption of new technologies

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improves productivity to employee creativity (Aldieri et al., 2019). The employee technological skills repercussions of product innovation paired along with cost and revenue compensation procedures may countervail the displacement effect of process innovation (Barbieri et al., 2020). The employee technological skills a good relationship in between employee creativity as well as employee virtual work performance (Pitafi et al., 2020). Also, if innovation promotes job creation, it has two interrelated repercussions for the employee creativity one is the achievable rise of employee technological skills (Cetrulo et al., 2019). The employee technological skills taken the place of through technological change cannot locate need for their skills will probably come under long-lasting lack of employment or even a sequence of temporary low-pay jobs along with periods of joblessness in between (Rolandsson et al., 2020). The various other relevant outcomes is the modification in the relative need for employee technological skills encourages the complementarities between technology and skills, favouring the employment as well as earnings of the high-skilled workers (Mellacher & Scheuer, 2020). The relationship between technological change and employment as well as the economy concentrated its attention on the labour saving effect of innovation and the compensating mechanisms (Yuhong & Xiahai, 2020).

There is actually no contract on the clue of the relationship, but a lot of the investigation studies recommend a boost in the employee technological skilsl process innovation, through boosting work efficiency, has been actually differentiated with the settlement procedure created by product technology (Balsmeier & Woerter, 2019). The employee technological skills of product technology, the authors notice an increase in job (Cetrulo et al. 2019). The employment-enhancing or even

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displacing impact of advancement has been actually featured by an adjustment in the skill make-up of the workforce and using new innovations usually calls for even more skills and learning (Eichhorst et al., 2020). Furthermore, instructed and skilled workers possess a member of the family advantage in the application of brand new technologies (Lund & Karlsen, 2020).

The documentation of innovation ability complementarity, which is actually the skill-biased technological adjustment, where technological modification is taken note of to favour skilled workers (Shen & Zheng, 2020). The technological adjustment still favoured high-skilled employees, but the requirement for middle skilled workers decreased about the reduced proficient, creating a polarized job (Mellacher & Scheuer, 2020). The developments in robotics, and also innovations in finding out power and expert system, integrated alongside the reduce in the fee of pc funding, nourished the contemporary substitute of laborers carrying out program work prone of being actually automated (Higgs, 2020). The strategy offers the technology-driven illustration to the middle-skilled workers displaced through devices saw their work amount decline as well as existing most recent documentation between employee virtual work performances, and employee creativity (Vermeulen et al. 2018).

The earlier conversation, nonetheless, symbolizes that both modern technology and job association impact the tasks to come to be accomplished on one palm, association variables could nab portion of the effect of technology on skill-set criteria, which is actually absolutely not otherwise nabbed as a result of the occupation fakes and also the personal computer use variables (Goos, 2018). The essential competencies identified as a ton of critical for a blooming online labourer matched throughout

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study compositions as featuring being self-motivated, self-efficacy, disciplined, having reliable communication along with opportunity keeping an eye on skill-sets, being results-oriented along with technically seasoned (Maher & Bedawy, 2015).

The employee preparation phase is giving technological tools to all virtual employees and promising they possess an area in their push-button control work environment to function successfully (Manko, 2020). Possessing stated that, the employability ability is a staff of vital skills instilled in everyone therefore as to generate effective labour force and this is actually matching alongside individuals that have powerful attributes like a greater feeling of self, impressive, effective, capability complete, realistic, a challenging feeling of decision, in addition to imaginative (Gregory, 2020).

The capacity of the individuals from a functioning gathering to coexist with each other is significant for prosperity and errand performance, as indicated by concentrates on virtual gathering conduct (Cascio and Montealegre, 2016). It has been exhibited that the meaning of cultivating such intra-bunch attachment is especially significant in circumstances when individuals are new to each other, like newly made gatherings or when individuals are distributed to new project groups (Griffin, 1997). For breaking down bunch union in customary and mechanically based groups, the Symbolic Convergence Theory offers a rich hypothetical structure. Task union is one kind of gathering cohesiveness and it happens when individuals remain together on the grounds that they are profoundly put resources into the gathering's undertakings (Weible et al., 2021). Individuals who relate to the gathering's errands and find them innately fulfilling and important will cooperate more durably. Successful correspondence and close coordination are important for

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virtual groups with individuals working for a few organizations, various sectors of the economy, and, surprisingly, unique geographic areas to lie out bunch attachment (Ketelhut et al., 2010). Various examinations have upheld the connection between group union and confidence in the work environment. At the point when the group chief recognizes colleagues emphatically, it enables them to partake in direction. At the point when a colleague feels enabled, they are bound to trust their chief and partake when they are requested feedback. After handling them, an individual chooses relying upon the proposals (Hebbar, 2020). A few prior examinations proposed that groups can be enabled in four distinct ways: power, which is the aggregate conviction that a group can be viable; importance, which is the degree of care that colleagues have for their errands; independence, in which colleagues have the opportunity to simply decide; and influence, which is the degree of feeling that colleagues have for the commitments that their undertakings make. Dulebohn, and Hoch, (2017) investigated what group strengthening meant for how well virtual work acted in Islamabad's telecoms firms. As per the review, there is a connection between group strengthening and viable cooperation in telecom groups. Collaboration, coordination, trust, cohesiveness, exertion, shared help, group struggle, work fulfillment, and quality viability are factors that influence how well a group performs. Koohang et a. (2009) investigated that cutting edge organization's group performance and the job that eye to eye communication played as a go-between. They found that group strengthening is well connected with both the interaction improvement and consumer loyalty aspects of virtual group performance. As per the Crisp, and Jarvenpaa (2013), strengthening in a virtual group can replace a solitary group pioneer's authority obligations. The colleagues' activities because of the pioneer's strengthening are right away and well attached to trust. Seen as a quality

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rouses certainty. Responsibility for strengthening must be achieved when there is a typical vision and open, continuous correspondence between the group and the pioneer (Lei, Zhou, and Lei, 2011). Models normally research correspondence and the social-profound elements of confidence to look at task processes (Limburg, and Jackson, 2007). Performance is likewise remembered to be impacted by the level of virtuality and the connections between tasks.

Correspondence issues can likewise emerge in blended groups, where a few individuals work from a similar actual region while others don't. Colleagues that are actually near each other often have further discussions than they do with colleagues who are farther away, which prompts struggle and subverts the group's viability (Pemsel, & Muller, 2012). Activity methods that expect the productivity and adequacy of the group should incorporate correspondence, cooperation, and data trade as essential parts. One more review found that group coordination diminished as virtuality rose, yet that levels of trust to some degree alleviated this impact. Introductory eye to eye contacts ought to advance performance, as per early concentrate on virtual work performance. Dominic, and Francis, (2013) applied this logic to creativity and differentiated the adequacy of different types of early correspondence. Research on how, why, and under what condition trust arises is still popular. Results showing that trust well affects virtual work performance support the meaning of trust. For virtual work performance, correspondence style, immediacy, straightforwardness, and input all influence trust (Boud, 2012). Later exploration shows that early correspondence and a decent tone are probably going to cultivate quick trust, which might further develop performance by helping part certainty and thusly trust. The impact of overall virtual work performance on the development of

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trust has been examined in a few examinations. The trust between eye to eye groups and virtual work performance was concentrated between groups that were socially homogeneous and those that were socially heterogeneous, and no detectable contrasts were recognized. What's more, Gilson et al. (2015) found that when everybody's exercises were noticeable, trust was not a huge determinant in that frame of mind in a longitudinal investigation of overall virtual work performance. At long last, trust in globally scattered groups diminished the troublesome performance effects of part variety.

2.9 Conceptual Framework

This study proposed a model of the role of employee creativity factors on the employee performance of through virtual working during a crisis in employees of the Federal Authority for Government Human Resources (FAHR), with different relations between employee technological skills towards explaining employee virtual work performance.

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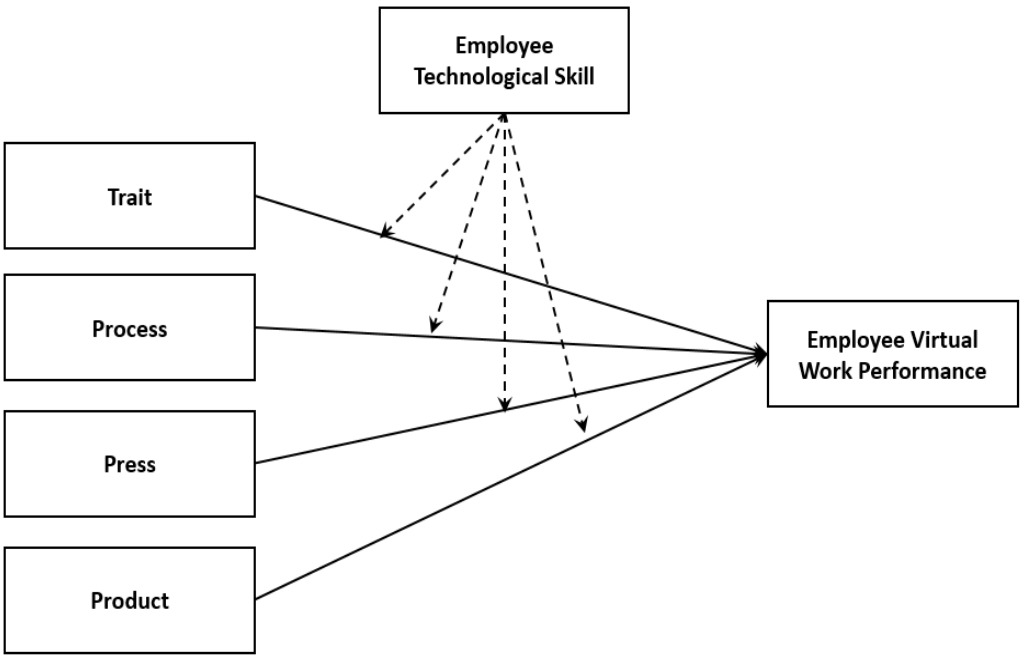

Figure 2. 1 Research Framework

2.10 Research Hypotheses Development

This model consists mainly of four main independent variables, which are the trait of creativity, process of creativity, press of creativity and product creativity. Along with one moderator and one dependent variable. This model is to explain the change of employee virtual work performance by measuring the impact of employee creativity factors on employee virtual work performance. Employee technological skills as a moderator; which according to many scholars would have a positive impact on this type of model (Analytica, n.d.; Carbone, 2020; Cubric, 2019; Loimusalo, 2019; Mucha et al., 2020; Passaro, 2019; Ruder-Hook, 2018; Sjøberg, 2019).

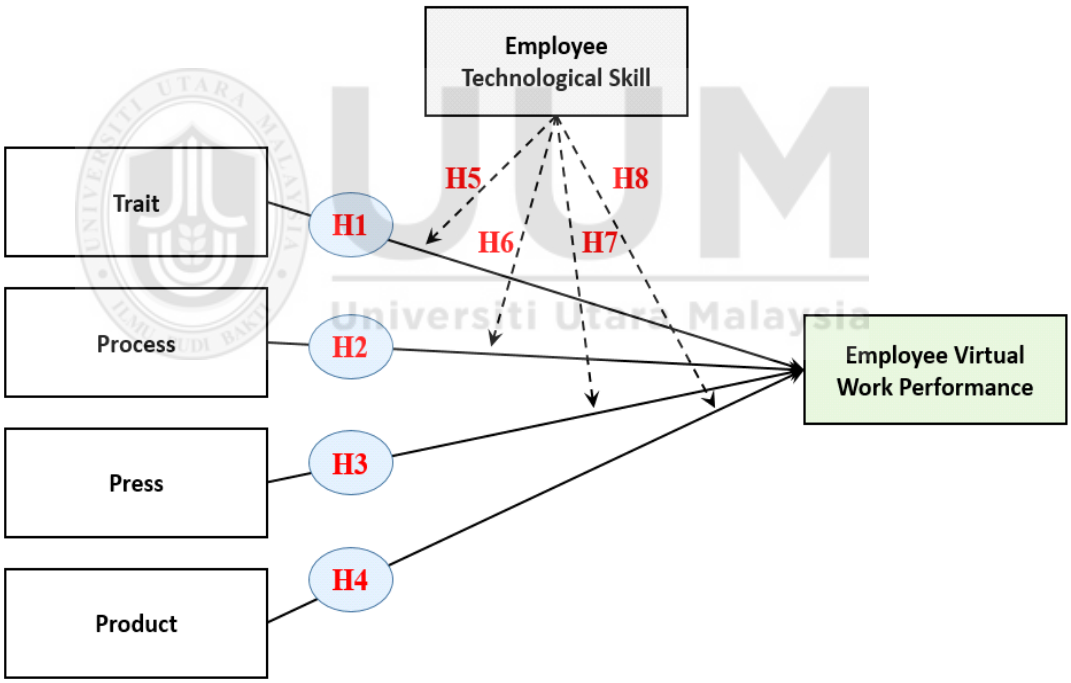

Figure 2. 2 Research Hypotheses

2.10.1 Trait of Creativity and Employee Virtual Work Performance

Creativity is actually associated with an openness to experience, ideas, attention deficit disorder, impulsivity, contumacy, important reasoning, accuracy and

conscientiousness all interacting in tandem (Zakaria, 2017; Zuluaga & Albert, 2018). It is this perfect storm of contradicting traits mixing at once which makes these achievers seem eccentric (Konak et al., 2017; Stinson, 2017). Some researchers that have carefully studied trait of creativity they found out that trait of creativity has a positive impact in increasing employee virtual work performance (Dumitraşcu-Băldău & Dumitraşcu, 2017; Lukić & Vračar, 2018; Panteli et al., 2019; Stinson, 2017; Strydom & Elvin, 2016; Webster & Wing-Fai, 2017; Zakaria, 2017).

Creativity is the most important factor in encouraging innovation, increasing competitiveness, and gaining a competitive advantage in the marketplace. And creative performance is the most important factor in encouraging innovation, improving competitiveness, and gaining a competitive advantage for businesses. As a result, in the subject of Organizational Behavior Science research, creativity becomes an outcome variable that is distinct from standard performance outcomes, and people pay particular attention to it. Although creativity is often viewed as the initial step of innovation in an organisation or career, it focuses more on the development of fresh and beneficial ideas or viewpoints, whereas innovation focuses more on ideas and viewpoints. However, experts point out that creative performance is a continuum with numerous levels, and past studies have failed to identify the process, conflating the components that influence the generation of original ideas. The internal need of company administration is to learn how to boost creativity and its impact on performance.

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Amabile's component theory offered the theoretical foundation for investigating the causes of creative performance in organisations. According to Woodman, Sawyer, and Griffin's interactive theory, the interaction of personal and situational elements influences creative performance. Then there's an empirical research to see how the influence grows over time. Despite the fact that there are several theoretical and empirical research on the causes of creative performance in the literature, there are still some uncertainties and flaws.

Trait of creativity is making the firms more flexible in facing the problems and daily work including the virtual work (Dumitraşcu-Băldău & Dumitraşcu, 2017; Konak et al., 2017; Webster & Wing-Fai, 2017). Based on that the researcher is expecting a significant impact of the trait of creativity on employee virtual work performance. This hypothesis is same and aligned with other hypotheses in others studies (Alwan, n.d.; Dumitraşcu-Băldău & Dumitraşcu, 2017; Lukić & Vračar, 2018; Panteli et al., 2019; Primorac, 2016; Strydom & Elvin, 2016; Webster & Wing-Fai, 2017).

- Hypothesis1: Trait of creativity has a significant impact on employee virtual work performance.

2.7.1 Process of Creativity and Employee Virtual Work Performance

The process is actually the show of making brand new links in between aged ideas (Iurato & Ruta, 2016; Knapp, 2016). Therefore, we may say creative thinking is the task of recognizing relationships in between principles (Meil & Kirov, 2017; Zhu & Lee, 2017). One way to technique innovative obstacles is actually by adhering to the five-step process of 1) party component, 2) deeply persuading the product in your mind, 3) stepping away from the problem, 4) enabling the suggestion to follow back

to you typically, and 5) screening your suggestion in the real world and readjusting it based on comments. Being actually innovative isn't about being the first (or only) individual to think about a suggestion. Regularly, creativity has to do with attaching concepts (Imran et al., 2019; Wong et al. 2020).

Some researchers that have carefully studied process of creativity they found out that process of creativity has a positive impact in increasing employee virtual work performance (Eisenberg & Krishnan, 2018; Imran et al., 2019; Knierim et al., 2018; Wong et al., 2020; Zhu & Lee, 2017). Process of creativity is providing the organized steps and roles that will enable the firms to perform better including the virtual work (Guinalíu & Jordán, 2016; Straßmann et al., 2019). Based on that the researcher is expecting a significant impact of the process of creativity on employee virtual work performance. This hypothesis is same and aligned with other hypotheses in others studies (Duh & Büdefeld, 2018; Guinalíu & Jordán, 2016; Kovács, 2017; Makarius & Larson, 2017; Raghuram et al., 2019; Straßmann et al., 2019).

The essential method for empowering advancement, supporting seriousness, and acquiring a benefit on the lookout for organizations are imaginative performance (Baer, 2012). Moreover, the vital driver of development, expanded seriousness, and upper hand for organizations is innovative performance (Bessen, 2017; Weick, 1990). In this manner, in the field of Organizational Behavior Science research, imaginative performance turns into the result variable that contrasts from customary performance, and individuals begin to rapidly give specific consideration to it (Whitfield, 2000). The inside interest of business organization is the means by which to upgrade imaginative performance. Biggs, and Tang, (2011)'s hypothesis filled in

as the hypothetical starting point for the exploration of the precursors of imaginative performance in organizations (Ajmal, & Koskinen, 2008; Amabile et al., 1996). As per the intuitive hypothesis set forward by Autor et al. (2003b), individual and natural elements collaborate to influence inventive performance. Then, an exact review was led to look at how progressively the impact expanded (Greenan, 2003; Simons, and Peterson, 2000). The reasons for inventive performance have been the subject of a few hypothetical and exact examination, but there are as yet critical vulnerabilities and blemishes (Makoul, and Curry, 2007). Although imaginative performance is much of the time considered to be the start of development, it puts more noteworthy accentuation on the production of unique and valuable thoughts or conclusions than development does (Ford, 2015). Scientists cause to notice the way that there is a continuum of various levels inside imaginative performance and those previous examinations didn't obviously distinguish the cycle, confounding the factors that impact the age of original thoughts (Jonassen, & Land, 2012). Past examination has zeroed in more on the level of individual creativity, overlooking the investigation of gathering and organizational creativity, which has restricted the immaterialness of the discoveries (Frey, and Osborne, 2015; Bell et al., 2002). Bunch level imaginative performance can impact the degree of development across the whole venture, and endeavour level inventive performance can impact the degree of advancement across the whole business, area, and, surprisingly, the country (Bartel et al., 2003).

Despite the fact that there are unmistakable degrees of homogeneity and isomorphism related with the idea of imaginative performance (Spector, 2006), it is as yet hazy what elements affecting individual innovative performance mean for bunch and organizational inventive performance (Alamri, Lowell, Watson, and

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Watson, 2020). On the cooperation of individual and ecological impacts on innovative capacity, different scientists have shifted results and interior instruments. Inward inspiration is invigorated by a remotely uplifting climate, and interior inspiration improves inventive performance (Manning, 2014). At the point when workers are more propelled to step up to the plate, this impact is more grounded. As indicated by specific investigations, a steady initiative input climate could support the shift from outside to inside inspiration and upgrade objective self-consistency (Black et al., 2001). The improvement of imaginative performance is energized by creativity's certification, which is to a greater extent a character quality. Brain science research on creativity is where the investigation of imaginative performance in organizations started (Becker, Hodge, & Sepelyak, 2010). Numerous scholastics use the idea of imaginative performance as opposed to creativity to all the more plainly delineate the meaning of creativity in the organization and to all the more likely mirror the results of creativity in the workplace Boin, Stern, & Sundelius, 2016). Notwithstanding the way that most of scholastics agree that oddity and utility of items are fundamental parts of imaginative performance, there are numerous unmistakable meanings of innovative performance (Piccoli, Powell, and Ives, 2004). Some focus on the maker, others on the technique and cycle of creation, but others on the outcome and the climate. Bell, Villado and Lukasik (2011) characterize imaginative performance as the individual, employee-level creation of helpful, new merchandise, cycles, techniques, and thoughts that increase the value of the firm. In spite of the way that this definition has gotten far and wide help from scholastics, it is at times ignored, stacked with a few ideas, or restricted in its centre with regards to estimating imaginative performance. A continuous focal worry in the field of organizational review has been the elements that influence word related results

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(Alhassan and Adam, 2021). Numerous organizations presently view creativity as a critical component in the turn of events and outcome of their undertakings as well as their general performance. Thus, workplace creativity keeps on being very significant (Jonathan, Ronald and Gayle, 2019).

