An Organizational Culture, Leadership Style And Innovative Behaviour on Performance of the Organization

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Abstract

This study intends to explore the impact of organisational culture, leadership style, and innovation practices on employee performance within a public sector organisation. This research employs a qualitative methodology through document analysis to investigate a range of references, publications, and reports. The study aims to elucidate the relationship between adaptive organisational culture, supportive leadership styles, and the innovation practices that emerge among employees. The findings indicate that a robust organisational culture, coupled with an inspirational leadership style, is instrumental in cultivating innovative practices, which subsequently have a beneficial impact on employee performance. This study underscores the significance of cultivating a culture that fosters creativity and innovation, alongside the provision of effective leadership training to enhance organisational performance. The findings of this research suggest that organisations ought to prioritise the establishment of a culture conducive to innovation and to equip their leaders with the requisite skills to inspire and empower employees. This approach is likely to enhance productivity and facilitate the more effective attainment