The Black et al. (2010) discussed that one of the key factors that permits organizations to succeed and contend with different organizations is the creativity of their employees. Individuals who are perceived as certifiable trailblazers are compensated working all the more every now and again. Understanding the ideas of creativity and innovation is critical for all employees. As indicated by much exploration, development is the introduction of those thoughts, while creativity is the expertise or ability to communicate unique and new thoughts. Taking care of innovative issues gives the serious prevalence that each organization endeavours over obtains. Scientists have been reading up creativity for over 50 years (Wieser, 2020). Creativity in the workplace is significant for the two employees and undertakings. Technology is rapidly taking over in the 21st hundred years, so it's vital that all employees have such specialized and imaginative mentalities (Spencer, 2018). The economy is profiting from it too. It is essential to furnish employees with critical thinking open doors that will challenge them intellectually. Employee creativity and receptiveness to new difficulties are presently fundamental characteristics. Imaginative organization ideas assist organizations with standing apart from each other. In the present society, each organization requests creativity. For an organization, it is likewise urgent to stress creativity (Bormann, 1996). To urge employees to share thoughts and think basically, organizations ought to likewise cultivate a culture of remunerations and recognition. Boin, (2009) asserted that

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sharing of information is critical for a person's inventive performance. In fact, the scattering of data encourages advancement. Past hypotheses have guaranteed that sharing information can upgrade creativity through three unique cycles (Spitz-Oener, 2006). For one thing, offering mastery to co-workers is generally a valuable growth opportunity. It's critical to completely understand something oneself prior to endeavouring to make sense of it legitimately to one's co-workers. Sharing information consequently offers a fabulous chance for workforces to incorporate their insight related mastery (Heffner, 2004). Beneficiaries of information can give the information sharer convenient criticism on restraining and utilizing unique information (Stone, 2019). Thusly, the sharer will be better ready to understand the main things, concoct imaginative ways of interpreting past hypotheses, or potentially integrate prior distinguishing pieces of proof into another contract. Information the executives' capability in development. During the information sharing cycle, contrasts in understandings and information might be found (Hew, & Brush, 2007). The extension of novel ideas is presumably made conceivable by these distinctions. Basically, information sharing enables the individuals who to keep their insight and abilities current an important condition for the improvement of novel thoughts by trading data and imparting thoughts. Scientists have exhibited in a new report that employees with an active and peppy demeanour like to share their skill more, which helps development. Scientists have suggested that businesses consider an employee's readiness to realize while fostering a work for them (Subramanyam, 2013). As some remarkable therapists have found that receptiveness to encounter is a character highlight that sensibly influences an employee's creativity. It is one of the five qualities of an individual's personality, and prior research has inspected what it means for an employee's ability for creativity (Mao, 2021). An individual who is

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available to new encounters wants to explore different avenues regarding and learn new things. It is a demonstrated truth that somebody with an expansive psyche, receptive outlook, and creative mind is more open to learning and encountering new things than somebody with a restricted brain and no creative mind. Organizational culture has been recognized as a vital character trademark that impacts workers' creativity (Sue-Chan, and Hempel, 2016). As the need might arise to learn new things, individuals with this character trait will generally be more inventive. Each employee ought to embrace each idea with excitement and help each other. Creativity is urgent for the turn of events and outcome of organizations and venture groups (Wieser, 2020). The setting wherein individuals work on projects is normally controlled and directed, with time imperatives and tantamount work structures. They can't communicate their unique perspectives and thoughts in such a setting. They will not give ideas and should be constrained into playing out the assignment they would rather incomplete (Ferending, 2003). Furthermore, it is believed that an employee shouldn't work in a thorough setting. A climate that is quiet and empowering ought to exist. All through the organization, correspondence ought to tell the truth and open. Moreover, there ought to be a deferential climate at work where individuals have the opportunity to contribute new thoughts. A culture of authority shouldn't exist, and there ought to be an environment of straightforwardness (Boss, & Krauss, 2007). Regardless of whether they need to, they should stick to the organization's arrangements. Despite the fact that everybody must follow the arrangements and strategies set up for an organization to find success, there ought not be any unbending guidelines that keep employees from presenting new suggestions (Sullivan, 2003). Accordingly, individuals lose inspiration and can't produce great work (Cunha, & Heckman, 2007). An individual can produce unique, viable, and

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imaginative thoughts in a setting that supports free thought and articulation. As mentioned by Gregory and Chapman, (2012), Employees ought to be urged to contribute new thoughts, yet assuming the proposition is shoddy, it can in any case be considerately dismissed so the employee doesn't feel affronted and demotivated.

- Hypothesis2: Process of creativity has a significant impact on employee virtual work performance.

2.10.2 Press of Creativity and Employee Virtual Work Performance

Press represents the environment and the climate in which the person operates and functions in, in other words press is that it is examining the nature of situations and its context within the creative press (or environment) (Alblooshi, 2018; Bruno & Canina, 2019). Some researchers that have carefully studied press of creativity they found out that press of creativity has a positive impact in increasing employee virtual work performance (Baldé et al., 2018; Bruno & Canina, 2019; Mareque et al., 2019; Welp, 2020). Press of creativity is about work atmosphere and the better it is the better is the performance and this is including the virtual work (Burayeva et al., 2020; Cayirdag, 2017). Based on that the researcher is expecting a significant impact of press of creativity on employee virtual work performance. This hypothesis is same and aligned with other hypotheses in others studies (Asquith et al., 2020; Karaca, Uzun, Metin, et al., 2020; Koronis et al., 2018; Ma, 2018; Mareque et al., 2019; Park et al., 2017).

Past examination has disregarded the differentiation among shallow and profound group variety. Subsequent to isolating shallow variety from profound variety, Carine, Shukla and Oduor, (2015) found a feebly certain connection between profound

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variety and group imaginative performance and distinguished a negative relationship between's shallow variety and creativity. The third is the change of the group. As per study by Dickerson, and Green, (2004) exploration, the working hours of the colleagues affected how imaginatively the group performed (Alge, Ballinger, and Tangirala, 2006). The adjustment of group piece explicitly adversely affected the group with steady individuals, however just an insignificantly beneficial outcome in the group with compacted working hours. The scientists found that organizational advancement environment is the mental discernment and experience of the organizational level that employees affect the development and improvement of their imaginative capacity (Sung, and Ashton, 2005). This finding has suggestions for imaginative performance at the organizational level. It is the steady avocation for organizational help for and obligation to advancement (Card and DiNardo, 2002). A significant middle among individual and organizational development is the advancement climate. The way that different working offices in an organization are separated, work together, and work as a unit is known as its organizational design. As indicated by earlier research (Han, Chiang & Chang, 2010; Amabile, 1983), incorporated, inflexible, regulatory organizational designs and an absence of departmental collaboration adversely influence the innovative performance of organizations (Tan, et al., 2019).

The scientists discussed inspiration, feeling, and perception as three powerful systems. Most of exploration on innovative performance is driven by inner inspiration. As per the hypothesis of inventive fixings, outside inspiration sabotages inside inspiration. It has, in any case, as of late gone through amendment (Beghetto and Kaufman2009). That's what it declares, under specific circumstances, natural

inspiration and creativity may not be debilitated by outer motivating forces (Tierney, and Farmer, 2011). Because of this, few examination blend interior and outside motivating force and find that a criticism climate can improve employees' objective self-consistency, which thus upgrades imaginative performance. Various investigations have endeavoured to decide what feeling means for innovative performance, however without steady achievement. Positive feelings, as per Mao (2021), energize innovative performance (Tranvik and Bråten, 2017).

As per Leelakulthanit (2018), productive analysis can upgrade inventive performance when there is a high potential for remuneration, an emphasis on creativity, and a requirement for profound clearness. Scientists battle that the mental instrument behind imaginative performance is a particular region, not a part of general insight. The previously mentioned factors at different levels can impact imaginative performance at many levels, however it must be seen whether the elements at one level influence imaginative performance at different levels similarly and by a similar system. Frey, and Rahbari (2016) found that group size usefully affected innovative result, yet just at the gathering level. People consume more exertion keeping up with group commitment as the group size increments. The two essential hypothetical frameworks for concentrating on imaginative performance are synthesis hypothesis and collaboration hypothesis. These two hypotheses treat individuals as free people, thusly they neglect to perceive that human association delivers the course of individual imaginative performance (Peters, 2021). This prompts different outcomes for innovative performance across societies, which is an exceptionally hurtful conduct result. Various scholastics have been working on the previously mentioned issues lately from different points, which have effectively added to widening the use

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of part hypothesis and collaboration hypothesis, working on the hypothesis' pertinence, and looking at the underlying drivers of imaginative performance in various settings (Mar, and Inés, 2019).

The focal point of exploration on imaginative performance has been changed from inside people to collaboration between people to examine how to address innovative difficulties (Velicia-Martin et al., 2021). Four interrelated social communications that influence imaginative performance are recognized through a study of employees in proficient assistance organizations, perception, interviews, casual discussions, record information, and according to the viewpoint of connection among individuals: requesting help, offering assistance, evolving conduct, and reinforcing (Marler and Liang, 2012). The foundation and change in light of the pattern of dynamic advancement on the individuals will keep on affecting. High-chasing groups can help each other through individuals to prompt changes in imaginative way of behaving. Then, at that point, show elevated degrees of creativity, interior group information sharing can all the more likely help the development of creativity.

Employees find it trying to both recognize the innovative parts of their own insight and ability as well as to dominate all the data, gifts, and abilities delivered by imaginative performance (Martins, Gilson, Land Maynard, 2004). They can energize the improvement of innovative performance and upgrade the capacity essential for creativity by sharing information and looking for data to make conduct changes. The hypothesis moves the focal point of the executives and exploration on innovative performance away from distinguishing and directing every individual's imaginative result and toward a comprehension of social factors and the development of

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relational connection. It changes the accentuation from situational factors that are consistent to situational factors that are persistently changing, and according to the viewpoint of association and elements to the support of innovative performance.

The Lei (2014) focused on the social parts of the advancement of imaginative performance, featuring the meaning of others in the age of innovative thoughts (Martinez-Cañas et al., 2016). This review, which is grounded in informal community hypothesis, investigates how individuals move from the network's outskirts deeply and finds that failure points encourage creativity more than solid ones. In any case, when an elevated degree of imaginative performance is accomplished, minimal people start to move to the middle position step by step (Ketelhut et al., 2010). The peripheral situation with various network externalities might be related with additional innovative thoughts and pivotal advances. Individuals can concoct new thoughts and foster more unique experiences thanks to the variety of information and data assets related with this centrality (Peters, 2021).

Up until a low return point is reached, this corresponding and spiralling course of developing centrality and imaginative performance will go on. Except if they keep up with communications beyond their social circle, individuals might be too unshakable or gotten up to speed in business as usual as of now, which will impede their imaginative performance. Social responsiveness (Hirst, Van Knippenberg and Zhou, 2009). The utilization of the executive’s techniques and the development of the worldwide business sector are both essentially affected by the systems by which imaginative performance is created in different societies (Martins et al., 2004). At the singular level, it centres around how work and social setting could direct the impacts

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of individual qualities, like independence or community, distance of privileges, and the evasion of vulnerability, on imaginative performance. The review recognizes changed impacts of group inner inspiration guideline in group imaginative performance at the gathering level across different social settings. Paternalism helps group inside inspiration and imaginative result in Eastern societies while it brings down it in Western ones, which affects both (Gruber, Gelman, & Ranganath, 2014). The effect of multiculturalism on organizational imaginative performance is exhibited through the cycle model of innovative performance. An employee's inventive mentality straightforwardly affects the development and creativity of a venture or business. Employees who need creativity can't work on an organization. An employee's imaginative way of behaving might be spurred by their advantage in creativity or by the requests of their work. An inventive individual can become exhausted without any problem (Rothwell, & Whiteford, 2009). There has been a ton of exploration on employee creativity and what it means for an organization, yet very little has been finished to comprehend the instruments that connect employee creativity to project achievement. The undertaking would turn out to be fairly standard and employees would begin finding their work exhausting and grim in the event that everybody kept the laid out guidelines and guidelines, in this manner there ought to be an imaginative viewpoint to achieve change and make work seriously engaging (Maynard et al., 2012). The performance of an employee in an organization is impacted by various components, including the supervisor's commendation, the benefits presented by the business, the way of life of the organization, and the idea of the co-workers. Employee collection is brought about by specific character attributes and conduct qualities of a person. It to a great extent relies upon their feeling of creativity, eagerness to attempt new things, and inventive capacities. A pattern

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toward project-based organization is presently arising, and it is turning out to be progressively famous (Whitfield, 2000). The greater part of the assignments and exercises completed by these organizations take the state of ventures. An organization enjoys a cutthroat benefit on the off chance that its kin are capable at decisive reasoning and critical thinking. The all out performance and progress of an undertaking rely upon an employee's creativity (Mesfn, 2020). The degree of employee support in the cycles of creativity and development decides an Entity's performance (Felstead and Henseke, 2017). Being inventive and innovative likewise includes incorporating ground-breaking thoughts. An organization turns out to be strong and successful due to both of these components (Rosenberg, 2006). Employee creativity can expand the organizational reach, help in the formation of novel items and administrations, and produce novel ideas. In the wake of considering individual creativity through the life stories of makers, resourcefulness impelling methodologies at the singular level, corporate imaginativeness according to the point of view of the pioneering organization, and as a pivotal objective, research about creativity zeroed in on creative mind (Ren, Deng, & Liang, 2018). The administration of imaginative gatherings as a piece of "common ordinary business works out" and the inventive flow of organizations as an authoritative issue that should be regulated through indicated settings and organization are current worries. Late works have checked on the intricacy of various levelled innovativeness and recommended integrating its numerous measurements according to a stunned perspective (Wei, Thurasamy, and Popa, 2018). The innovativeness of employees can expand the viability and effectiveness of numerous corporate cycles. This can be achieved by decreasing the sources of info required for different tasks or by working on the results. The performance of the whole unit or business could then get to the next level. Also,

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regardless of whether such pay for an employee's creativity may not straightforwardly influence their genuine suitability or capability at work, their chiefs may in any case add to such helps while rating their employees' work performance. These work in show to have a synergistic effect, bringing about slow gains (Peters, 2015). It has been noted in a few examinations that throughout recent many years, employee creativity has turned into a subject of request. Every one of the examinations highlight the need of creativity and advancement in Pakistan's task based undertakings. Since activities can work effectively in the event that clever procedures are applied to them, this can happen assuming staff are given the right climate in which to practice their imaginative resources (Michaels et al, 2010). Any employee can be inventive and thought of a few unique and state of the art thoughts. Any organization's work could be incorporated. Development through creativity can be presented wherever; it isn't required for it to be a notable partnership with secret undertakings or a new business (Perry-Smith & Shalley, 2003). In spite of all of the earlier exploration on the foundation and improvement of information sharing cycles in organizations and ventures, employees' information sharing limits get next to no consideration. Despite the fact that there are various web and versatile applications that can help with learning and granting information to other people, employees actually assume a significant part in data trade and information dispersal inside an organization (Raja and Johns, 2015). Information sharing is the demonstration of conveying and communicating with others through different media, like the web, books, papers, and so forth, between gatherings of people who have a typical interest in different points of view, information, and data. The directing hypothesis is the componential hypothesis of creativity. Furumo (2009) reported areas of strength for an on acquiring space skill in this hypothesis. Feng et al. (2018) accepted that a vital

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part of creativity is having a strong comprehension of the field wherein one is utilized. A wide range of employee creativity in their performance depends on their capability, information, and fitness for long lasting learning in their sector of work. It is fundamental for somebody to have proper comprehension of the field they are working in to be imaginative and show their inventive capacities (Walden, 2016). The sum and type of information conveyed among people with shared interests through different courses will decide the results of information sharing.

Support in actual local area occasions is significant no matter what the way that informal communities and connections are a critical component of a solid populace. Long range interpersonal communication is urgent in light of the fact that it gives individuals admittance to data and assets that cultivate development (Stone, 2019). To understand its maximum capacity, an organization should grow, and the degree of that still up in the air by the workforce. The social vegetation of development and creativity is featured by a continually growing review region that utilizes a social connectedness strategy. Solid connections are made by compelling correspondence (Velicia-Martin et al., 2021). Networking and information sharing remain inseparable. The advancement of networks can benefit significantly from data technology.

The new advancements and techniques enjoy benefits for organizations. With the guide of PCs, employees can lay out joins that will permit them to associate with each other (Perry-Smith and Coff, 2011). The trading of significant information and information is one more component of PCs. People are more drawn in and social in the workplace when they share their insight. It empowers productive cooperation

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between staff individuals at different organizational levels. Furthermore, it works with the creation of a huge volume of excellent work. Thought sharing inside the task group is urgent for better undertaking performance and venture achievement (Sue-Chan and Hempel, 2016). The venture ought to be obviously grasped by the colleagues, and they ought to be urged to contribute new and unique thoughts. Working as a group is more viable than working alone. This point of view is established on a fundamental guideline of teamwork, coordinated effort, and relationship in the undertakings, which expresses that regardless of whether each individual from a group simply contributes one idea, it can in any case bring about a critical improvement (Peñarroja et al., 2013). Very not quite the same as different firms, project-put together enterprises generally leave with respect to drives that are restrictive, particular, troublesome, and dubious in nature. Because of these qualifications, the information and data dispersal necessities of the venture groups and different groups working on undertakings of a comparable sort require satisfactory cycles for sharing encounters, data, and information (Tranvik and Bråten, 2017). There are a few ventures of a similar kind, and it's implied that undertakings of a similar kind experience issues of a similar sort. Thus, as indicated by the exploration, project groups are anxious to impart their difficulties and encounters to different groups working on comparable sorts of undertakings. By doing this, many task issues can be addressed rapidly and really. Organizations can carry out procedures to urge workers to work hard toward accomplishing primary objectives, bringing about benefits that are advantageous for the two organizations and their staffs, as well as accumulating organizational achievement, which is helped by improved information appropriation at work. By offering a stage for information sharing, an organization could encounter a huge expansion in its drives and tasks

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(Rapp et al., 2020). An organization's top administration ought to lay out this sort of culture among themselves prior to moving it to their different groups. The viability of the information move process inside the group in project-based organizations is impacted by various variables, as per a review (Ra, 2018). One of these elements is the personality of the task, which keeps a good significance in information move.

- Hypothesis3: Press of creativity has a significant impact on employee virtual work performance.

2.10.2 Product Creativity and Employee Virtual Work Performance

Product creativity is identifying outcomes and qualities of creative products (Barclift et al., 2017; Cotter et al., 2016). Some researchers that have carefully studied product creativity they found out that product creativity has a positive impact in increasing employee virtual work performance (Barclift et al., 2017; Cotter et al., 2016; Daemei & Safari, 2018; Esfahani et al., 2019; Gulliksen, 2018; Karaca, Uzun, & Metin, 2020). Product creativity is about the features of products and how unique it is (Daemei & Safari, 2018; Tien et al., 2019).

A creative product needs a creative work effort including virtual work effort and vice versa (Perchtold-Stefan et al., 2020; Zhang et al., 2020). Based on that the researcher is expecting a significant impact of product creativity on employee virtual work performance. This hypothesis is same and aligned with other hypotheses in others studies (Daemei & Safari, 2018; Gulliksen, 2018; Iedūna Liepė, 2018; Karaca, Uzun, & Metin, 2020; Perchtold-Stefan et al., 2020; Przychodzen et al., 2016; Tien et al., 2019; Zhang et al., 2020).

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Brain science research on creativity is where the investigation of imaginative performance in organizations started. Numerous scholastics use the idea of imaginative performance as opposed to creativity to all the more obviously represent the meaning of creativity in the organization and to more readily mirror the results of creativity in the workplace (Carmeli, Gelbard, & Palmon,2013). Regardless of the way that most of scholastics agree that oddity and utility of items are fundamental parts of imaginative performance, there are numerous particular meanings of innovative performance. Some focus on the maker, others on the strategy and cycle of creation, but others on the outcome and the climate. The scholars (Carretero, Vuorikari, Punie, and DigComp, 2017) characterized imaginative performance as the singular employee-delivered, helpful products, cycles, techniques, and thoughts that are important to the firm (Bormann, et al., 1996). Notwithstanding the way that this definition has gotten far reaching support from scholastics, it is in some cases ignored, stacked with a few thoughts, or restricted in its centre with regards to estimating imaginative performance. Just 30% of the articles introduced the idea of innovative performance, as indicated by inventive performance, while different pieces, without a doubt, dimly referenced the idea of discussion (Baer, 2010). The important estimation is essentially changed because of the discussion encompassing the thought of inventive performance (as mentioned by Amabile, 1988). The Cascio and Montealegre (2016) surveys were the most frequently utilized instruments, as indicated by imaginative performance. With regards to assessment procedures, 15% of the examinations utilized cross-level assessment, 8% utilized bunch assessment, and 28% utilized self-assessment to check individual inventive performance. Lately, there has been a pattern toward changing assessment methods to other people, similar to initiative evaluation. Lei, Zhou, and Lei, (2011) underscored that the idea of

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imaginative performance as it is as of now perceived is excessively wide; it ought to recognize the wellspring of advancement and its belongings, take on different evaluation strategies, and give pertinent estimating instruments (Pemsel, & Muller, 2012). Past investigations ignored the recognisability and impact of imaginative performance on the grounds that assorted specialists' inclinations prompted shifted ideas for and ways to deal with estimating inventive performance (Boud, 2012). In the event that outer assessment is utilized for the hard to-see, low-influence imaginative performance, there will be mental predisposition, and it is trying to rapidly notice the imaginative performance with critical impact (Beghetto and Kaufman, 2007). Thus, imaginative performance from a more minuscule point of view, focusing on both testing to see and less critical inventive performance notwithstanding recognizable and compelling innovative performance. A more nuanced technique for categorisation is given by Gaines, and Martin, (2014) research. They fight that exploration on imaginative performance ought to focus not simply on excellent creativity that can essentially impact others, yet in addition on ordinary development, adaptability despite change, and critical thinking consistently. Information, knowledge, and imaginative abilities are gotten by difficult work, and they encourage creativity in various disciplines, both little and enormous (Spencer, 2018). The scope of imaginative performance reaches out from little change to significant development. The vast majority will initially perceive their own creativity, which guardians and teachers both had an impact in cultivating during the preparation cycle. Individual creativity can increment with support, trial and error, and disappointment (Han et al., 2011). Individuals can detect the energy of the people who are bringing creativity into their day to day routines. Despite the fact that the individual just gets a restricted degree of creativity in one field subsequent to

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finishing proficient schooling and preparing, the individual might have accomplished the previous degree of creativity in other expert circles. Individuals might foster an elevated degree of creativity following quite a while of difficulty, or it could be trying to do as such (Purvanova, and Bono, 2019). From little creativity to little creativity to front creativity, it traverses an expansive range of levels of inventive capacity. This shows how essentially everybody displays creativity another way. A continuum exists in imaginative performance. The creativity model of innovative performance has made a more exhaustive conversation of estimation, proficient region, motivation component, and the system of psychological instability development than prior investigations. Since various imaginative performances differ in the previously mentioned ways, yet earlier examinations didn't make this qualification, the discoveries were conflicting (Shin and Jing, 2003).

- Hypothesis4: Product creativity has a significant impact on employee virtual work performance.

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2.10.3 Employee Technological Skills as a Moderator

Technolgical skills can describe the capability to perform jobs that need making use of certain tools, whether tangible or intangible, and the technology required to master their intended uses in a variety of scenarios (Collins et al., 2018; Lee et al., 2020). Hereof, the expertise in a technological abilities capability is viewed as functional in nature since it enables a specific to complete an assigned task in a real world, not theoretical. way (Bjerrum et al., 2018; Koopmann et al., 2020). Provided the growth of innovation within around the world and regional economies, the demand for diverse technolgical skills and understanding is likely to remain to become the near future (Dawson & Thomson, 2018; Stulberg et al., 2020).

The procurement of advanced technological skills needs to have particular education or instruction, commonly with a hands-on recognizing component and various advanced topical components (Krage et al., 2017; Zuluaga & Albert, 2018). Technological ability necessities are actually attended to the majority of occupation fields, along with the greatest feasible concentration being work in areas involving scientific, technical. engineering, computational and mathematical functionalities (Konak et al. 2017; Zakaria, 2017). Within the monetary markets, investor and financier interaction in the technical assessment skill set calls for making use of various mathematical and pattern acknowledgment tools.

These are composed of the functionality and effectiveness to identify what historic data is actually required and simply exactly how it demands to become used if you want to conjure the needed details (Lukić & Vračar, 2018; Stinson, 2017). Numerous technological examination treatments in regard to market and numerous other economic jobs are created to soak up historic details assessed in days, months, years or weeks and make use of the end result to anticipate future directional end results in particular financial tools (Strydom & Elvin, 2016; Webster & Wing-Fai, 2017).

Furthermore, many researchers that have studied the role of technolgical skills as a moderator in many independents' variables, including some of this study variables and the relationship with virtual work performance (Asquith et al., 2020; Burayeva et al., 2020; Cayirdag, 2017; Koronis et al., 2018). They found out that technolgical skills are playing a significant positive important moderating role in making a better anticipation the variance of dependent variables related to virtual work performance (Ma, 2018; Park et al., 2017). Based on that the researcher is expecting significant

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positive moderating effect of technolgical skills on the relationship between this study independent variables and virtual work performance (Barclift et al., 2017; Cotter et al., 2016; Karaca, Uzun, Metin, et al., 2020). And this hypothesis is consistent and compatible with other hypothesis in others studies (Chen et al., 2020; Damaschin & Mihaila, 2020; Han et al., 2017; Humala, 2017, 2018; Kim, 2019; Pink et al., 2017; Poulsen & Aisbett, 2016; Wolniak & Grebski, 2018; Yang et al., 2019).

2.10.4 Employee Technological Skills and employees creativity

The improvement of mechanical abilities is a vital worry for a country's social and instructive strategy (Hebbar, 2020). Employees get the opportunity to get and propel a scope of abilities, including mechanical ones. These capacities will without a doubt be required and supportive in an employee's expert life given the range of necessities and utilizations that they cover. Following the COVID-19 pandemic, obviously innovative capability was fundamental, and the workplace will be the best defining for accomplishing this objective (Boin, & Hart, 2010). The pandemic fundamentally affects training, featuring the worth of technology abilities and the part that employees might play in encouraging their turn of events. It was a quick progress from face to face talks to online review, particularly at this level (Mao, 2021). The emergency, nonetheless, causes individuals to rethink the value of a college degree, which offers scholastic information as well as networking and social possibilities. Colleges will accordingly have to reconsider their learning surroundings and urge staff individuals to procure their specialized capacities (Kay, & Honey, 2020). The need to utilize alleged crisis remote work exposed an issue with taking on far off getting the hang of, as per the Organization of Ibero-American States for Education, Science, and Culture (OEI report 2020). It focused on the workplace over the need to

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lay out curricular substance needs and to focus instructive endeavours on the skills and capacities that are really urgent in the midst of vulnerability (Autor et al., 2003a). The advancement of characters and the scholarly independence of employees are upheld by these abilities, which include innovative expertise along with delicate abilities that empower thinking, appreciation, and information transmission. In light of the wide spread and openness of data as well as the need to foster abilities and skills to comprehend and decipher data to have the option to change it into information, employees in the on-going data and information society described by globalization, changes in the work market, and the remarkable development of advancements face new and different advancing necessities (Shalley, Jing & Oldham, 2014). Notwithstanding broad capacities, mechanical abilities seem, by all accounts, to be critical to individuals' future life satisfaction in the present information society (Handel, 2008). It was found that life fulfillment is emphatically impacted by age, cash, and the key 21st-century capacities of decisive reasoning, critical thinking, correspondence, and technology (Henley, 2020).

Each area of human existence, from individual public activity to modern modernization and worldwide financial development, has been changed by data correspondence innovations, especially the Internet and the web (Heffner, 2004). Technology is vital for our prosperity and, all the more critically, it has advanced into a necessity that increments open doors for a superior personal satisfaction, which is an essential for the manageable improvement of countries and locales. The consequences of a concentrate on virtual performance use and European individuals' evaluations of their personal satisfaction show an unmistakable association among technology and employee creativity (Ketelhut et al., 2010). It was resolved that

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expanded technology use and virtual performance readiness support life fulfillment. The computerized resident is consequently more joyful in mechanically progressed, R&D-contributing locales that are committed to achieving maintainable development. virtual performance expertise use is critical in the linkage between computerized consideration and employee creativity yet not for the linkage between virtual performance access and employee creativity, as per a second report on the effect of virtual technology on performance (Peters, 2021). Both advanced incorporation and virtual performance access impressively impact employee creativity at the worldwide level. Subsequently, while making strategies for personal satisfaction, policymakers ought to permit admittance to virtual technology, cultivating a general public that is carefully prepared and approaches economical virtual performance that will permit people to work on their abilities, forestall social prohibition, and advance their employee creativity. the comprehension of, and thought of, the meaning of computerized advances in the workplace, especially at the level of the reasonable improvement of the different mechanical abilities of employees and their likely impacts on both the employees and on academic and organizational cycles (Hebbar, 2020). Employees are making and creating technology capacities, and it is essential to comprehend how significant they accept these abilities are to both their expert and individual lives. The utilization of advancements, procedures, and educating and learning with technology in the workplace has all been the subject of a few examinations on the worth of abilities (Purvanova, and Bono, 2019). Nonetheless, there aren't many examinations that attention on the requests and uses of technology abilities advancement by employees or the association among technology and personal satisfaction. Consequently, it plans

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to show that it is so critical to urge workers to grow their technology capacities (Weible et al., 2021).

Today, there can be no question about how computerized advancements are integrated into learning and work exercises. Advanced development can add to monetary development, make an incentive for organizations, and advantage society, for instance by cultivating consideration, bringing down imbalance, and making position (Hew, & Brush, 2007). As indicated by the Digital Transformation Initiative, it can likewise help the three mainstays of the UN Sustainable Development Goals: upgrading human prosperity, advancing impartial development, and defending the climate. Then again, individualized and computerized learning administrations at the instructive level will assist with giving a customized and individual methodology in light of explicit requirements, making it conceivable to all the more successfully track what an employee has realized (Parker et al., 2020). Technology abilities influence on accomplishment when the incorporated advancements support performance. One examination showed worked on normalized performance with the utilization of intuitive learning. Another review showed that the utilization of interactive media programming further developed employees' entire word acknowledgment. A review that pre-owned conceptualizing programming in to construct coordinated effort abilities likewise expanded accomplishment. At the point when incorporated advancements supplement guidance, understudy accomplishment is affected by technology abilities (Shuaib, 2013). As per one review, utilizing intelligent white sheets to show English outcomes in better performance (Nevado-Peña et al., 2019). Another investigation discovered that utilizing mixed media programming assisted workers with perceiving full words all

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the more precisely. That show how technology and intuitive learning further develop learning (Ministry of Human Resources & Emiratisation, 2019). The relationship uncovered in a Virginia concentrate on that specific technology was aimed at explicit substance purposes (Hirst, Van Knippenberg and Zhou, 2009). Utilizing a mixed media project seems to influence interest in the topic, research and coordinating abilities, and applying methods to certifiable conditions.

An alternate report uncovered that utilizing technology really upgraded performance. The errand was completed utilizing a computerized methodology. The staff individuals utilized an electronic data looking through technology to accumulate information on the Internet, and they then utilized imaginative strategies to put together their work with respect to the information (Pitagorsky, 2007). To assemble criticism and evaluate the performance of the employees, various estimating instruments were used, for example, the accomplishment scale, the inspiration scale, and the critical thinking skill scale. The review's discoveries showed that digitization decidedly affected employee inspiration, critical thinking abilities, and scholarly achievement. The technique for applying technology is like the way things are utilized as a device (Schweitzer and Duxbury, 2013). The investigation, commitment, and coordinated effort parts of the exercises additionally made the employees show a lot more elevated levels of characteristic inspiration and essentially lower levels of outward inspiration. The review's constructivist setting energized more understudy focused learning, with the instructor going about as a facilitator. The three investigations introduced demonstrated that employees' performance expanded while utilizing technology, yet they likewise found that there are observable consequences for performance when technology is incorporated (Mar

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and Inés. 2019). While utilizing a normalized post-review, one more investigation of workers in a virtual climate for logical request found negligible contrast between the control and mediation gatherings. Specialists found that the mediation bunch had a superior perception of logical request when they utilized an alternate strategy of evaluation. There is clashing examination with respect to the relevance of run of the mill testing and estimation techniques for the conventional talk based study hall to the intuitive workplace. While permitting different answers for the test, The Partnership for 21st Century Skills (2005) expressed that surveying decisive reasoning and critical thinking abilities is fundamental. It is additionally expressed that the review that shows major areas of strength for a between mechanical capability and performance might be mistaken because of the assumption that basically approaching innovations is favourable. Nonetheless, research recommends that utilizing mechanical instruments at work has prompted better performance. As well as proceeding to utilize individual mechanical gadgets like PCs, tablets, and telephones, it is essential that teachers search for and make opportunities for understudies to involve these individual gadgets at work to draw in their understudies (Pieterse et al., 2021). Notwithstanding, further developing performance can't just be achieved by making the workplace more powerful. The Schepers et al. (2011) guarantees that by making the appraisal more thorough and including position norms, as well as making employees' performance practically identical with normalized public and worldwide guidelines, progress was made in consolidating huge changes to how employees were assessed for their performance. As per Wieser (2020), the rising thoroughness of the appraisal ensures that the staff individuals have the capacities important to deal with the hardships of the twenty-first hundred years.

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2.10.5 Employee Technological Skills and employee virtual work performance

The advanced office urges employees to play out their errands utilizing on the web assets.

Use an application to manage bank exchanges or take part in online business for buys (Gruber, Gelman, & Ranganath, 2014). Individuals' whole life possibilities and employability may be fundamentally influenced by an absence of technology abilities. The European Commission made DigComp, or the European Digital Competence Framework for Citizens, to assess the capability of computerized technology. To achieve objectives connected to work, employability, learning, relaxation, and contribution in the public eye, it is expected to have abilities in every one of these areas, which are recognized as 21 skills in five essential regions. Having the option to utilize such computerized technology in a basic, cooperative, and imaginative way is a necessity for being carefully equipped (Khaleej Times , 2020). The accompanying ability classes are recorded: data and information proficiency, correspondence and collaboration, making of advanced material, wellbeing, and critical thinking (Harrison and Rouse, 2015). Four learning results, each with two levels: essential, halfway, high level, and exceptionally specific, have been utilized to lay out eight capability levels for every skill (Henderson, 2008). The Digital Competence Framework can help with characterizing public approaches, following resident specialized capability, and deciding advanced skill at the public level (Ballantine, Ferguson, and Ronald, 2013). The Digital Economy and Society Index were created utilizing the web to gauge the human resources expected to make the most of the potential open doors introduced by a computerized society (Ayyagari, Grover, and Purvis, 2010). The present Covid-19 pandemic scourge is fundamentally

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influencing the key financial files connecting with how oftentimes occupants use Internet administrations (Christensen, & Lægreid, 2020). Recuperation should be painstakingly overseen as Europe slowly recuperates from the pandemic. Portugal made various strides in the computerized circle to address what is going on, including the making of stages and programming for the wellbeing and training sectors, the advancement of public organization digitization, and the arrangement of new administrations. Various drives upheld computerized home instruction, and neighbourhood and public adjustable channels were laid out. Fully intent on helping understudies who need gear or Internet association (Mittal, & Dhar, 2015). As far as the conveyance of computerized public administrations, Portugal is in front of the EU normal and is at a high level phase of network arrangement. On the opposite side, it is bogged down in doing the change to 5G and performs ineffectively on signs of mechanical capability to work (Khan, 2020). Understudies referred to their absence of technology proficiency and the requirement for help and preparing as the vital difficulties concerning the utilization and mix of advanced technology (Hargadon and Bechky, 2006). Inquiries concerning the troubles of getting to equipment, the need of utilizing different applications and programming, and speedy and constant updates thought of a few references. Furthermore noted were an absence of time and an abuse of computerized gadgets (Mahande, and Akram, 2021). Four students revealed having no issues. Most understudies who answered the request about the requirement for proficient level mechanical abilities later on concurred and referenced its unavoidable nature, especially considering its pertinence in the public arena and the advanced world later on, its interest in the work market, and the reasonableness of advances (Henseler, 2017). This was talked about regarding arranging, using time productively, information transmission and advancement,

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resolving issues imaginatively, and the foundation of relaxation exercises. Extra references to technology capacities included upgrading performance, overseeing data, being more associated and informative, having the option to work from a distance, and adjusting to a world that is ceaselessly evolving (Khatiwada, & Veloso, 2019). There was just a single occurrence where the innovations were reprimanded for being constrained upon us. Employees were gotten some information about the significance and effect of technology abilities on their personal satisfaction on an individual level. They answered that these abilities are essential for getting to information and for self-improvement on various levels, including using time productively, correspondence, and learning, straightforwardness and speed in task fruition, critical thinking, security, relaxation, and prosperity (Mo, Ling, and Xie, 2019). The productive utilization of time and assets, the straightforwardness of correspondence and errand the board, and the accessibility of telework were completely referenced as benefits. The reliance on technology, the dissipating of consideration, the trouble shuffling family and expert commitments, the decrease in friendly cooperation, and different issues with profound and actual wellbeing because of investing a lot of energy before screens were a portion of the elements.

Advanced technology coordination in the workplace is fundamental for employees' mechanical ability advancement, proficient future, and, in this manner and simultaneously, improvement of personal satisfaction. Christensen, Lægreid, and Rykkja, (2016) found that most of respondents used a cell phone and a versatile PC. The projects or programming they utilized for their own, social, scholarly/expert, and learning lives incorporated a content manager, learning stages, introductions, WhatsApp, and Instagram. Web search tool route and searches, send messages and

additionally use email, perform work, and Use interpersonal organizations were the computerized exercises with the most significant level of advancement (Henttonen, and Blomqvist, 2005). They stressed the need to adjust looking through systems to track down the most significant data and content in computerized conditions, share data and content utilizing various advanced apparatuses, control data for simpler organization, stockpiling, and recovery, and use and select suitable advanced innovations to associate while talking about the abilities they felt had worked on the most working (Kim, & Lee, 2006). Security-related technology skill was believed to be immature in such regions as Apply copyright and permit regulations, use wellbeing and security safeguards, or even pick ways of lessening the impact of advanced technology on the climate. Additionally, address issues in computerized settings. They concurred that all demonstrated capacities would be essential later on regarding profession, individual life, and social communications, yet search and pick solid internet based data and content, as well as Use online security and protection guidelines, were most often referred to as significant. Making on the web introductions and participating in video meetings were the most un-esteemed (Montoya-Weiss et al., 2005). As a general rule, understudies accepted that having technology capacities would be fundamental later on work market and computerized society. The advances are useful at the organizational level for using time productively, information sharing and advancement, and critical thinking. They likewise empower expanded network and correspondence, data the board, remote work, and transformation to a world that is consistently evolving (Nevado-Peña et al., 2019). The requirement for help and preparing in software engineering, an absence of time responsibility, a test in accessing equipment, and the necessity to utilize different applications and programming were featured as the essential

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difficulties in the use and coordination of computerized advancements (Scott, and Hunsaker, 2005). Innovations have advantages and downsides with respect to what they mean for personal satisfaction. From one viewpoint, they make it conceivable to telework and consider the effective utilization of time and assets, correspondence, and undertaking the board (Kirkman et al., 2013). Then again, because of their abuse, advancements can prompt dependence, attention scattering, trouble adjusting time among family and work, diminished human cooperation, and issues on a close to home and actual level. As per the primary discoveries of the Future of Jobs 2020 report, progressing advanced change of economies and social orders in OECD nations is changing the amount and nature of occupations. It is featured that there are as yet critical abilities holes contrasted with the abilities required for occupations that will change over the course of the following five years; that, without proactive measures, disparity will increment because of the double impacts of technology and the pandemic downturn; and that, online work will increment because of these changes (Peters, 2021). While the jobless are focusing on acquiring innovative abilities, employees are putting a greater amount of an accentuation on self-improvement courses. Employee requalification has financial repercussions with impressive mid-to long haul returns for their firm as well concerning society at large (Orlikowski and Scott, 2008). Since it can hold access and quality at a lower cost of guidance, expanding effectiveness, digitalization in educating and learning will probably hold an undeniably more significant spot as a legislative goal. In the present proper learning settings, where understudies are viewed as dynamic members chasing information, learning with advanced devices in the workplace is typical and coordinated. Following the COVID-19 scourge, various examinations have been led on how technology were applied in the workplace, considering factors like

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inspiration, techniques, their joining into the educational experience, the learning frameworks utilized, or the administration (Chen et al., 2020). Be that as it may, when things fully recover soon, this experience could prove to be useful. The results showed importance for the workplace at the organizational level, to the extent that the digitalization of instructing and learning starts to change the financial matters of the workplace and the organization of scholastic work (Panteli, and Dawson, 2001). This is on the grounds that this isn't simply an adjustment of the method of conveyance of training from eye to eye to internet learning or mixed learning, yet additionally can possibly change the workplace, the organization. Along these lines, it is critical to comprehend what technology capacities individuals have laid out and gotten to the next level. The capacities expected to be cutthroat are continuously changing because of the workplace's rising spike in efficiency technology. For endurance, achievement, and financial dependability, specialized expertise advancement and dominance specifically innovations are fundamental. Microsoft Word, Excel, and PowerPoint capability used to be a huge in addition to on a performance. Nowadays, a great many people believe those gifts to be necessities (Parker, van den Broeck and Holman, 2017). On the off chance that someone come up short on now-fundamental abilities, and will find it harder to get work in the middle class sector and have less open door in the common sector too. It further developed open doors for monetary security, vocation dependability, and expert development. In the event that somebody has these capacities, make a point to keep upper hand so someone can make shrewd vocation moves or break into the workforce. It aids constantly obtaining new capacities that are relevant to the field of capability, forestalling out of date quality. Put time and exertion in acquiring the popular abilities that are appropriate to employees' work and profession to remain

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serious (Paul, 2007). Likewise, there is a developing rundown of technology abilities that are efficiency engaged and pertinent to all occupations (Scott, Leritz, & Mumf, 2005). Past the now-required capability in Word, Excel, and PowerPoint, most businesses will see the value in a worker who has insight with data sets and calculation sheets, can refresh a site, and knows about client relationship the board (Hemant and Regina, 2015). After some time, increasingly more of these capacities will be important for a developing number of future employments. Up to that point, having these abilities as well as the new technologies, people can find their direction to work and will give application for any work for higher performance by using these skills (as mentioned by Parker et al., 2020).

- Hypothesis5: Employee technological skills is playing a moderating role in the relationship between trait of creativity and employee virtual work performance.
- Hypothesis6: Employee technological skills is playing a moderating role in the relationship between process creativity and employee virtual work performance.
- Hypothesis7: Employee technological skills is playing a moderating role in the relationship between press creativity and employee virtual work performance.
- Hypothesis8: Employee technological skills is playing a moderating role in the relationship between product creativity and employee virtual work performance.

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2.11 Underpinning Theories

The following sections explain the underpinning theories that have been used for the current study. The institutional theory and resource-based view theory have different antecedents of performance of virtual working approach during crisis in UAE public sector of the organization that includes processes, competences, technology. For instance, institutional theory asserts that the institutional environment can strongly influence the development of formal structures in an organization. For this particular study, employee creativity press and employee creativity process is dependent on the institutional environment; besides, employee creativity is a complex phenomenon that goes beyond the formal structure. In addition, resource based view theory is strongly relate to this study because the employees and their creativity is the major and most value resource in any organisation. Both theories support this concept matually as institutional theory suggested that organizations can work either in crises of emergy time with proper strategies while resource based view integrate it as employees creativity help to upbring the virtual performance of the employees with the help of technological resources.

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2.11.1 Institutional Theory

Institutional theory seeks to discuss the processes as well as causes for organizational behaviour along with the result of organizational practices trends within a more complete, inter organizational situation (Dacin et al., 2002). The research study of organizational institutions happens throughout industries of research study in business, interaction, as well as likewise sociology and likewise advises public relations experts' understanding of business credibility and additionally genuineness (Battilana et al., 2009). The institutional theory is specified as basic, standardized

trends of activities positioned within and around providers as well as providing recommendations to social exchange and likewise order (Heugens & Lander, 2009). These trends of routines feature organizational and additionally market schedules, rules, and criteria and institutional theory advises that organizational behaviors are duplicated and imitated, cultivating taken-for-granted criteria as well as additionally, inevitably, widespread basic assumptions of method (Powell & Colyvas, 2008).

Depending on to the Lawrence & Suddaby (2006), revealed that the understanding just how adhering to institutions, or relatively repaired and likewise official operating policies, confers authenticity on organizations thereby creates it possible for researchers to conceptually distinct institutions coming from a provider's image, or its viewed health condition. The institutional theory foundations of institutional theory as it is currently comprehended settled between 1977 and 1983 at the centre of a more detailed seek realizing the parts that sustain successful and continual company functionality (Filippov et al., 2004). The simple emphasis of organizational research had altered throughout this length coming from examining the facets consisted of within the borders of the company, otherwise referred to as a closed system, to one that acknowledged the interaction between organizations along with its ambience, an open unit (Lammers & Barbour, 2006).

Identical to structuration, or even the ways agents create and replicate social structure, the institutional context recursively is and forms formed through usual understandings of acceptable conduct (reasonable myths), to which organizations conform (the technique of isomorphism) to acquire social permission (genuineness) as well as produce it via (Gosain, 2004). Meyer and Rowan helped illustrate

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institutionalized social or even emblematic organizational behavior that withstood affordable principles of the firm (Tolbert & Zucker, 1999). The firms in the incredibly same field frequently have a tendency to possess similar procedures and kinds, causing a sector-specific homogenization (Sturgeon et al. 2008).

The institutional theory of associations puts organizations at the primary of the evaluation of companies' style and performance and the companies are actually regional instantiations of better companies (Barley & Tolbert, 1997). Institutions, understood as taken-for-granted beliefs, policies, and rules, determine the progression and dispersing of organizational forms, layout functions, and methods (Mair & Reischauer, 2017). Noticing institutionalized prescribeds is actually looked at a way for getting authenticity, decreases uncertainty, and improves intelligibility of company's tasks and tasks (Li, 2017).

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Institutional arguments (business institutionalism) moved beyond source dependence and clarified why organizations adopt reputable style functions and practices without reviewing their relevance (Palmer et al., 2008). According to the Davis et al. (1994) argue that there is a clear difference from resource-dependence debates by highlighting the suggestion that organizational practices must be taken into consideration institutionalized. If they are commonly accepted as well as made use of without recourse to evaluation or proof for their relevance as well as if they stand up to difficulties on critical premises.

2.11.2 Resource Based View Theory

The RBV theory aims in providing justification for attaching importance to resourcing tasks specifically skill monitoring and can likewise be made use of to enhance the value of the HR contribution in achieving competitive advantage (Perez & Falcon, 2002). In using the concepts of value, inimitability, substitutability, and rareness, have to have both high degrees of skill as well as a determination motivation to exhibit productive behavior this is because HR practices competitors could quickly copy not develop the basis for lasting competitive advantage since (Sagwa, 2014). Furthermore, the RBV has restrictions which first, it may be hard to find resources, which satisfy all the criteria, and it offers only generalized advice on what resources are suitable (Priem & Butler, 2001).

The RBV theory calculated match suggests creating HR strategies that are combined along with service method and assist its own success that is upright mix or match (Mweru & Maina, 2016). This approach assistance in improvement of HR practices including resourcing, employee development, and additional reward as well as worker relationship to make certain that they enrich along with help each other that is (parallel assimilation or even fit) (Baird & Meshoulam, 1988). HRM consists of universalistic, data backup and configurationally delivers absolute best method as bundling is the development and implementation of several HR practices all together to make certain that they are related as effectively as worried about the company as an overall unit in addition to deals with what needs to be carried out throughout the company overall (Armstrong, 2010).

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The RBV evaluates and translates information of the organizations to identify precisely how organizations achieve long-term success (Madhani, 2009). Additionally, The RBV takes the company's perspective on why an organization fails or becomes successful in the marketplace (Madhani, 2010). The resources that are useful, unusual. and unrivalled as properly as non-substitutable make it viable for organizations to create and keep very competitive benefits, to also take advantage of this information and reach the desired success (Barney et al. 2001).

According to RBV, resources could be widely defined to consist of homes, business procedures, strong qualities, details, or skills managed by the company which can be used to envisage in addition to execute their techniques (Mata et al., 1995). When identifying resources, a number of researchers have assembled particular sorts of resources that could permit firms to implement and build worth developing business tactics (Kozlenkova et al., 2014). Brumagim (1994) mentioned that this offers a class structure of resources along with four different levels of organization information; 1. Production/maintenance information (considered among the most standard or even lowest level), 2 Administrative information, 3. Business discovering resources and 4. Strategic vision resources (taken into consideration among one of the most enhanced or the best degree). Additionally, Barney (1991) argues that the categorises three sort of resources: 1. Bodily financing resources (physical. technological. plant and tools), 2. Individual financing sources (instruction, experience, understandings) and 3. Business financing information (formal structure).

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2.12 Summary

The concept “public sector” is regularly identified with public administration, civil service and government entities. the general public sector as the part of a nation's financial activity, which is typically had and controlled by government and recognized the main domain names of any kind of public sector central federal government, town government, public business organizations and public institutional devices. The UAE is a youthful country that hinges on the Arabian Gulf. Made in it is an establishing nation with a blended workforce consisting of individuals of various races seeking task chances provided by the invention of oil in the nation.

The oil sector is deemed one of the most critical sector for the UAE economy and Emirati community is actually characterised through on-going and easy progress throughout all markets, in spite of its early stage as a country. The UAE consists of the seven emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al-Qaiwain, Ras Al-Khaimah and Fujairah. Institutional theory looks for to discuss the processes as well as reasons for organizational behaviour as well as the effect of organizational practices patterns within a more comprehensive, inter organizational context. The study of organizational institutions happens across fields of research in company, communication, and sociology and notifies public relations professionals' understanding of business credibility and authenticity.

The RBV theory aims in providing justification for attaching importance to resourcing tasks specifically skill monitoring and can likewise be made use of to enhance the value of the HR contribution in achieving competitive advantage. In using the concepts of value, inimitability, substitutability, and rareness, have to have

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both high degrees of skill as well as a determination motivation to exhibit productive behavior this is because HR practices could quickly copy not develop the basis for lasting competitive advantage since. The conceptuall framework as employee creativity factors (trait, process, press, and product) to employee virtual work performance while employee technological skills as moderation.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Many literature and data are available about the role of employee creativity factors on the employee performance in a virtual working environment during a crisis in UAE public sector. A combination of variables to create successful factors of creativity measurement (trait, process, press, and product) to employee's virtual work performance, while employee technological skills is used as moderation. This study aims to determine the level of importance of the mentioned factors within the UAE Public Sector. This study is primarily conducted by using quantitative methods. The research can be defined by research objectives and questions. These questions were developed to achieve the research objectives by enabling the researcher to obtain more information regarding the factors.

3.2 Research Approach

According to Cresswel (2010) there are two research approaches in order to identify the theories, link it with the research questions and develop the hypotheses. These research approaches are inductive and deductive research. When the nature of research is qualitative and explained the phenomenon under discussion, Inductive research approach is used. Inductive research helps to explain the research questions and develop the theories based on the details of the research findings, while

deductive research is used in this research as this research is quantitative in nature and based on facts and figures. Furthermore, this study first identified the research questions, develop hypothesis and than test the hypotheses to answer the research question so deductive approach applicable for this current research.

3.3 Research Design

Research design discusses the general approach that has been chosen to combine and connect the different components and variables of this research together in a logical way; it creates a guideline for collecting, measuring and analysing data. Detailed research study handle the relationships in between variables, the testing of hypotheses, and the advancement of reason, principles or even theories that have global validity. In accomplishing a detailed investigation study, the analyst carries out certainly not use the variable, yet notes and describes the existing scenario. A study process using a questionnaire is actually made use of to pick up data for this study. The quantitative strategy is decided on considering that the research study includes identifying the influencing factors along with a few variables for each and every factor. Figure 3.1 shows the research flowchart of the steps and the process, in which the scientific research approach appears as a number of systematic steps.

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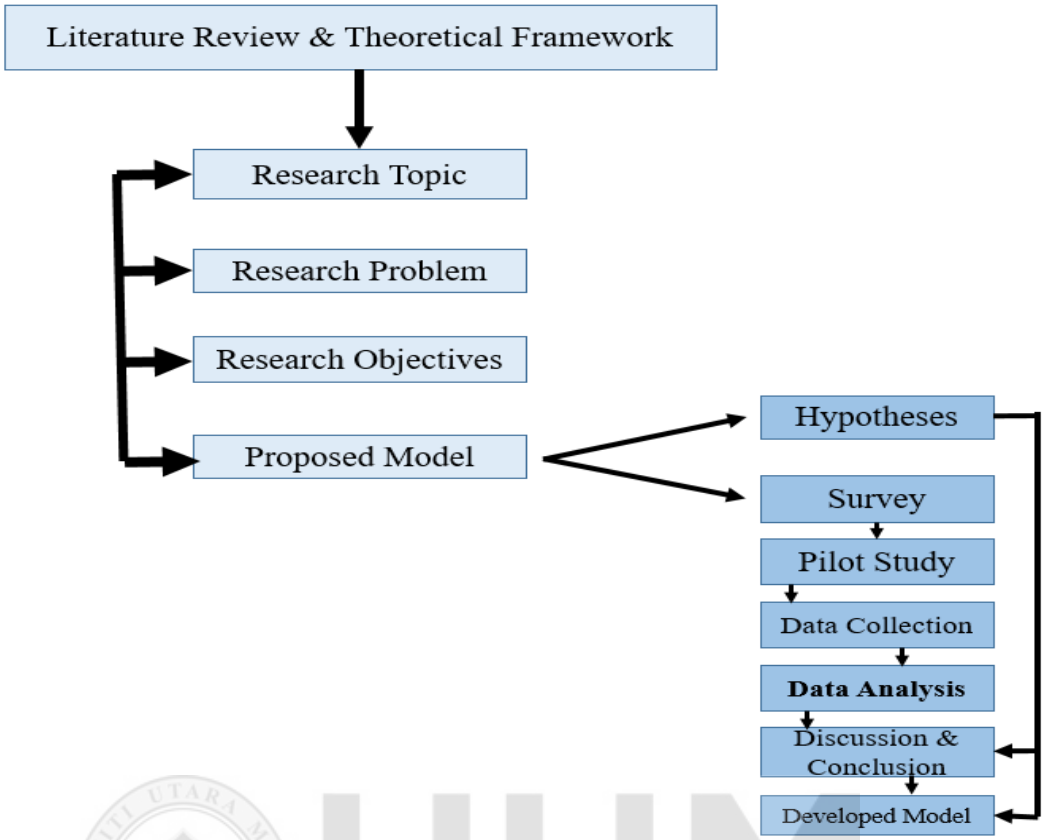

Figure 3. 1 The Research Flowchart

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The figure shows a typical scientific research phases for a quantitative – deductive research. The phases starts with identifying and exploring the research topic, which is the employee's creativity and its role in the performance in virtual work environment. The proceeding steps include formulating the research aim, objectives, and building the conceptual framework. Then based on the framework, the proposed hypotheses are stated and in line with it the questionnaire is designed and validated by conducting a pilot study. After that is the actual work of data collection, analysis, and reporting the results.

3.3 Population, Sampling, and Data Collection

The population process is beginning with determining the total population size. Population is referring group of people, things or event of interest to investigate while sample is subset of population as cited in (Sekaran & Bougie. 2013). The population of the current study is all employees of the Federal Authority for Government Human Resources.

3.3.1 Unit of Analysis

In survey research, unit of analysis refers to the level of aggregation of the data to be collected and analysed. The unit of analysis may be at the individual, group, community or organization where the concern data can be collected to perform the research analysis. The unit of analysis for this study is the employees of different offices of the Federal Authority for Government Human Resources (FAHR), which have a federal head quarter at Abu Dhabi and seven state offices at the seven states of the UAE.

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3.3.2 Population

The study population includes all the employees from operational management, supervisors, operational managers, departmental managers of the Federal Authority for Government Human Resources (FAHR) in the UAE. Based on the reports of authority (2021), the total number of employees in all department and in the seven states are approximately 3750. So the population of the current study is all the employees at each level of job working in FAHR.

3.3.3 Sample Size

The total population is 3750 and the suitable sample size based on Morgan Kerjice formula is 349. The following Table 3.3 shows the Morgan sampling table and the following text box is showing the formula with assumption of 95% confidence and 5% marginal error.

Table 3. 1
Morgan's Sampling Table

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Source: Krejcie & Morgan (1970)

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"The sample size (n) is calculated according to the formula: n = [z2 * p * (1 - p) / e2] / [1 + (z2 * p * (1 - p) / (e2 * N))]

Where: z = 1.96 for a confidence level (α) of 95%, p = proportion (expressed as a decimal), N = population size, e = margin of error.

z = 1.96, p = 0.5, N = 3750, e = 0.05

n = [1.962 * 0.5 * (1 - 0.5) / 0.052] / [1 + (1.962 * 0.5 * (1 - 0.5) / (0.052 * 3750))]

n = 384.16 / 1.1024 = 348.463

n ≈ 349"

In addition to the calculation of the sample size due to the population size, it is complementary to assure that the size it fit with the effective sample size for statistical analysis. Cohen (1988) provides an approach to make this estimation and the tool G*Power provide an easy method to calculate the effective sample size. As seen in Figure 3.4 the effective sample size is 138 with consideration of 95% confidence, 5% marginal error, and the use of linear regression statistical analysis.

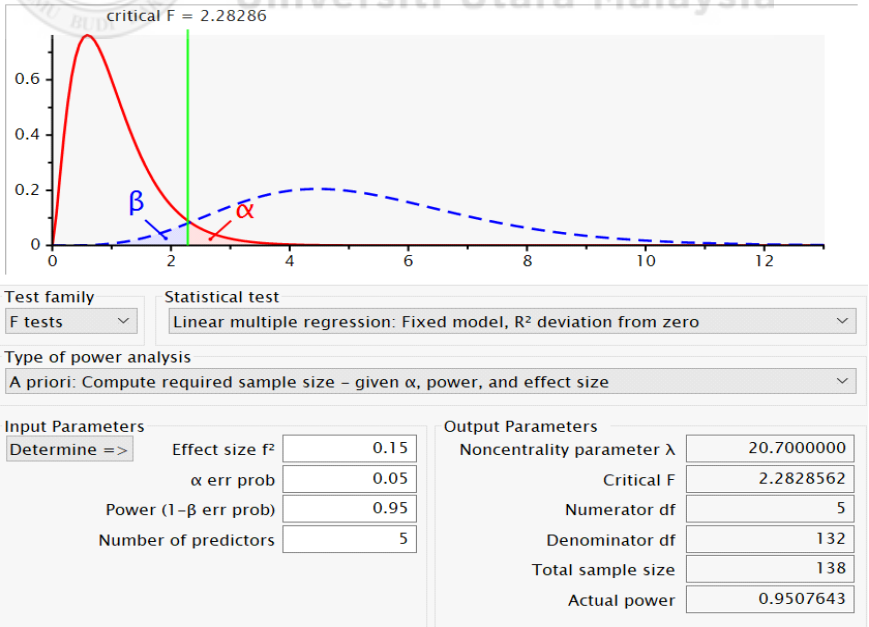

*Figure 3. 2 Effective Size as Calculated by G*Power*
Source: (Developed by Cohen'D and applied by Thompson, 2007)

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Therefore, the target sample size is 349, which is representing the population size and fit the requirement of effective size.

3.4 Samples Selection Technique

The population size is 3750 employees and the target sample size is 349; however, the proper selection of the samples is essential to assure that participants are effective presenters of the population landscape. To provide more insight into the population characteristics, the following list is identified:

The population is allocated into eight categories, the main office and the seven states. The eight location-based groups are not equal in population density. Table 3.2 shows the distribution of citizens, public employees, and FAHR employees' number.

Table 3. 2
Number of FAHR Employees among UAE States

Emara (State)	**#Citizen (Million)**	**#Public Employees**	**# FAHR Employees**	**# FAHAR Op. Management to Dep. Managers**
Head Quarter (Abu Dhabi)	-	-	1071	750
Dubai	3.32	34801	1491	1044
Abu Dhabi	3.23	33857	1451	1016
Sharjah	1.51	15828	678	475
Ras Al Khaimah	0.39	4088	175	123
Ajman	0.54	5660	243	170
Umm Al Quwain	0.08	839	36	25
Fujira	0.23	2411	103	72
Total	**9.54**	**10000**	**5248**	**3750**

Source: FAHR Statistics Report, 2022

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The data will be collected from the eight location-based groups based on the employees' population rate which have an overall size of 349 employees. The technique used for selecting samples is stratified random sampling and have the following characteristics:

The collection will be conducted into eight location; one organisation per location group to cover the seven states and the federal office (every location is a strata). Random sampling technique is used to reach participants at every chosen organisation based on random selection that supported by the HR department at the FAHR management.

3.5 Data Collection

The study will adopt the two techniques of direct collection and online collection to reach a relatively specific-target sample of FAHR employees in the UAE. The use of two techniques for data collection can be better when the target groups are distributed in wide cover area to assure securing the suitable sample size (Nuno & John, (2015).

Direct data collection used a printed copy of the survey and collected by the researcher. The online data collection method is used a soft online copy (such as google forms) and the have been sent to the target population.

3.6 Instrument Development, Validity, and Reliability

This research seeks to gather data on the factors of employee creativity to improve employee virtual work performance in the employees of Federal Authority for Government Human Resources (FAHR). The population studied consists of the UAE

Public Sector. The poll questions have been designed to cover every one of the variables. The instrument made use of for this research study is a set of questionnaires making use of Likert Scale. Likert Scale asks attendees to react to a set of declarations by showing whether they strongly oppose, oppose, neutral. concede or definitely agree with each enquiry.

3.7 Questionnaire Design and Development

The study featured two main sections. Section one-- standard info concerning participants and their institutions, area two is actually regarding the items for all the variables of this study. All range items were conformed to interval range. This research study makes use of Likert scale which is actually a period range that primarily utilizes the five supports of highly disagrees, oppose, not either disagree nor acknowledge, acknowledge, and highly concede (Sekaran, 2016). This scale has advantages considering that it is actually quick and easy to construct, conduct, and credit rating. After the questionnaire is actually accomplished, each of the items are going to be actually analysed either individually or even summed up to create a score for a group of items utilizing analytical software program. The benefits of using a Likert range to assess the individual and reliant variables, is actually that it summarizes the actions to embody a particular claim which at that point could be operated to get specific desirable results when it come to the objective of the research.

Where the original survey was being used to determine how Employee creativity factors (trait (TR), process (PR), press (PS), and product (PT) to employee virtual work performance (EVWP), while employee technological skills (ETS) as

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moderation), meet the objective of the study. Based on the literature review, the original questionnaire was edited and developed to meet the objective of this study.

The importance of this research resides on the role of employee creativity factors on the employee performance of virtual working approach during crisis in UAE public sector. For obtaining the objectives of the study, some approaches and methods from previous studies have been used for the constructs. The items for all these constructs and their sources are stated in table 3.3 and the style enquiry used the closed end questions with five closed option from strongly agreement to strongly disagreement, which is known as the five-point Likert scale. Table 3.3 shows the sources for every variable.

Table 3. 3
Questionnaire Sources

`	Variable	# Items	Source
	Employee creativity - trait (TR)	5	(Kumar, Kemmler, & Holman, 1997; Runco, 2007)
	Employee creativity - process (PR)	5	(Kumar et al., 1997; Runco, 2007)
	Employee creativity - press (PS)	5	(Kumar et al., 1997; Runco, 2007)
	Employee creativity - product (PT)	5	(Kumar et al., 1997; Runco, 2007)
	Employee virtual work performance (EVWP)	10	(Koopmans, Bernaards, Hildebrandt, De Vet, & Van der Beek, 2014)
	Employee technological skills (ETS)	5	(Dong, Xu, Chai, & Zhai, 2020)

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i. “Employee creativity factors - trait (TR)

- I consider myself to be a creative person.
- I am engaged in creative type work on a regular basis.
- My creativity comes from careful planning and forethought.
- My creativity comes from self-discipline.
- I would describe my style of creativity as predictable or systematic

ii. Employee creativity factors - process (PR)

- I typically create new ideas by systematically modifying (by substituting, rearranging, elaborating, etc) an existing idea.
- When I examine existing products, I usually critically evaluate them to see how I can improve them.
- I am always thinking (fantasizing) about how to do everyday things differently
- When I am generating new ideas, I do not tend to evaluate them until I have generated many ideas.
- I often look for new ideas outside of my own field and try to apply them to my own.

iii. Employee creativity factors - press (PS)

- I have set aside a particular place (or places) for creative work
- I have set aside a particular time (or times) for creative work
- I have an adequate support from my supervisors to do creative thinking
- I have been rewarded in some way after I have worked on my creative idea(s) for a designated period of time.

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- I tend to do my creative work in a quiet place.

iv. Employee creativity factors - product (PT)

- I usually have a lot of both workable and unworkable ideas.
- If I do not have a concrete (visible) creative product to show (e.g., written composition, work of art or music, etc), then I think I have failed.
- I enjoy the process of creating new ideas whether they lead to a final product or not.
- I think a final product that is not readily observable through the senses can emerge in a creative act.
- When I have completed a creative product, I can start on a new project immediately.

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iv. Employee virtual work performance (EVWP)

- I managed to plan my work in the virtual environment so that it was done on time
- My planning for my work in the virtual environment is optimal
- I kept in mind the results that I had to achieve in the virtual work environment
- I was able to perform my work in the virtual environment with minimum time and efforts
- I look on extra responsibilities in the virtual work environment
- I started new tasks myself, when my old ones were finished

- In the virtual work environment, I took on challenging work tasks, when available
- In the virtual work environment, I came up with creative solutions to new problems
- I kept looking to new challenges in my job
- I actively participated in the online work meetings

vi. Employee technological skills (ETS)

- I can always manage to solve difficult problems in using ICT if I try hard enough
- It is easy for me to keep up with important new ICT
- I am confident that I have the technical skills to use ICT effectively
- I can solve most technical problems when using ICT if I invest the necessary effort
- When I am confronted with a problem when using ICT, I can usually find several solutions

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3.8 Questionnaire Validity and Reliability

For this research, content validity was achieved by consulting experts' panel of three experts. The panel was inquired to examine and comment on the 1st draft of survey questions. The three experts have been chosen based on different levels of expertise and academic qualifications. Their remarks were considered, and some terminologies and phrases were added to the second draft to then use it in the face validity test group.

Face validity determines whether the second draft of the survey is a good measure or not. For this research, face validity was done by a beta test on ten participants from UAE who work in the employees of Federal Authority for Government Human Resources (FAHR). This beta test will not become part of the actual study sample. The following measures were taken: (1) the test was done all at once and participants inquired to fill the survey. (2) Answers, answering time were checked. (3) An informal discussion was included in the survey. Observations as well as comments were signed up to confirm the third draft which to be applied to the pilot study.

The study uses Cronbach's alpha to find the reliability of the variables and to examine the inner consistency of the variables. The analysis performed a pilot study as a pre-test integrity and credibility method. The pilot test team comprises 34 participants who were chosen specifically for the survey. The Cronbach's alpha reliability test was acquired using SPSS 23. Table 3.4 presents the results of Cronbach's Alpha test. Cronbach's alpha for a variable must be higher than 0.70. As shown in the table, each one of the variables has a proper value of Cronbach's alpha between 0.701 up to 0.935. Internal consistency reliability assessed by Cronbach's' alpha must be bigger than 0.70 and lower than 0.95. Additionally, in some scientific studies the values from 0.6 and more are accepted (Hair Jr, Wolfinbarger, Money, Samouel, & Page, 2015).

Table 3. 4
Pilot Study Reliability Tests Results

Variables	Items	Cronbach's Alpha
Trait (TR)	5	0.787
Process (PR)	5	0.805
Press (PS)	5	0.729
Product (PT)	5	0.785

Employee virtual work performance - Task (EVWP-T)	4	0.881
Employee virtual work performance - Contextual (EVWP-C)	6	0.876
Employee technological skills (ETS)	5	0.883

Source of data is fieldwork (2021) and results are presented from SPSS software

3.9 Data Analysis Procedure

The data analysis procedure include the ways to achieve the research objectives and to answer the research questions based on these research objectives. data analysis took place as first step was to find the demographic of the respondents including: their age, gender, qualification, and experience of the current job. Then the next step was to find the answer of the research questions as it helps to establish the link between theory and model of the current study.

The first research question is to identify the employee's creativity factors that have influence on the employee virtual work performance. In order to identify the creativity factors linked with the virtual performance this study explored the previous literature.

The second research objective is to assess the perceptions of employees regarding the different concepts of their technological skills, creativity factors and virtual work performance. To attain answer of this research question, descriptive analysis will be applied. The goal of the descriptive analysis is to examine the basic features of the data. The descriptive analysis included histogram (graphical presentation) of the responses that shows the responses about each item of the creativity, virtual performance and technological skills on five point likert scale.

The third research question is to examine the influence of the identified factors on the employee virtual work performance virtual work performance among employees of Federal Authority for Government Human Resources (FAHR). To find the impact of independent variable on depend variable regression analysis is used. The last objective of the study is based on interaction effect as: to evaluate the moderation impacts of the employees' technological skills on the relationships between employees' creativity factors and the employee virtual work performance. So Process Marco has been applied to find the answer of this research objective.

3.10 Justification for the PLS-SEM

PLS-SEM technique is called a second-generation structural equation modelling (Wold, 1982). The relatively new technique works well with structural equation models that contain latent variables and a series of cause-and-effect relationships (Gustafsson and Johnson, 2004). The PLS-SEM approach is a good and flexible tool for statistical model building and prediction (Hair et al., 2016). Specifically, the PLS technique was used in this study for the following reasons.

- Firstly, structural equations models have been demonstrated to be superior models that perform estimations better than regressions (Iacobucci, et al. 2007). This technique is most appropriate when the sample size is relatively small (Lei & Lomax, 2005).
- Secondly, PLS path modelling becomes more appropriate for real world applications and more advantageous to use when models are complex (Chin, 1998).
- Thirdly, in most social science studies, data tend to have normality problem and PLS path modelling does not necessarily require data to be normal (Chin, 1998).

- Fourthly, PLS-SEM offers more meaningful and valid results (Bollen & Lennox, 1991). PLS-SEM is one of the most powerful statistical tools in social and behavioural sciences that have the ability to test several relationships simultaneously.
- Fifth, Hair et al. (2016) stated that PLS is well known as an alternative to SEM method. The PLS path modelling is more suited to complex models such as those with hierarchical constructs (with a complete disaggregation method), mediating and moderating effect.
- Sixth, one of its powerful features is its suitability for prediction-oriented research where the methodology helps researchers to concentrate on the explanation of endogenous constructs.

3.11 Summary

This study followed the scientific research steps and allocated as quantitative methods and deductive approach. The study population includes all employees from operational management, supervisors, operational managers, departmental managers of the Federal Authority for Government Human Resources (FAHR) in the UAE. Based on the reports of authority (2021), the total number of employees in all department and in the seven states are approximately 3750 and the sample size is 349, which is adequate and satisfies both the minimum sample size and the effective sample size. Quota sampling is the sampling technique suitable for this research; direct and online collection methods will be used and data collection will take place in 2021.

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CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter's goal is to explain and show all of the findings and hypotheses that have been tested. The broad introduction of this chapter is explained in Section 4.1. Before moving on to the next phase, this study discusses data preparation, data coding, and data editing. The process of data screening is described in the next section. Individual response rates are shown in this study and the features of the sample were discussed in section. The following chapter goes into depth on the SEM that was used to analyse the hypothesis. The two-stage Structural model was utilised for data analysis, and it was explained. The first stage, which concerns the measurement model, was covered in this chapter. The structural model is also shown in the second stage. The following section takes a closer look at the overall conclusions from data analysis and hypothesis testing. The final section of this chapter (4.6) shows the chapter's conclusion.

4.2 Response rate:

The data was collected from 349 people out of 3750 that shows the response rate is 100%. According to the Suanders et al. (2010), this rate is highly appreciated for results and finding.

4.3 Data analysis by SEM

In oder to analyze the data, different prlimanery tests have been applied including demographic test, descriptive analysis, quality and accuracy of responses. The nest main analysis was to find the answer of the research questions and establish the justification for research objectives. To apply all these tests there is need to compile the collected data and find the accuracy of the data. So, the survey data has been compiled in a similar way either by hand or using e-mail. All the answers are compiled into a dataset in Microsoft Excel which have been used later for analysis using the statistical software package (SPSS). Before any test, reliability and validity tests are essential as it provide details about the nature of data. The reason for chosen reliability analysis is to achieve accuracy in the data analysis and hypothesis testing. While other important tests to screen the data for further analysis includes normality, preliminary analyses of missing data, data screening, test of non-respondent bias and outliers.

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4.3.1 PLS Measurement Model (Outer Model)

In PLS SEM analysis, researchers need to test the measurement model first. In doing that, test of measurement model includes a bundle of reliability and validity assessments as the following:

i. Indicator Reliability (Outer Loading)

Outer loading are the estimated relationships in reflective size models (i.e., arrows from the latent variable to its indications). They establish an item's complete payment to its own assigned construct. Loadings are actually of major passion in the examination of reflective size models however are actually additionally analyzed when developmental measures are actually included. The removed value is actually

0.708, any launching credit rating identical of above 0.708 is thought about appropriate filling. On the contrary, any running listed below 0.4 is poor and deleted. Any type of aspect along with packing score in the selection in between 0.4 and 0.708 could be maintained or deleted or removed based on the opinion of an analyst (Hair Jr et al., 2016).

ii. Internal Consistency Reliability

Cronbach's Alpha is actually a measure of internal consistency or reliability of a construct's measure, which is, just how very closely related the set of items comprising the construct are as a group. The end result is actually generally a number coming from 0 to 1, yet an unfavorable Cronbach's Alpha may additionally take place, recommending something truly wrong along with the function (e.g., if some score items possess opposure turned around relative to a few other, the mean of all the inter-item relationships can be bad: items' polarity must consistently be actually straightened). The closer the reliability coefficient to 1.0, the far better, while reliability lower than 0.6 are poor and those over 0.8 are good (Sekaran, 2016).

iii. Convergent Validity

Convergent and discriminant validity are actually each taken into consideration subcategories or subtypes of construct validity. The crucial point to realize is actually that they collaborate-- if you can display that you have documentation for both coming together and discriminant validity, then you've necessarily illustrated that you have proof for construct validity. However, neither one alone is sufficient for establishing construct validity. To create convergent validity, you need to have to

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reveal that steps that should be connected are in truth associated. This study found four measures (each is an item on a range) that all purport to reflect the construct.

iv. Discriminant Validity

Discriminant validity is actually referring to the degree in which the construct is actually contrasting from one another empirically. It likewise assesses the degree of differences between the overlapping construct. The discriminant validity can be analyzed by using cross-loading of clue, Fornell & Larcker criterion and Heterotrait-monotrait (HTMT) ratio of correlation. Through examining the cross-loading, the variable packing indicators on the designated construct have to be actually more than all loading of other constructs with problem that the cut-off worth of factor running is greater than 0.70. The 2nd criterion is actually to determine discriminant validity using Fornell-Lacker criterion. This strategy reviews the square origin of the common variation extracted (AVE) along with the connection of unexposed constructs. A hidden construct needs to discuss far better the difference of its personal red flag instead of the difference of various other unexposed constructs. The square origin of each construct's AVE need to possess a higher market value than the correlations with various other latent constructs.

4.3.2 LS Structural Model (Inner Model)

The second model is a structural model that relates endogenous latent variables (LVs) to other LVs. In PLS, this model is termed as the inner model. A number of criteria suggested by Chin (1998), and re-proposed by Hair (2016), are commonly used to measure partial model structures. All these criteria are applicable for assessing the inner model.

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i. Coefficient of Determination (R2)

The coefficient of determination is actually an analytical size that examines just how distinctions in one variable could be discussed due to the distinction in a second variable, when anticipating the end result of a given occasion. Simply put, this coefficient, which is much more frequently called R-squared (or even R2), evaluates just how strong the direct relationship is between two variables, and is actually intensely counted on through researchers when performing style evaluation.

ii. Predictive Relevance (Q2)

Anticipating Relevance (Q2) is actually an additional examination of the building model, which involves the model's capability to forecast. One of the most extensively used step of predictive relevance is actually Stone-Geisser's Q2 (Stone, 1974; Geisser, 1975), Q2 is typically determined utilizing an omission proximity of 5-10 under existing PLS software packages. The guideline signifies that a cross legitimized redundancy Q2 > 0.5 is considered as an anticipating model (Chin 2010).

iii. Hypotheses Testing

In PLS SEM, the structural model output is used for hypothesis testing. Usually the t-statistics is the criteria for hypothesis testing. If the t-statistics of a particular variable is higher than 1.96, it is assumed that the value is significant at 5% level. However, the present study will also calculate the p-value for testing hypotheses and significance level. A p-value less than 0.05 signifies 95% confidence level and a p-value less than 0.001 signifies 99% confidence level.

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4.4 First Research Question

What are the factors (dimensions) of employee's creativity that have an influence on the employee's virtual work performance?

In order to answer the first research question of the current study, detail review of previous work was conducted. The first research question is to identify the dimensions of creativity and this research objective has been achieved as mentioned in chapter 2 (section 2.2) where the detail review of previous work is conducted and found that creativity is further divided into four dimensions: trait, Process, Press, and Product.

Here is detail found by the previous literature about some important directions of the creativity related to the virtual performance.

i. Creativity - Trait

According to the researchers employee creativity traits is merely a little variety of attributes (Qazi et al., 2020). Some of research administers involving how the traits in job affect employee creativity (as mentioned by Ding et al., 2019). Depending on the Wu and Wu (2020) studies about creativity trait, the partnership of the employee creativity traits with work performance, in the field of knowing and accomplishment as well as it helps to look into how creative personality types were connected to creativity. Another research by authors (Terblanche & Heyns, 2020) pertaining the effect of employees' traits creativity have been definitive, leading to findings that all the attributes possess positive, favorable, as well as significant effects on performance.

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The literature identified the trait as dimension of creativity that determines the effect of characteristic on creativity (also reported by Malik et al. 2020). Given the common idea in the worth of creativity in organizations, it is, therefore, vital to understand the situations under which creativity becomes beneficial for or detrimental to trait and personality (Blomberg et al., 2017). Following this reasoning literature has paid enhancing focus on characteristic of creativity as trait to perform at the workplace, however some identified it as personality factor while creativity is also a type of personality (Qazi et al., 2020). Particularly, some researchers acknowledge that personal emotional characteristics produce an interior incentive to activate employees' innovative engagements, including intrinsic incentive that boost the trait of the employees towards creative nature (Abidi, 2020). The traits undergo impacts coming from the organizational environment, which signals the theoretical value on thinking about just how organizational predictors may apply an impact on employees' psychological resources for creativity (De Clercq et al., 2019).

Table 4.1 showed the details of first dimension of the creativity known as trait mentioned by authors.

Table 4. 1
First dimension of creativity: Trait

Creativity	**Trait**	**Author**
		Qazi et al., 2020
		Wu & Wu (2020
		Terblanche & Heyns, 2020
		Ding et al. 2019
		Malik et al., 2020
		Blomberg et al., 2017
		Abidi, 2020
		De Clercq et al., 2019

These authors identified the trait as the dimension of the creativity

Based on these details it can be identified that trait is the dimension of the creativity.

ii. Creativity - Process

literature showed that the work creativity process is actually usually indicated in the viewpoint of business items, services, procedures, and procedures and centers on the production of helpful and unfamiliar ideas (as mentioned by Emich & Vincent, 2020). Process in creativity conveniently be summarized as: enough opportunity for generating unique work, folks with needed skills, designated funds for this domain, product resources, devices and creativity process, suitable details, and the availability of training (Marble et al., 2020). According to the Cheung et al. (2020), the vital links among which are individual. groups, and organizational characteristics, possess an impact on the creativity, which brings about innovative outcomes within the organization known as creative process. In addition, the complex mix of individual. group, company characteristics produces the ambience through which exclusive and staff techniques happen; that is actually, the organizational creative process comprises both substantial behaviors and innovative cases (e.g. Moon, 2018).

Some researchers defined the creative in term of process as: the total amount of social as well as environmental effects on creative behaviour (Liu & Huang, 2020). Furthermore, Sozo and Ogliari (2019) added in research of creativity that the creative process leads in creative outcomes concepts, organization, processes or even items and processes normally developed via four different stages: tip production, expediency, screening process and execution. The creativity may be taken into consideration as the idea production part of the innovation process (Thayer et al., 2018). Previous literature also showed that the creativity is an internal process of

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delivering brand new tips, while development describes the efficient request of originalities and creativity without development is a diminished worth, however our organization can point out that no innovation is feasible without the creative processes that produce the 1st step of the innovation process (Fischer et al., 2019). Table 4.2 illustrated the details about process as creativity dimension (factor).

Table 4. 2
Second Dimension Of Creativity: Process

Creativity	Process	Authors
		Emich & Vincent, 2020
		Marble et al., 2020
		Cheung et al. (2020
		Moon, 2018
		Liu & Huang, 2020
		Sozo and Ogliari (2019
		Thayer et al., 2018
		Fischer et al., 2019

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The above details showed that process is he dimension of creativity that help to measure it.

iii. Creativity - Press

previous studies showed that the press is a resource that promotes organizational and specific tasks, structural argument is that the development of the social system. That could take place along with social technologies, would certainly foster the trade of relevant information, create peer effects, as well as promote pro-social behaviour (Korzynski et al., 2019). According to the Korzynski et al. (2019), the relational argument is that creativity as press in form of technologies would strengthen trust, resources, team knowledge, and organizational values, which may assist in

understanding sharing as well as boost the feeling of organizational direction. While other suggested that press as dimension of creativity is also steered due to the inherent inspiration of the individual. such as the willingness to participate in logical reasoning inspiration describes behaviours that are driven through inner elements (Choi et al., 2020). The organization requires creative employees to initiate organizational technology as well as be recognized as key for creating a reasonable benefit in the press (Shanker et al., 2017). The employee's innovative efforts ought to additionally enhance press worth, which has crucial behavioural outcomes and creativity of frontline company employees has a fantastic prospective to add to productive long-term connections (Sok et al., 2018).

The press enhancing digitization is actually testing typical opinions about precisely just how companies can structure on their own to be effective in the scenario of vital obstacles and international markets is actually the issue of specifically how institutions structure the project of their employees to acquire the most ideal brilliant outcomes (Kohnke, 2017). While some of the researches developed a proposed framework about creativity as press that the future team must be equipped along with press skills and point of views, a great deal much less is covered another individual ability and efficiency that is also essential to the excellence of future associations in the electronic age specifically creativity (Singh, 2018). The creativity makes it possible for companies in addition to their labor force to ideate, set up and make all new working approaches that are led with the brand new digital options; use these options; and produce new functioning procedures and experiment brand new, extra market value recommendations in press (Cai et al., 2020). Scholars coming from a broader series of investigation study areas disclose that mixing technical and press

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devices can efficiently induce individual creativity through making it feasible for employees to make use of information and interaction modern technologies in their line of work as creative press (Johnson et al., 2016). In table 4.3 Press is discussed by authors as dimension of creativity.

Table 4. 3
Press as Dimension of Creativity

Creativity	Press	Researchers
		Korzynski et al., 2019
		Choi et al., 2020
		Shanker et al., 2017
		Sok et al., 2018
		Kohnke, 2017
		Singh, 2018
		Cai et al., 2020
		Johnson et al., 2016

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iv. Creativity - Product

As Shanker et al. (2017) discussed that the employee creativity an initiative comes from employees regarding the introduction of brand new processes, new products, brand-new markets or even combos of such in to the association and it is an employee ability. It may assist improve basic service productivity as well as premium, essential keystones of companies' survival. competition, along with results (Martín & Llusar, 2018). The institutions artistic employees along with capacities to enhance information to product and process growths and technology, professionals and also execs have also highlighted that gentle skills including laborers' innovative possibilities have actually ended up being a need currently especially before (as mentioned by Henry et al., 2020). In addition, particular staffing along with interior training and development are actually important for association to select the best

combination of readily on call individual funding as well as in the future enhance and also adjust for strengthened organizational capacities, productivity, and earnings growth (Armstrong, 2020).

On top of that, the creative employees supported that process as well as product have a positive influence on organizational and effect of employee on very competitive advantage by means of human capital along with a sample of a variety of degrees of division supervisors (Laužikas & Miliūtė, 2020). The creative employee's product growing need for high-grade services and products, and sense, constituted the execution of these practices to remain affordable (Engelseth et al., 2020). The organizational creativity products studies stand up that the steering motor of development in any organization is its own employees, as well as it is through its employees' innovation that an organization has the capacity to produce as well as produce novel, potentially helpful tips about organizational products, solutions, practices or even operations (Wipulanusat et al., 2020). These details showed that creativity can be measure by the products that a company introduce and market to the customers. The above mentioned authors suggested that creativity also be measured by products (showed I table 4.4).

Table 4. 4
Product as Forth Dimension of Creativity

Creativity	**Product**	**Authors**
		Shanker et al. (2017)
		Martín & Llusar, 2018
		Henry et al., 2020
		Armstrong, 2020
		Laužikas & Miliūtė, 2020
		Engelseth et al. 2020
		Wipulanusat et al. 2020

So it is suggested by the review of previous literature that: Trait, process, press and Product are factors of creativity that influence the virtual performance of the employees.

4.5 Second Research Question

The second research question is to assess the perceptions of employees regarding the different concepts of their technological skills, creativity factors and virtual work performance. To attain answer of this research question, descriptive analysis has been applied. For descriptive analysis the first step is coding the data that has been collected from the respondents and figure out the perceptions about creativity, virtual performance and technological skills.

a. Coding and Editing of the data

In order to answer the second research question, this research need to discuss data preparation, data coding, and data editing Following the acquisition of all data, data editing was implemented as the next stage to ensure data completeness, stability, and the absence of errors. Any data editing is a type of data analysis that occurs throughout the processing stage (Malhotra et al., 1996). According to Sekaran (2000), if respondents complete about 70% of the questionnaire, it is acceptable for further analysis; however, if more than 30% of the questionnaire is incomplete, the incomplete questions must be deleted. Before moving on to the final analysis step, 15 surveys were abandoned due to sekaran's recommendation. In the final analysis, more than 75% of fully completed surveys were considered. Data coding is the next stage. Coding was used to assign numbers to each item's response, which then allowed the data to be entered into SPSS (Zikmund, 2003). According to Vaus, these

types of tests can be done both before (before coding) and after (after coding) (1995). when people answer to questions Pre-coding was utilised to assign numerical values to all question alternatives during the questionnaire building stage, and post-coding was used to document the full data on SPSS by assigning various numbers and alphabets. (Appendices consist of questionnaire).

After entering the data into SPSS, the next stage, data editing, was utilised to identify any problems or omissions in the data entry. All errors have been overcome at any stage of data transfer.

b. The Data Screening Phase of data:

Following the completion of the previous two processes (data coding and data editing), the following phase is data screening. Data screening is the initial stage in data analysis to identify all missing values, outliers, and data normalcy. Data screening is a helpful step in ensuring that the entered data is correct, as well as the normalcy and distribution of each variable in the questionnaire (Joseph F Hair, 1995).

c. Missing Values Detection and Its Treatment:

The missing values occur when a person does not respond to a question or any questionnaire enquiry. SPSS ensured that no questions were left unanswered and that all surveys had been completed completely by the respondents and were ready for analysis. As a result, no solution for dealing with missing values is required. Churchill (1995) argued that if the percentage of missing data is less than 5%, the data is adequate and acceptable. The mean value of the same variable can be changed

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to treat missing values. It's the best trick because, according to Joseph F Hair (1995), it's been used a lot since it relies on precise replies, making the mean the best single substitute for missing data.

d. Normality Assessment of the data:

Following the detection of missing values in data, the next step was to check the data's normalcy. If the researcher wants to utilise Structure Equation Modelling and Confirmatory Factor Analysis on their thesis, they must first examine the Normality distribution. It is critical for determining the distribution of all variables (Tabachnick & Fidell, 2001; Kline, 2005). Both the Box and Whisker and steam and leaf graphs are used to look for any outliers after validating the data's normality distribution. Outliers in data can be defined as "responses with an inimitable mixture of qualities that explicitly differ from other responses." Outliers are defined as "informational conditions with an infrequent concoction of characteristics that are clearly distinct from all other responses" (Tabachnick & Fidell, 2001). Extremely High and Extremely Low numbers, for example, are features of these types of outliers (Coakes & Steed, 2006). which might affect data normalcy and fool further statistics. A total of 32 outliers were removed from the 419 respondents' data set. Bivariate outliers were used to eliminate 20 respondents, and multivariate outliers were used to eliminate 12 respondents.

The Shapiro-Wilk test and the Kolmogorov-Smirnov test are two of the most helpful methods for testing data normality. These two tests are the most typically used to determine whether data is normal. When the result of 'P' in both tests is greater than

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0.05, the null hypothesis is supported, and the data is said to be regularly distributed. The results are listed in the table 4.5.

Table 4. 5
Normality Assessment

Normality assessment of Trait:						
Tests of Normality						
	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
	Statistic	**Df**	**Sig.**	**Statistic**	**df**	**Sig.**
Trait	.156	429	.000	.829	429	.000
Normality assessment of Process:						
Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Process	.167	429	.000	.905	429	.000
Normality assessment of Press:						
Tests of Normality						
	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
	Statistic	**Df**	**Sig.**	**Statistic**	**df**	**Sig.**
Press	.118	429	.000	.974	429	.000
Normality assessment of Product:						
Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Product	.136	429	.000	.913	429	.000
Normality assessment of performance:						
Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Performance	.078	429	.000	.967	429	.000

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Normality assessment of Technological skills:

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**Df**	**Sig.**	**Statistic**	**df**	**Sig.**
Tech-skills	.156	429	.000	.918	429	.000

a. Lilliefors Significance Correction

Source: the data is collected from field work (2021)

e. Response Rate

A total of 349 questionnaires were delivered to FAHR representatives in order to collect data. A total of 349 questionnaires have been returned. The response rate was 100 percent effective. According to Tabachnick and Fidell (1996), a sample of 200 respondents is reasonable, whereas a sample of 300 respondents is a good realistic sample. Joseph F Hair (1998), on the other hand, disagrees that a sample size of 200 respondents is necessary (Hoelter, 1983). The 100 percent response rate is regarded as suitable for investigation, as a result the sample size chosen is sufficient for SEM analysis in this study.

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f. Characteristics of Sample

The data was collected from the employees of FAHR employees. Demographic characteristics help to identify the nature of the respondents. Diverse factors have been employed to define respondent's characteristics. Demographics includes respondent's gender, age of that respondent, his or her education level, job status and experience.

Gender of the respondents

Results of the gender showed that, data was collected from both male and female employees. Total 349 employees participated in this research. 182 male participant took part with 52% frequency. 167 female participated in this research. The percentage of the female participants were 47%. Five of the total 349 were missing value.

Age of the participants

The age of respondents was calculated using four different categories. As indicated in the graph above, age is separated into four categories (18-25, 26-35, 36-45, and 46-55). The results show that the majority of the respondents, 200 in total, are between the ages of 36 and 45. (56.5 percent). Then there were 96 (27.1%) respondents aged 46-55, 52 (14.7%) respondents aged 26-35, and 2 (.5%) respondents aged 18-25.

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Education of the respondents

In order to measure the education of the respondents, five groups were design. These groups were distributed as bachelor, Diploma, high school, post graduate, and other. Mostly employees were post graduate with 177 out of 349 (50%). Second category of the education that showed majority of the employees are Bachelor with 101 out of total 349 (28.5%). 12 employees having diploma (9.6%). Other 21 employees were showed high school qualification (5.9%). 34 employees having different other education level.

Employment status of the respondents

Forth demographic variable was employment status of the respondents. There are five categories of employment level including executive level, middle manager, senior manager, staff and supervisors. All level of employees took part in this research. Majority of the participants were at supervisor level as 90 out of 349 (25.4%). Second category was senior managers with 81 out of total with 21.4%. 81 executive level employees participated in this research (22.9%). 57 participants were serving as middle manager (16.1%). And 32 staff participated in this research (9%).

Job experience of the respondents

Final category of demographic characteristics was related to the job experience. The participants were from fresh employees to 12 and above experienced. 1 to 3 years of experienced employees were 113 out of 349. 4 to 7 years of experience were shown by 87 employees (25%). 8 to 12 years of experienced participant were 73 with 21%, while majority of the employees were highly experienced as they have 12 and above years of experience (22%). Only single employee was fresh hired on job.

Table 4. 6
Characteristics of Sample

Gender	**employees**	**percentage**
Male	182	52%
Female	167	47%
Age of the participants		
18-25	2	5%
26-35	52	14.7%
36-45	199	53.2%
46-55	96	27.1%
Education of the respondents		
Bachelor	101	28.5%
Diploma	12	9.6%

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high school	25	5.9%
post graduate	177	50%
Other	34	6%
Employment status of the respondents		
executive level	57	22.9
middle manager	32	16.1
senior manager	81	21.4
staff and supervisors	90	25.4
Job experience of the respondents		
1 to 3 years	113	22%
4 to 7 years	87	25%
8 to 12 years73	73	21%
12 and above years	76	22%

After analysis of the data (preparation of data, coding, missing value assessment normality test, and demographic analysis of the responses) the main focus of this step is to figure out the descriptive analysis about creativity, virtual performance and technological skills.

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The second objective of the study was related to the identify each item of the variables and its results. For this purpose histogram is used to represent the descriptive analysis of the responses. The items were recorded from 1 to 5 point likert scale. Value 1 showed minimum response (highly disagree) and value 5 showed maximum (highly agree) at likert scale. Results showed that majority of the participants recorded high responses on agreed and strongly agreed for the creativity scale. First five graphs showed the responses of Trait creativity.

i. Trait Creativity

The results of the descriptive analysis for first dimension of the creativity that is trait creativity is presented in table 4.7. The results of the tendency table shown that the items with value of 1 as strongly disagree, 2 value shows that employees are disagree, value 3 shows that employees recorded neutral behaviour, value 4 shows that employee agree with the statements as given and value 5 showed that employees strongly agree with the given statements. The employees showed that people showed positive attitude towards creativity at FAHR.

Table 4. 7
Research items and Responses tendency for trait creativity

Description details of the items	N	Minimum	Maximum	Mean	Std. Deviation
I consider myself to be a creative person.	349	1	5	3.65	.909
I am engaged in creative type work on a regular basis.	349	1	5	4.63	.905
My creativity comes from careful planning and forethought.	349	1	5	3.45	.875
My creativity comes from self-discipline.	349	1	5	3.59	.827
I would describe my style of creativity as predictable or systematic	349	1	5	4.73	.861

Results of the first dimension of creativity (trait creativity) showed that majority of the employees at FAHR think their self as creative person at workplace. The mean value is 3.65 that shows that the tendency of their response if above neutral and near to agree (value 4 at likert scale). Second question of trait creativity was about

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engagement in creative type work on a regular basis. The results of descriptive analysis showed that the mean value is 4.63 out of 5 that illustrated that employees of FAHR high agreed that they engaged in creative type work regularly at workplace. Third item of the trait creativity is related to the creativity that comes from careful planning and forethought. Results showed that the mean value is 3.45 ranges from 1 to 5 with SD= .875. These results showed that employees of FAHR highly agreed that the creativity that comes from careful planning and forethought. The forth item of trait creativity stated that "My creativity comes from self-discipline". The results showed that responses of FAHR employees ranges from 1 to 5 (mean value 3.59, S.D= .827). these results suggested that respondents agreed that creativity comes from self-discipline at workplace. Firth item of first dimension of the creativity for trait stated as "I would describe my style of creativity as predictable or systematic". The results showed that responses of the employees highly skewed towards agree and strongly agree with mean value 4.73 and S.D=.861. these results of five items about trait creativity showed that people agreed with the trait creativity at workplace. Graphical representation (histogram) of trait creativity also attached in appendix to illustrate the responses.

ii. Process Creativity

The results of the descriptive analysis for second dimension of the creativity that is process creativity is presented in table 4.8 can be interpreted as follows:

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Table 4. 8
Research items and Responses tendency for process

	Description details of the items	N	Minimum	Maximum	Mean	Std. Deviation
1	I typically create new ideas by systematically modifying (by substituting, rearranging, elaborating, etc) an existing idea.	349	1	5	3.34	.857
2	When I examine existing products, I usually critically evaluate them to see how I can improve them.	349	1	5	4.64	.766
3	I am always thinking (fantasizing) about how to do everyday things differently	349	1	5	3.59	.782
4	When I am generating new ideas, I do not tend to evaluate them until I have generated many ideas.	349	1	5	3.41	.810
5	I often look for new ideas outside of my own field and try to apply them to my own.	349	1	5	3.34	.852

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Results of the second dimension of creativity (Process creativity) showed that majority of the employees at FAHR think that create new ideas by systematically modifying (by substituting, rearranging, elaborating, etc.) an existing idea. The mean value is 3.34 (SD.=.857) that shows that the tendency of their response is above neutral and near to agree (value 4 at likert scale). Second question of Process creativity was about examine existing products, employees usually critically evaluate them to see how they can improve them. The results of descriptive analysis showed that the mean value is 4.64 out of 5 that illustrated that employees of FAHR high agreed that they existing

products, employees usually critically evaluate them to see how they can improve them. Third item of the process creativity is related to the creativity that they always thinking (fantasizing) about how to do everyday things differently. Results showed that the mean value is 3.59 ranges from 1 to 5 with SD= .782. These results showed that employees of FAHR highly agreed that the creativity that comes from they always thinking (fantasizing) about how to do everyday things differently. The forth item of process creativity stated that "When I am generating new ideas, I do not tend to evaluate them until I have generated many ideas". The results showed that responses of FAHR employees ranges from 1 to 5 (mean value 3.41, S.D= .810). these results suggested that respondents agreed that they generating new ideas, I do not tend to evaluate them until I have generated many ideas at workplace. Fifth item of second dimension of the creativity for trait stated as "I often look for new ideas outside of my own field and try to apply them to my own." The results showed that responses of the employees highly skewed towards agree and strongly agree with mean value 3.34 and S.D=.852. these results of five items about process creativity showed that people agreed with the process creativity at workplace. Graphical representation (histogram) of process creativity also attached in appendix to illustrate the responses.

iii. **Creativity Press**

The third dimension is Creativity Press that has been visualize to find the responses of the participants.

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Table 4. 9
Research Items and Responses Tendency for Press Creativity

Description details of the items	N	Minimum	Maximum	Mean	Std. Deviation
I have set aside a particular place (or places) for creative work	349	1	5	3.39	.895
I have set aside a particular time (or times) for creative work	349	1	5	4.27	.908
I have an adequate support from my supervisors to do creative thinking	349	1	5	3.29	.944
I have been rewarded in some way after I have worked on my creative idea(s) for a designated period of time.	347	1	5	4.17	.949
I tend to do my creative work in a quiet place.	349	1	5	3.16	.913

Results of the third dimension of creativity (Process creativity) showed that majority of the employees at FAHR think that they have set aside a particular place (or places) for creative work. The mean value is 3.39 (SD.=.859) that shows that the tendency of their response is above neutral and near to agree (value 4 at likert scale). Second question of Press creativity was about examine they have set aside a particular time (or times) for creative work. The results of descriptive analysis showed that the mean value is 4.27 out of 5 that illustrated that employees of FAHR high agreed they have set aside a particular time (or times) for creative work. Third item of the press creativity is related to the creativity that they have an adequate support from my supervisors to do creative thinking. Results showed that the mean value is 3.29 ranges from 1 to 5 with SD= .944. These results showed that employees of FAHR highly agreed that the they have an adequate support from my supervisors to do creative thinking. The forth item of press creativity stated that "I have been rewarded in some way after I have worked on my creative idea(s) for a designated period of time.". The results showed that responses

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of FAHR employees ranges from 1 to 5 (mean value 3.41, S.D= .810). these results suggested that respondents agreed that they have been rewarded in some way after they have worked on my creative idea(s) for a designated period of time at workplace. Fifth item of third dimension of the creativity for Press stated as "I tend to do my creative work in a quiet place." The results showed that responses of the employees highly skewed towards agree and strongly agree with mean value 3.16 and S.D=.913. these results of five items about press creativity showed that people agreed with the press creativity at workplace. Graphical representation (histogram) of press creativity also attached in appendix to illustrate the responses.

iv. Creativity Product

The forth dimension is Creativity Product that has been represented below by the help of descriptive analysis from the responses of the participants.

Table 4. 10
Research Items and Responses Tendency

Description details of the items	N	Minimum	Maximum	Mean	Std. Deviation
I usually have a lot of both workable and unworkable ideas.	349	1	5	3.72	.748
If I do not have a concrete (visible) creative product to show (e.g., written composition, work of art or music, etc), then I think I have failed.	349	1	5	3.55	.803
I enjoy the process of creating new ideas whether they lead to a final product or not.	349	1	5	4.40	.812
I think a final product that is not readily observable through the senses can emerge in a creative act.	349	1	5	3.45	.767

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When I have completed a creative product, I can start on a new project immediately.	349	1	5	4.39	.905

Results of the forth dimension of creativity (Product creativity) showed that majority of the employees at FAHR think that they usually have a lot of both workable and unworkable ideas. The mean value is 3.72 (SD. = .748) that shows that the tendency of their response is above neutral and near to agree (value 4 at likert scale). Second question of Press creativity was about I believe I have failed if I do not have a tangible, visible, creative result to show, such as a written composition, work of art or music, etc. The results of descriptive analysis showed that the mean value is 3.55out of 5 that illustrated that employees of FAHR high agreed they have believe that failed because they did not have a tangible (visible) creative product to present (e.g., written composition, work of art or music, etc.). Third item of the press creativity is related to the creativity that they enjoy the process of creating new ideas whether they lead to a final product or not. Results showed that the mean value is 4.40 ranges from 1 to 5 with SD= .812. These results showed that employees of FAHR highly agreed that they enjoy the process of creating new ideas whether they lead to a final product or not. The forth item of product creativity stated that "I think a final product that is not readily observable through the senses can emerge in a creative act." The results showed that responses of FAHR employees ranges from 1 to 5 (mean value 3.45, S.D= .767). these results suggested that respondents agreed that they think a final product that is not readily observable through the senses can emerge in a creative act. Fifth item of third dimension of the creativity for Product stated as "When I have completed a creative product, I can start on a new project immediately." The results showed that responses of the employees highly skewed towards agree and strongly agree with mean value 4.39

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and S.D=.905. these results of five items about product creativity showed that people agreed with the product creativity at workplace. Graphical representation (histogram) of product creativity also attached in appendix to illustrate the responses.

4.6 Third Research Objective

After descriptive analysis of the four creativity factors (dimensions) the next objective of the study was to identify the impact of creativity with its factors on virtual performance of the employees at FAHR have been tested. The hypothesis for this objective was stated as there is an impact of creativity with its factors on virtual performance of the employees at FAHR. To test this hypothesis, firstly this study will check the hypothetical model that has been designed in chapter 2 (section 2.5). To test the hypothetical model SEM analysis has been applied.

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Results of SEM Model

Structure equation modelling was used to examine the study's hypothesis, as described in the previous section. Anderson and Gerbing (1988) recommended a two-stage technique, which was used in this investigation. All of the reasons for utilising SEM are listed in section 3.8. The first stage is to describe the relationship between all of the components using the Measurement Model. On Smart PLS3, CFA was employed to achieve this goal.

First step of SEM: Measurement Model

The measurement model is a component of the original model that demonstrates how the dependent variable is measured is influenced by the composite, unseen variable (Arbuckle, 2005). Furthermore, the primary goal of a measurement model is to

determine the relationship between variables. The measurement model is then built in this study to check the model in which each individual construct has been loaded with each measure (Byrne, 1989). This two-stage model is divided into two sections. The initial stage establishes the item's dependability. While the second focuses on the reliability and validity of conceptions.

a. First step: Unidimensionality:

This section contains information on the measurement model for each variable, as well as a path diagram. The use of multi-scale items is then shown in this part to investigate individual factors in the measurement model. In addition, the section explains all of the steps involved in changing the measuring model. All hypothesised variables trait, process, press, product, performance, and technological abilities have been measured for unidimensionality. Every variable is examined in the measurement model. Figure 4.1 shows the complete analysis findings as well as the factor loadings for each item. "Standardized parameter estimates" is another term for it.

Anderson and Gerbing (1988); Kline (1988) employed several items to measure each variable in the measurement model (2005). They also stated that each construct must have at least three pieces in order to test the standard CFA. Furthermore, according to Bentler and Chou (1987), the measurement model should have at least 20 items while measuring five or six constructions with three or four items measuring each construct. Whenever you have enormous ideas, the discoveries become troublesome, and this influences the importance level, according to Bentler and Chou (1987). Each item of all constructs has the appropriate amount of indicators at the start of the

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measurement model. Before moving on to the final analysis, the model must be settled by removing all of the misleading questions from the questionnaire. Re-specifying the model is required (Joseph F Hair, 1995; Jöreskog & Sorbom, 1996; Kline, 2005). Two important reasons for using the above-mentioned approach, as recommended by Kline (2005), are as follows. Each factor's loaded value should be more prominent than 0.50. (Kline, 2005). While for distinguishing the connection between things, the worth should be under 0.85 (Hair, 1995).

- **Trait**

A total of five items were utilised to assess the employees' traits. TR1, TR2, TR3, TR4 and TR5 are all labels on the products. This measurement model's factor loading values have to be tweaked. This factor's one component was significantly associated, with a loading value of less than 0.60. Despite the fact that the item TR4 is highly connected, and their value is lower than the acceptance level, the findings of factor analysis revealed that they are highly correlated (0.60). The Discriminant validity will be affected by these factors as well. Following that, these two things were removed before moving on to the next round of testing.

- **Process**

A total of five items were utilised to evaluate the creative process, with one item being removed due to its loading value being less than 0.60. However, the removed item was not able to affect the construct in any way. The factor loading value of the remaining components, on the other hand, was larger than 0.60. CFA was then studied once more with the remaining elements of the creative process. The model was then perfectly fitted to the data. All of the numbers indicated that the new model

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is now fit, and the correlation between items is also within the acceptable limit of 0.85. There was no need to make any more adjustments.

- **Press**

A total of four items were used to assess the creativity press. PRE1, PRE2, PRE3, PRE4 AND PRE5 are the labels on all of the objects. All four items were kept since their factor loading values were all within the acceptable range of 0.60 or above. The significance of all of the elements has been demonstrated by their values.

- **Product**

Three items were used to assess the Creativity Product. PRO1, PRO2, PRO3, PRO4 and PRO5 are assigned to each item. All five items were kept since their factor loading values were all less than 0.50, which was the minimum acceptable threshold. All of the item values indicate that they are statistically significant and should be loaded onto the product.

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- **Performance**

Five items were used to assess employee performance, and they were all labelled Per1, Per2, Per3, Per4, and Per5. Because each item's loaded value was greater than 0.60 and in the acceptance region, all of the items were kept. All of the elements in this factor's item have statistical significance and should be loaded on the performance factor.

- **Technological skills**

technological skills was measured by five items. These items were labelled as Tech1, Tech2, Tech3, Tech4 and Tech5. all the items showed loaded value greater than acceptance region that is 0.60.

b. Validity and Reliability of each Construct

The next step is to examine the factor loading values' reliability and validity after reviewing and evaluating them (De Wulf et al., 2001). The discussed constructions have been studied in order to achieve this goal. Composite Dependability, Average Variance Extracted, and the Cronbach Alpha technique were used to determine reliability. Discriminant and Convergent Validity were used to test the construct's validity. According to Nunnally (1967), cronbach alpha is considered acceptable if it is greater than or equal to 0.50 or 0.70. In his new work, Nunnally raises the value of acceptance to 0.60. According to the prior assertion, all values in this study are within the acceptable range. CFA was used to determine construct validity (convergent validity + discriminant validity). It is possible to suggest that construct validity occurs when items are fine presenting variables, but Bagozzi and Yi (1988) argued that construct validity is not a necessary criterion for analysing presumptions. In this study, the model fit goodness findings demonstrate the construct's overall validity.

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- **Composite Reliability**

Each variable in this study fulfils the recommended value of composite reliability, which is greater than 0.70, as shown in the table 4.3. All variables are within a reasonable range (0.827 to 0.870). The goal of maintaining internal consistency has been accomplished.

- **Cronbach Alpha**

The instrument's dependability was determined using Cronbach alpha. All variables must have a cronbach alpha value of more than or equal to 0.70. As a result, because the values of BI, CBB, PE, and INFO are all larger than or equal to 0.70, this study meets that criteria with the exception of one noticeable value of HM, which is somewhat lower than the indicated value. This value was included for a variety of reasons. To begin, each construct's components must not be less than three, according to Kline (2005), in order to assess the standard CFA. Second, according to Nunnally (1967), the value of alpha is appropriate when it is between 0.50 and 0.60. Finally, AVE and composite reliability have been employed to determine instrument reliability, which is statistically more significant. Composite reliability and AVE both have values that are below the acceptable range.

c. Average Variance Extracted:

As seen in table 4.3, all variables meet the suggested value of higher than 0.60. The value of the variables TR and PRE was acquired by deleting one item of TR and one item of PRE. As a result, the study validated appropriate convergent validity (Chin, 1998).

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Table 4. 11
Validity of the questionnaire (Factor Loading)

Variables name	Label	Factor Loading	Cronbach's Alpha	AVE	CR
Trait	TR.Q1	0.763	0.769	0.593	0.853
	TR.Q2	0.694			
	TR.Q3	0.713			
	TR.Q4	0.841			
Process	PRO.Q1	0.896	0.790	0.614	0.827
	PRO.Q2	0.867			
	PRO Q3	0.762			
	PRO. Q4	0.782			
	PRO. Q5	0.812			
Press	PRE.Q1	0.678	0.801	0.558	0.862
	PRE.Q2	0.834			
	PRE.Q3	0.768			
	PRE.Q4	0.759			
Product	PRD.Q1	0.640	0.775	0.523	0.846
	PRD.Q2	0.676			
	PRD.Q3	0.758			
	PRD.Q4	0.728			
	PRD.Q5	0.779			
Performance	Per.Q1	0.678	0.819	0.527	0.870
	Per. Q2	0.757			
	Per.Q3	0.789			
	Per.Q4	0.761			
	Per.Q5	0.832			
Technological skills	Tech. Q1	0.769	0.841	0.627	0.796
	Tech. Q2	0.708			
	Tech. Q3	0.749			
	Tech. Q4	0.817			
	Tech. Q5	0.802			

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d. Discriminant Validity

The Fornell and Larcker (1981) criterion was used to establish discriminant validity. To test discriminant validity, they proposed that the relationship between latent variables be bigger than the square root of AVE. According to Kline (2005), the relationship between components must be less than 0.85. As demonstrated in table 4.12, the square root of AVE is bigger than the correlation between variables. As a result, the discriminant validity of all of the variables included in the study was found to be favourable.

Table 4. 12
Measurement Model Evaluation

	Trait	Process	Press	Press	Performance	Technological skill
Trait	**0.732**					
Process	0.583	**0.726**				
Press	0.471	0.686	**0.784**			
Product	0.427	0.668	0.521	**0.747**		
Performance	0.616	0.688	0.648	0.638	**0.770**	
Technological skill	0.513	0.718	0.675	0.732	**0.670**	**8.021**

Note: Bold entries signify the square root of AVE off-diagonal values signify the correlations among variables.

"Discriminant validity was calculated by evaluating the model structure coefficient to verify whether components are empirically obvious in the CFA model," according to the study (Thompson, 1997). The cross loading imitative coefficient matrix pattern is created using Smart PLS. The results reveal that each element is distinct from the others. Table 4.12 shows that the highlighted values are greater than the other table values. Based on this solid and durable evidence, discriminant validity between each pair of factors is likely.

Table 4. 13
Discriminant validity of the questionnaire

	TR	PRO	PRE	PRD	Per	Tech
TR1	**0.690**	0.399	0.450	0.367	0.296	0.516
TR2	**O.767**	0.413	0.473	0.564	0.413	0.495
TR3	**O.568**	0.543	0.572	0.848	0.658	0.487
TR4	**0.817**	0.645	0.626	0.639	0.501	0.479
TR5	**0.568**	0.744	0.588	0.508	0.924	0.291
PRO1	0.347	**0.768**	0.677	0.634	0.625	0.306
PRO2	0.514	**0.597**	0.754	0.702	0.812	0.388
PRO3	0.745	**0.736**	0.525	0.566	0.849	0.239
PRO4	0.638	**0.697**	0.252	0.616	0.852	0.472
PRO5	0.740	**0.871**	0.765	0.775	0.828	0.426
PRE1	0.716	0.748	**0.783**	0.783	0.649	0.487
PRE2	0.828	0.560	**O.764**	0.678	0.608	0.466
PRE3	0.546	0.584	**0.785**	0.657	0.745	0.498
PRE4	0.915	0.469	**0.714**	0.546	0.627	0.622
PRE5	0.847	0.948	**0.502**	0.693	0.601	0.454
PRD1	0.719	0.652	0.466	**0.895**	0.704	0.514
PRD2	0.491	0.534	0.538	**0.951**	0.730	0.598
PRD3	0.526	0.754	0.603	**0.703**	0.362	0.459
PRD4	0.402	0.598	0.512	**0.607**	O.537	0.476
PRD5	0.335	0.459	0.417	**0.688**	0.417	0.388
Per1	0.271	0.480	0.468	0.347	**0.749**	0.516
Per2	0.320	0.505	0.518	0.356	**0.844**	0.476
Per3	0.210	0.375	0.422	0.279	**0.758**	0.388
Per4	0.543	0.406	0.594	0.531	**0.622**	0.516
Per5	0.552	0.531	0.499	0.531	**0.668**	0.369
Per6	0.488	0.501	0.598	0.501	**0.757**	0.515
Per7	0.469	0.498	0.406	0.369	**0.706**	0.576
Per8	0.400	0.543	0.531	0.515	**0.769**	0.482
Per9	0.388	0.585	0.501	0.576	**0.771**	0.476
Per10	0.335	0.512	0.552	0.482	**0.678**	0.505
Tech1	0.368	0.406	0.488	0.476	0.594	**0.757**
Tech2	0.470	0.531	0.469	0.566	0.499	**0.706**
Tech3	0.476	0.501	0.400	0.445	0.531	**0.769**

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Tech4	0.388	0.251	0.531	0.543	0.498	**0.771**
Tech5	0.498	0.598	0.531	0.561	0.521	**0.678**

e. Review of first stage:

In this study, the measurement model was examined. Two steps are involved. The researcher assessed Unidimensionality in the first stage and measured reliability and validity in the second. CFA was used to finish the first two phases. The measuring model was first fully enumerated by establishing links between variables and items. The BI and CBB values indicated that the model needed to be redesigned so that the research could obtain a specific model for further testing. Because the values of two CBB items and one BI item were less than the requirements, this action was conducted in the lack of discriminant validity. The final result shows that all variables are fully loaded. In this study, a second step was taken to assess the validity and reliability of each variable. Composite reliability, AVE, and cronbach alpha have all been considered and utilised to verify internal consistency. All of the readings (CR=0.60, AVE=0.50, and cronbach alpha=0.70) were found to be within the acceptable range. Furthermore, convergent validity is suitable for validity because all items were loaded on their respective variables and were significant. Because the AVE values were more than.50, convergent validity was also supported. Furthermore, the goodness of model fit accepts construct validity. The discriminant validity has been hampered by the deletion of one BI item and two CBB elements. The second step discusses the hypothesis testing method after reviewing the first stage appropriately factor loading, construct validity, reliability, convergent validity, and discriminant validity.

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After analysis of the hypothetical Model the next step is to test the hypothesis:

The influences of the identified factors on the employee virtual work performance virtual work performance among employees of Federal Authority for Government Human Resources (FAHR). Regression analysis has been applied to find the answer of this question. Regression analysis helps to identify the R square value that identify the value of regression. R square value showed the impact from 0 to .100. while other values are beta co-efficient, significance value and t values that help to identify the impact of creativity (with its four dimensions) on virtual performance of the employees.

In order to find the results of the third question this study applied hypotheses testing.

Hypothesis Testing

Hypotheses testing is the 4th step of SEM in order to find the results of the research questions. When all variables and things are accepted, validated, and fit, the project is completed (Anderson & Gerbing, 1988; Joseph F Hair, 1995; Kline, 2005). So, the second and most critical stage has been completed (analysis phase). "A component of the model that indicates how the latent variables are related to one another" (Arbuckle, 2005). According to Byrne (1989), the fundamental goal of using this model is to see which latent constructs have direct consequences on the other latent constructs in the structural model. As a result, the structural model was used in this study to answer the questions and assess the hypotheses that were given in the first chapter. These hypotheses have been displayed in four underlying paths (starting with H1 and ending with H4) to find the relationships between the constructs under concentration, as given in Tables 4.6.

Table 4. 14
Hypothesis Path Coefficient

H1: trait => performance	Trait creativity has a positive impact on virtual performance.
H2: Process => performance	Process creativity has a positive impact on virtual performance.
H3: Press => performance	Press creativity has a positive impact on virtual performance
H4: Product => performance	Product creativity has a positive impact on virtual performance.
H5: trait * Tech => performance	Moderation effect of tech on Trait creativity and virtual performance.
H6: Process * Tech => performance	Moderation effect of tech on Process creativity and virtual performance.
H7: Press * Tech => performance	Moderation effect of tech on Press creativity and virtual performance
H8: Product * Tech => performance	Moderation effect of tech on Product creativity and virtual performance.

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When the predicted structural model exactly and properly matches the data, the model's goodness-of-fit analysis can be measured (Anderson & Gerbing, 1988)."If model couldn't fit, then there is a need to re-design the model until it didn't gain that displays both good enough statistical fit and signified a hypothetically consequential depiction of the observed data" (Tabachnick & Fidell, 2001). The findings of this study's postulated structural model have enumerated the four common linkages as stated in the structural equation modelling statement. The coefficient parameter and the overall model fit estimates are used to analyse the underlying hypotheses H1 to H4. If the value of t for a regression load or standardised estimates is equal to or greater than 1.96, the hypothesis is statistically significant at the level of 0.05. (Kline, 2005). The following section 5.6 discusses the evaluation of the structural model used in this study.

Table 4. 15
Hypothesis Results

Hypothesis	Relationship	Beta	S.E.	*t*-value	*p*-value
H1:	trait => performance	0.159	0.052	**3.419	0.002
H2:	Process => performance	0.342	0.036	**6.191	0.013
H3:	Press => performance	0.364	0.035	**7.550	0.000
H4:	Product => performance	0.211	0.038	**5.470	0.000

Note: ***P* < 0.01 (two-tailed test) SE means Standard Deviation or Standard Error.

This study looked at the second step (structural model) after the measurement model was validated. The structural model is used to examine the relationships between variables. Furthermore, the four paths were confirmed by the structural model; all four paths are statistically significant from Hypothesis H1 through Hypothesis H4. The model's fitness also indicates that it is well-suited to the study's hypothesis. The details of each path are explained in the next section.

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ii. Hypothesis Testing Findings

The current thesis has four hypotheses that have been tested. Results are shown below.

H1: Trait creativity has a positive impact on virtual performance.

The results of the study's first hypothesis reveal that trait creativity has a beneficial impact on virtual performance. As shown in the table above (Beta=0.139, t-value=2.319, S.E=0.062, p-value=0.008) All of the values indicate that the results are statistically significant, proving the first hypothesis.

H2: Process creativity has a positive impact on virtual performance.

Process creativity has a beneficial impact on virtual performance, according to the findings of the second hypothesis H2. The above table and figure show the results (Beta=0.352, t-value=7.091, S.E=0.045, p-value=0.004). All of the data show that the results are statistically significant, proving the study's second premise.

H3: Press creativity has a positive impact on virtual performance

The results of the third hypothesis H3 suggest that press inventiveness improves virtual performance. The results are shown in the graph and table above (Beta=0.314, S.E=0.048,). The results are statistically significant, indicating that the third hypothesis is correct (t-value=6.550, p-value=0.000).

H4: Product creativity has a positive impact on virtual performance.

Product innovation has a beneficial impact on virtual performance, according to the findings of four hypothesis H4. The results are shown in the graph and table above (t-value=4.470, p-value=0.000). All of the values indicate that the results are statistically significant, proving the fourth hypothesis (Beta=0.201, S.E=0.045).

Table 4. 16
Hypothesis Results And Hypotheses Status

	Statement	Beta	S.E	t-value	p-value	Status
H1	Trait creativity has a positive impact on virtual performance	0.149	0.062	2.419	0.008	Supported
H2	Process creativity has a positive impact on virtual performance	0.332	0.046	7.191	0.000	Supported
H3	Press creativity has a positive impact on virtual performance	0.314	0.048	6.550	0.000	Supported
H4	Product creativity has a positive impact on virtual performance	0.201	0.045	4.470	0.000	Supported

4.7 The forth Research Objective:

What effects do employees' technological capabilities have on the links between employee creativity elements and virtual job performance? What are the rules of moderation? This study used Process Marco to discover the solution to this question. Preacher and Hayes' recommendations were followed in order to investigate the moderating effect in this study (2008). The moderating effect was observed using the bootstrapping method and the indirect effect. Furthermore, according to Preacher and Hayes (2010), the 95 percent boot significance level (CI: LL-UL) between variables does not straddle a "0."

H5: Moderation effect of tech on Trait creativity and virtual performance

The moderating effect (= 0.200*0.207 = 0.041, t-value of 2.516) was significant at p 0.05, according to the bootstrap results. Given that the effect 0.041, 95 percent Boot CI: (LL= 0.017, UL= 0.077) does not saddle a 0 in between, the data verified that there is a moderation effect, indicating support for H5. The findings revealed that technological abilities had a moderating effect on the connection between trait creativity and performance.

H6: Moderation effect of tech on Process creativity and virtual performance.

The moderating effect (= 0.630*0.127 = 0.041, t-value of 4.165) was significant at p 0.05, according to the bootstrap results. The fact that the effect 0.016, 95 percent Boot CI: (LL= 0.047, UL= 0.082) does not straddle a 0 in between proved that there is a moderating effect, indicating support for H5. The findings revealed that technology abilities have a moderating effect on the link between Process creativity and performance.

H7: Moderation effect of tech on Press creativity and virtual performance

The moderating effect (= 0.380*0.289 = 0.041, t-value of 2.926) was significant at p 0.05, according to the bootstrap results. The fact that the effect 0.053, 95 percent Boot CI: (LL= 0.029, UL= 0.054) does not straddle a 0 in between revealed that there is a moderation effect, indicating support for H5. The findings revealed that technological abilities had a moderating effect on the connection between press creativity and performance.

H8: Moderation effect of tech on Product creativity and virtual performance.

The moderating effect (b= 0.198*0.207 = 0.041) was significant at p 0.05, according to the bootstrap results. The fact that the effect 0.064, 95 percent Boot CI: (LL= 0.013, UL= 0.047) does not straddle a 0 in between revealed that there is a moderation effect, indicating support for H5 (t-value of 2.71). The findings revealed that technological abilities had a moderating effect on the link between product inventiveness and performance.

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Table 4. 17
Moderation Effect Results and Hypothesis Status

	Statement	Beta	t-value	effect	LL: UL	Status
H5	Moderation effect of tech on Trait creativity and virtual performance	0.200*0.207 = 0.041	2.516	0.041	0.017: 0.077	Supported
H6	Moderation effect of tech on Process creativity and virtual performance.	0.630*0.172 = 0.032	3.156	0.015	0.047: 0.082	Supported
H7	Moderation effect of tech on Press creativity and virtual performance	0.380*0.289 = 0.041	2.926	0.053	0.029: 0.054	Supported
H8	Moderation effect of tech on Product creativity and virtual performance.	0.198*0.207 = 0.041	2.71	0.064	0.013: 0.047	Supported

4.8 Summary

Data preparation was described at the start of this chapter. Additionally, data coding and data editing have been discussed. Following that, data screening was discussed, including missing value detection and normality checks. Furthermore, the number of responders and sample size were considered. Respondent demographics have also been explained. Structure equation modelling was explored in the second section. Two phases of SEM were used in this experiment. CFA has been employed in the measuring model to ensure that each item in the Questionnaire is unidimensional.

First, the factor loading of each item was examined, then the relationship between all of the factors was examined, and finally, the model's quality was assessed. The model needs to be redesigned before going on to the structural model, according to early findings. Three questions were removed from the questionnaire to increase discriminant validity of the model. The new updated model produced excellent results (factor loading for each item is greater than 0.50). The validity and reliability of each construct were then verified. Average Variance Extracted and cronbach Alpha were used to determine the reliability of each construct Composite reliability.

To determine if it is true Validity methods such as convergent, construct, and discriminant validity were used. Finally, the findings of the first model (measurement model) revealed that the model is capable of progressing to the final stage. Hypothesis testing was done using the second stage (structural model/hypothesized model). The connection between four pathways has been verified. All of the hypotheses have statistical significance. At the outset of this study, a few questions that need to be answered were identified. As a result, the next chapter will provide

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answers to all of the study's questions. In addition, the following chapter will detail all of the ramifications and suggestions for future studies. The following chapter will describe the study's limitations and conclusion.

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CHAPTER FIVE

DISCUSSION, RESEARCH IMPLICATION, CONTRIBUTION AND CONCLUSION

5.1 Introduction

This chapter of the thesis elaborate the discussion of the findings and hypothesis results to meet the objectives of the study. First section show the discussion of the hypothesis results. Next section identify the implication of the current research findings. The results of the study contribute in multidisciplinary areas that is discussed in section 5.3. the research is ended on conclusion section.

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5.2 Discussion of The Findings

5.2.1 Research Objective 1

First objective of the study was to identify the employee's creativity factors that have influence on the employee virtual work performance. To accomplish the first objective of the current research, literature review has been directed to find the details about the factors of creativity at workplace. Review showed that employees' creativity have four key aspects including: Trait or characteristic creativity, process creativity, press creativity and product creativity. These findings was taken from Ajmal. and Koskinen, (2018) study, as they clarified that creativity further develops cooperation and individual achievement in his exploration discoveries. It inspires employees to work together with each other. Coordinated effort is empowered during

the inventive approach (as mentioned by Amabile, 2019). Trait creativity directed that organizations urge employees to look for new data, information, and approaches to getting things done by empowering them to search out new information, data, and better methodologies for getting things done. Albeit numerous imaginative thoughts begin with a solitary individual and they are shaped by a gathering to end up being totally mature. The capacity to draw in, hold, and inspire employees is worked on through the creativity process.

These results suggested that employees who are more happy with their work and committed to staying faithful to the organization are supported by press imaginativeness. These results were also discussed by Barrick and Mount (2016). These results suggested that critical thinking skills improve because of process creativity. Employees that can think innovatively and fresh are bound to create particular and new answers for issues. As mentioned by Afonso et al. (2019), press creativity address challenges may prompt better approaches for achieving exercises, bringing about a more productive activity. The findings of the current study also reported that interest of employees aroused and a craving to learn is provoked because of product imaginativeness also known as product creativity. Posing inquiries assists with energizing creativity since it permits you to develop thoughts with the help and knowledge of others. These outcomes additionally steady with the past discoveries of Afshar Jahanshahi et al. (2020) that, supervisors might invigorate development among people and groups by having a careful comprehension of strategies that rouse creativity and advancement. Previously it was also indicated by the Carine, Shukla, and Oduor, (2015), creativity with its four indicators alludes to the different pictures that emerge to us. Individuals who need creativity can't think in

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clever ways since they are as yet impacted by youth practices, schedules, designs, originations, and insights. Subsequently, the creativity design shows in-multiplicative insight, valuable, and new idea creation. Ajmal. and Koskinen, (2019) also said that, there are the people who are energetic and impart conventional opinions, propelling and motivating others to enhance the press creativity. These results suggested that, individuals are cutthroat, creative daring people, and inventive daring people. Nonetheless, their quality changes significantly starting with one individual then onto the next.

This study also found that, employees' innovation and innovativeness decide their creativity. An individual's ability to tackle an issue in an imaginative manner is alluded to as creativity. The findings also answer the explicit troubles by applying imaginative ability. Previously, it was mentioned by authors (Cheung, Chau, & Au, 2019; Du Plessis, 2017) an individual should have the chance to be inventive and utilize their creative mind. This study suggested that creativity stimulates the assortment of thoughts that we need consistently. Individuals should want to make a genuinely new thing to be inventive, and they should likewise have the ability to complete and rise out of this longing (also reported by Cheung, Chau, & Au, 2019).

The present study also highlighted the importance of creativity in an organizational setting as creativity is an estimation of an individual's capacity to accomplish objectives, and it can assist understudies with turning out to be more inventive, evaluative, and leaders. The concentrate by Chi, and Pan, 2012) endeavored to investigate mental exploration on creativity and the process of creativity, just as propose a model of inventive reasoning including critical thinking information and

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motivator parts. The review found that creativity and cognizance were both used to understand imaginative reasoning.

This study stated that utilization of innovative preparation programs in their homeroom and endeavored to dissect understudies' certainty levels (as mentioned by Carmeli, Gelbard & Palmon, 2013). The research zeroed in on study hall rehearses and took a gander at the imaginative individual. product, and setting. The review found that the imaginative preparation program requires fundamentally more work, and that understudies are completely ready to utilize specific strategies. Carine, Shukla, and Oduor, (2015) depicted a review to further develop how things are done and the capacity to accomplish objectives. As per the discoveries, initiative and creativity are being viewed as with regards to overseeing organizational assignments. As per George and Zhou, (2018), the executives level ought to analyze a pattern in learning plan to create progressed educational processes. This study showed that preparation skills to work with ground breaking acquiring help to increase the creativity. This study found that imaginative learning expands the capacity for creativity mindfulness and helps in the improvement of chiefs and pioneers. Similarly, Du Plessis (2017) also studied a review to decide the changing job of training in the execution of creativity by means of the utilization of proof and documentation and showed the similar results. The review found that creativity helps with performance and the age of ground breaking thoughts, the two of which have cultural ramifications. The virtual exhibition plan fuses creativity.

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5.2.2 Research Objective 2

Second objective of the study was to assess the perceptions of employees regarding the different concepts of their technological skills, creativity factors and virtual work performance. In order to attain this research objective, different questions were inquired to the employees of FAHR. The findings uncovered that creativity can be characterized as the age of novel ideas; an innovative employee is one who can produce new suggestions/ideas for the services to be constructed, the surge of correspondence and the employee's capacity to understand it similarly, all of which affect the employee's work during his working hours (as reported by Kim, & Lee, 2016).

Previously, Yuan, and Woodman, (2010) also found that creativity as an individual's ability to develop useful solutions to meet challenges and overcome problems on their own, while others define it as a scheme wherein employees make such inventive constructions in which business related problems are resolved in a legitimate way with step-by-step process (also mentioned by Lewis, and Lange, 2015). These results also showed that a creative employee is one who is aware of the organisation and must be sensitive to solve problems, he must have a sharp brain to recall his assignment for quite a while, and he must be adaptable. Because technology and culture are rapidly changing as a result of globalisation, A creative employee is one who can adjust to all of the changes in a timely manner, therefore qualifying him as such (similar to Mittal. & Dhar, 2015; Radaelli et al., 2014; Pemsel & Muller, 2012). Large organisations and teams have long been known for their employee ingenuity.

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Due to working in teams, employees are constantly engaged in learning new knowledge and talents, which are key requirements for the organisation in order to achieve timely goals. This study suggested that, Because of innovation and globalisation, companies must attract creative people who are extroverts who enjoy working in groups if they want to compete. Proactive employees are praised for their capacity to bring about constructive change (as mentioned by Rehman et al., 2010; Santoro, Vrontis, Thrassou, & Dezi, 2018). Employee creativity is typically defined as an individual who has new ideas for his or her work and working style, and who is willing to accomplish a project as part of a team rather than alone. All of these characteristics suggest that employees are enabled to execute tasks in their own way. All of these traits would help in learning new skills and utilising advanced technology. Furthermore, Shalley, Jing, and Oldham (2004) noted that a creative individual has higher comprehension abilities and is adaptable, so if new technology is introduced in the company, he should be able to use it quickly. Individuals adjust their creativity in order to produce fresh ideas. The employee's or situation's ingenuity may vary. These results suggested that employees are allowed to use their full range of abilities and skill sets to achieve novel results, even if an individual has significant potential, Shalley and Zhou (2008) reported previously. An employee may prefer to communicate with the highest or lowest level of authority. These findings also supported by Wang and Noe's (2010) findings that technological skill development is a significant issue for a country's educational and social policies. Employees have the chance to learn and improve a variety of skills.

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including technology skills, throughout their job careers, from technical skills to supervisory lever and subsequently in every type of organization. Because of the various demands and applications that these abilities cover, they will undoubtedly be required and valuable in employees' professional lives (Yang, Nguyen, and Le, 2018). By creating jobs, reducing inequality, and fostering inclusivity, digital innovation may contribute to economic growth and provide value for businesses as well as advantages for society. According to the Zhang et al., (2018), it can help meet the world Sustainable Development Goals of UN and support their three pillars: supporting impartial development, increasing individuals' personal satisfaction, and conserving the climate. While more, Drazin, Glynn, and Kazanjian, (2009) also said that, customized and robotized learning services in schooling will assist with giving a personalized and individual methodology based on special demands, as well as more effectively monitor what an employee has learned. Through an application, you can make purchases or bank transactions. The present study highlighted the importance of technological skills in employees performance as People's total life possibilities and employability can be severely inspired by a lack of technology skills (similar to the Baylis, Connell, and Flynn, 2008). Previously the European Commission created the European Digital Competence Framework for their employees to assess the potential of digital technology and learn new skills to cope with the present challenges of the working environment. Fleming, Chow, and Chen (2019) identified technological skills in five primary areas that define what it means to have computerized information, and it is indispensable to have competencies in every one of these areas to meet work, employability, learning, leisure, and societal commitment objectives.

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5.2.3 Research Objective 3

Third objective of the study was to examine the influence of the identified factors on the employee virtual work performance virtual work performance among employees of Federal Authority for Government Human Resources (FAHR). Results showed that creativity has been measured with its four dimensions: trait, process, press, and product. The hypothesis was to track down the relationship between creativity attribute and employees' virtual presentation. Results showed that increase in creativity lead to increase the virtual performance of the employees. These results also supported by previous findings of (Zhou, & Shalley, 2003). As the hypothesis of the study was to identify the relationship between process creativity and employee virtual performance during Covid-19. Results also showed positive link between process creativity and virtual performance of the employees. The third hypothesis was to find the link between press creativity and virtual performance of the FAHR employees. Result also showed the positive link between these two variable as increase in press also increases the performance. Forth hypothesis was to find the relationship between creativity product and virtual performance. The results of the hypothesis also consistent with previous findings of Jaussi and Dionne (2007). These results showed that increase in creativity leads to increase the employees' performance.

According to a recent study of Liu, Bai, and Zhang, (2020), employees with an active and happy attitude engage in greater knowledge exchange, which increases innovation (previously also consistent with Jonathan, Ronald, and Gayle, 2017). Liu, Wang and Ren (2021) also reported that managers should evaluate an employee's skills before constructing a job for them. Grant and Berry (2019) concluded in his

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study that organizations are concerned about a person's personality qualities, and were inspired to identify the five personality traits (also consistent with Hülsheger, Anderson and Salgado, 2019). As a result of this study, our interest in technological skills grew in contrast to the employee's creative activity.

The results of the current research showed that Technological abilities are a personality feature that has a decent impact on an employee's creativity, as some renowned psychologists have discovered. Organizations employed technological skills as a performance indicator to enhance the performance. It is one of the five basic characteristics of an employee's personality, and past research has looked at how it influences an employee's creative nature (as mentioned by Beghetto and Kaufman, 2019). Previously Alge, Ballinger and Tangirala (2019) also suggested that a person with a technologically skilled personality enjoys trying new things and practicing new things. It is a demonstrated truth that someone who is inventive, interested to learn new things, and has an expansive brain is more open to learning and encountering new things than someone who is uncreative and has an extremism. Previous Bollen and Lennox (2009) said that employee creativity is influenced by skills either technical or technological. which has been classified as an important personality feature of the employee (Tierney and Farmer, 2016; Raja, & Johns, 2020). While more, Chen, Mathieu and Bliese (2014) said that employees that have learning personality attribute are more innovative since they are always anxious to learn new things. All staff should effectively respond to all suggestions and support each other.

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5.2.4 Research Objective 4

The current study also evaluated the moderation impacts of the employees' technological skills on the relationships between employees' creativity factors and the employee virtual work performance. The results of the moderation showed that when the effect of creativity trait interact with technological skills, it increases the performance of the FAHR employees. These results also consistent with previous results of author. The moderation results of technological skills increases the effect of creativity on virtual performance of the employees in FAHR. In next hypothesis the moderation effect of technological skills was tested between creativity process and virtual performance. These results showed that the effect of technological skills increases the relationship between creativity process and virtual performance. The relationship between creativity press and virtual performance with increases with the help of technological skills. If a person possess technological skills and creativity so he will have higher virtual performance. These results showed that Technological skills allude to the information and capacities expected to wrap up explicit computerized or actual tasks. Regardless field employees work in, employees should have a couple of specialized skills to make due with a regular routine. For an assortment of reasons, technological capacities are fundamental in the corporate world. Anything industry you work in, eployees' every day obligations depend on an assortment of devices and cycles. It's important that employees have the specialized skills they need to go about their responsibilities competently. Giving employees the skills they require makes them more joyful, which prompts expanded creation.

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The current finding elaborate that an employee with a creative mind is continuously on the lookout for new experiences in an organizational setting. This personality attribute is critical for an employee's creativity and project success. Previously Bell, Villado, and Lukasik (2018) also showed the similar results. Employees with a creative mind are always on the lookout for new methods to spice up their routine work. They become bored easily, so try to introduce new activities every day (Pieterse, Van Knippenberg, and Schippers, 2019; Derosa, Smith & Hantula, 2017). When an employee has a strong desire to learn new things, it is very easy for him or her to become bored (Hirst, Van Knippenberg and Zhou, 2019).

According to the results, technological abilities motivate people to learn, grow, and strengthen their self-confidence. There is a sense of trustworthiness and honesty that comes with a responsive viewpoint, because being liberal entails admitting that employees aren't all wise and capable of adapting to new situations. It entails believing that whatever truth Employee discovers may include more information than you understand. By fostering a culture of reliability and trusted quality, the labor force's ability to speak with each other improves, and they may all the more easily share data and other information concerns with each other and inside their group (Baer and Oldham, 2015). Technology skills are a personality trait that influences employee creativity in the workplace, proving that technological skills are unquestionably linked to creativity (Hargadon & Bechky, 2016). This might be useful to managers when assigning responsibilities.

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These results suggested that, the characteristic of technological abilities is linked to training competence, and this attribute propels enterprises forward (as similar to the Hunter, Bedell and Mumford, 2014). When an employee's technological abilities are strong, he is bound to think innovatively, employee gathers ideas and experiences from his surroundings through observation, which has a helpful effect on project execution and success (Anderson, Potočnik, and Zhou, 2018; Liu, Chen, & Yao, 2015). Employees with minimal technological abilities are more likely to work in a traditional office setting. Open-mindedness is the ability to be receptive to new ideas. According to the findings of Bai, Yang, and Liu (2016), some things are far more demotivating than being asked to do profoundly without stress, easy-to-take care of business, and this is especially valid for inventive employees. These results indicates that employee have a psyche that is constantly propelled to learn and encounter new things. As previously stated by Bledow, Rosing and Frese (2018), a person with a strong desire to learn new things, wide reasoning, and a sharp keenness is more responsive to new experiences than someone with a dull mind.

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5.2.5 Consistency of research objectives with research Gap

The overall findings of the current research study also consistent with previous studies as creativity is a crucial factor with its four dimensions and it impacts on virtual performance of the employees at FAHR. While more if employees possess technological skills they are more creative and the relationship between creativity and performance moderated by technological skills.

As it was found that numerous organizations have tried to develop training programs and online resources to enhance the situation of the virtual community and support their employees (Martinez et al., 2020). There were minor distinctions in just how these organizations identify virtual workers, as an employee who invests at the very least part of their time functioning away (Duggan et al., 2020). So this study highlight the importance of virtual performance at workplace. As followed the report of Sharkey (2019) it is vital to support the worth of providing a full time virtual employee with opportunities to participate in face-to-face communication with managers as well as associates (as mentioned by Collins et al., 2016).

Therefore, this study promote virtual performance concept as it is necessary for organizations to have informal check-ins with their virtual worker to support and encourage them to join business tasks which develop good relationship with colleagues (also consistent with Noordermeer, 2020).

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These results also similar to the previous findings of researcher as it shows that functional costs can easily enhance whenever employees that are working in various geological areas observe it convoluted to correspond (Kariithi, 2020). Close to every one of the conveniences that web-based work possesses, there are not many limitations for instance: online institutions partnership could be such a great deal more challenging to get, especially when members work for various segmentations or systems (Garcia et al., 2019). These results showed that technological skills increase the creativity and virtual performance link.

5.3 Research Implication

The practical implication of the study is to enhance the creativity within the organization in order to increase the performance of the employees. While more there is need to enhance the technological skills by trainings and motivation so employee with learn to perform better and increase the productivity of the organization. The current research provided a way to increase the productivity by mean of process, trait, press and product. Organizations can increase the performance of their employees by introduce and appreciation of creativity in different form to perform the organizational task rather than to be specific.

5.4 Research Contribution

This research was contribute in multidisciplinary fields of study including, management, Human resources and organizational psychology. Results will be beneficial for managers to provide them directions about creativity and its implication in the organization. this study will also help the employees to rethink about creativity model and its impact on performance. Cardon and Stevens (2004) also reported previously that creativity enhance the performance at workplace.

Secondly, this study will also contribute in literature and theories as it provide a new model of creativity and virtual performance with the moderation effect of technological skills. So this study will contribute in literature of three important variables in an organizational setting. Demirdjian (2018) highlighted that there is need to add in literature about different dimensions of the creativity.

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Thirdly, this study will contribute to the knowledge of practitioners and scholars as it will give them direction to work further and fill the research gap. Practitioners or researchers can explore different dimensions of creativity and its impact on individual or organizational outcomes.

5.5 Conclusion of the study

Basic objective of the study was to find the relationship between creativity and virtual performance of FAHR employees during Covid-19. While more to test the moderation effect of technological skills on this relationship. Results of the study showed that technological skills increases the creativity and also positively influence the virtual performance of the employees. This study concluded that, employees inventiveness is still valued highly in the workplace. Employee creativity is one of a handful of the components by which firms can make progress and contend with different organizations in their industry. Those who are recognised as true innovators are increasingly rewarded in the workplace. Understanding the concepts of creativity and modernism is critical for all employees. According to many research, creativity is described as the capacity or ability to impart unique and original ideas, whereas development is the presentation of those ideas. This is also concluded that Creative solution provides the competitive advantage that every company strives for. Results of many studies also support the creativity in an organizational setting. Employee creativity is important not just for the employee but also for the organisation.

This research also concluded that, technology is increasingly taking over in the twenty-first century, so it is critical that all employees develop a technical and inventive mind-set. It has a good impact on the economy as well. It's critical to match

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personnel with problem-solving opportunities that will allow them to grow intellectually. These results also showed that employees' ability to be creative and open to new challenges has become a must in today's workplace. Businesses that come up with innovative company ideas set themselves apart from the competition. In today's environment, all businesses require originality. It is also critical for an organisation to place a strong emphasis on creativity. An organization's culture of rewards and gratitude should also encourage employees to submit ideas and critically evaluate. information sharing is extremely important for an individual's creative performance. In truth, the dissemination of information fosters innovation.

It is also established that when top management allows employees to be empowered, their creativity would improve. Employee creativity may be fostered in the workplace by empowering employees and providing feedback on how they achieved their goals, as well as giving them free reign over how they wish to reach those goals, resulting in performance that exceeds expectations.

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Following the current issues in this challenging era, it became clear that technological competency was required, and the best place to do it will be in organizations, from lower level to managerial level. The pandemic has had a significant impact on working style, emphasising the necessity of technology skills and the role that virtual organisations may play in their employees' development. It was a swift transition from traditional labour to online activities, especially at this level.

This study also suggested that, organizations need to reimagine their learning environments in this way, and they should encourage employees and professors to develop technical abilities. According to the Perry-Smith and Coff (2017), the situation, which necessitated the employment of so-called emergency remote education, brought to light an unsolved issue with distance learning. It prioritized organizations over the need to identify task priorities and focus on efforts for the competencies and abilities that are actually necessary in times of vulnerability. These talents incorporate innovation skills as well as soft skills that consider thinking, comprehension, and transfer of information, all of which assist employees with fostering their personalities and increase their scholarly independence. As a result, employees face new and different advancing needs as a result of the widespread dissemination and accessibility of data, as well as the need to foster skills and competences to understand and decipher data to transform it into information in the present data and information society, which is described by globalization, work market changes, and dramatic innovative development.

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Alongside conventional abilities, innovative skills are now expected in the present information society and seem to be basic to individuals' future life happiness. The center 21st-century abilities of decisive reasoning, critical thinking, correspondence, and innovation skills, as well as age and pay, were found to advantageously affect life satisfaction. Data and correspondence technologies (ICTs), especially the Internet and the web, have changed each area of human existence, from personal social life to industrial modernisation and country building.

Innovation is essential to employees prosperity, and it has advanced into a necessity that contributes to growing the possibilities for a better of life, which is a critical part of a nation's or alternately area's drawn out improvement. The results of a study on the use of ICTs and European individuals' perceptions of their Quality of Life demonstrate an unequivocal connection among innovation and personal satisfaction. It was observed that increasing use of innovation and ICT readiness boosts life satisfaction. As a result, the advanced resident prefers to live in areas that have mechanical limit, invest in R&D, and are devoted to long-term progress.

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APPENDICES

The Role of Employee Creativity Factors on the Employee Performance of Virtual Working Approach during Covid-19 Crisis in the UAE Public Sector Moderation of Employee Technological Skills

Dear respondents:

The researcher is doing a study, to analyze employee creativity factors to Employee Performance of Virtual Working **the existence of Employee technological skills as moderator** Approach during Covid-19 Crisis in the UAE Public Sector. I would be very grateful if you could kindly respond to this questionnaire pertaining to the subject matter being studied. It should not take more than 15 minutes. The anonymity and confidentiality of respondents will be respected in this study. Your time given in completing this survey questionnaire is very much appreciated.

NOTE: The data will always be treated with the utmost confidentiality.

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❖ Have you been following the virtual working approach during the Covid-19
- Yes
- No

If yes, please proceed to answer this questionnaire.
If no, please stop answering this questionnaire.

❖ **Demographic information:**

Gender	□ Male	□ Female	…
Age	□ 25-35	□ 36-45	□ More 45
Education Degree	□ Bachelor	□ Master	□ PhD
living location	□ City	□ Village	□ nomadic
Social status	□ Single	□ Married	□ Widowed.
Nationality	□ UAE	□ Arabian	□ Foreigner
	□ **GCC**	□ Other (specif)……..	
Job title	□ Director	□ Head of the Department	□ Employee

❖ section 1: EMPLOYEE VIRTUAL WORK PERFORMANCE (EVWP)

- **Employee Virtual Work Performance:** Employee virtual work performance implies individuals function coming from office making use of present day technology to obtain things performed, each conventional, office-based, and digital company.
  Indicate with an **(X)** the option you consider appropriate according to you.

code	Task Performance	Strongly Disagree (S D)	Disagree (D)	Undecided (U)	Agree (A)	Strongly Agree (S A)
EVWP1	I managed to plan my work in the virtual environment so that it was done on time.					
EVWP2	My planning for my work in the virtual environment is optimal.					
EVWP3	I kept in mind the results that I had to achieve in the virtual work environment.					
EVWP4	I was able to perform my work in the virtual environment with minimum time and efforts.					

Section 2: Employee creativity factors

Trait: A worker trait is an aptitude or ability required for an employee to perform a job, worker traits differ from learned skills, and worker traits assess factors such as the individual's personality, physical abilities, educational development, temperaments, and general preparedness to enter the workforce.

Process: process helpful brand new hires adjust to social and performance elements of their brand new tasks swiftly and efficiently, and know the perspectives, knowledge, skills,

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and behaviors.

Press: The term creativity press refers to practical relevant suggestions creativity as the production of premium quality, exquisite and initial solutions to troubles The employee creativity press is the productive treatment of creativity in different contextual factors.

Product: The product considered employee creativity "as the creation of a valuable and useful product, service, idea, procedure or process by individuals working in a complex social system, for this particular study, the employee product in creativity is the outcome of the employee in creating new ideas, whether it is valuable, and the ability to have ideas bank.

Contextual performance: which is defined as activities that contribute to the social and psychological core of the organization, is beginning to be viewed as equally important to task performance.

Indicate with an **(X)** the option you consider appropriate according to you

Code	Contextual Performance	Strongly Disagree (S D)	Disagree (D)	Undecided (U)	Agree (A)	Strongly Agree (S A)
EVWP5	I look on extra responsibilities in the virtual work environment.					
EVWP6	I started new tasks myself, when my old ones were finished.					
EVWP7	In the virtual work environment, I took on challenging work tasks, when available.					
EVWP8	In the virtual work environment, I came up with creative solutions to new problems.					
EVWP9	I kept looking to new					

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	challenges in my job.					
EVWP10	I actively participated in the online work meetings.					
Code	**TRAIT (TR)**	**Strongly Disagree (S D)**	**Disagree (D)**	**Undecided (U)**	**Agree (A)**	**Strongly Agree (S A)**
TR 1	I consider myself to be a creative person.					
TR 2	I am engaged in creative type work on a regular basis.					
TR 3	My creativity comes from careful planning and forethought.					
TR 4	My creativity comes from self-discipline.					
TR 5	I would describe my style of creativity as predictable or systematic					
Code	**PROCESS (PR)**	**Strongly Disagree (S D)**	**Disagree (D)**	**Undecided (U)**	**Agree (A)**	**Strongly Agree (S A)**
PR 1	I typically create new ideas by systematically modifying (by substituting, rearranging, elaborating, etc) an existing idea.					
PR 2	When I examine existing products, I usually critically					

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	evaluate them to see how I can improve them.					
PR 3	I am always thinking (fantasizing) about how to do everyday things differently					
PR 4	When I am generating new ideas, I do not tend to evaluate them until I have generated many ideas.					
PR 5	I often look for new ideas outside of my own field and try to apply them to my own.					
Code	**PRESS (PS)**	**Strongly Disagree (S D)**	**Disagree (D)**	**Undecided (U)**	**Agree (A)**	**Strongly Agree (S A)**
PS 1	I have set aside a particular place (or places) for creative work					
PS 2	I have set aside a particular time (or times) for creative work					
PS 3	I have an adequate support from my supervisors to do creative thinking					
PS 4	I have been rewarded in some way after I					

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	have worked on my creative idea(s) for a designated period of time.					
PS 5	I tend to do my creative work in a quiet place.					
Code	**PRODUCT (PT)**	**Strongly Disagree (S D)**	**Disagree (D)**	**Undecided (U)**	**Agree (A)**	**Strongly Agree (S A)**
PT 1	I usually have a lot of both workable and unworkable ideas.					
PT 2	If I do not have a concrete (visible) creative product to show (e.g., written composition, work of art or music, etc), then I think I have failed.					
PT 3	I enjoy the process of creating new ideas whether they lead to a final product or not.					
PT 4	I think a final product that is not readily observable through the senses can emerge in a creative act.					
PT 5	When I have completed a creative product, I can start on a new project immediately.					

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❖ Section 3 : Employee technological skills (ETS)

- **Employee Technological Skills:** Technological skills are the know-how and capacities to perform field-specific, specialized tasks, these skills permit a supervisor to work with work, solve problems, correspond efficiently, and know the big picture because of the front-line work that have to be actually performed.

Indicate with an **(X)** the option you consider appropriate according to you.

Code	Employee technological skills (ETS)	Strongly Disagree (S D)	Disagree (D)	Undecided (U)	Agree (A)	Strongly Agree (S A)
ETS 1	I consider myself to be ready to try new technology— whether it's new computers, phones, software					
ETS 2	I skip the manual and tutorials and dive right in and try to understand how to use the online courses on my own					
ETS 3	I consider myself to be not confident when trying new technology. I feel overwhelmed by new computers, phones, software, embroidery machines, etc.					
ETS 4	When I am using any type of new software program, I seek the assistance of another person to provide training."					

Thank you

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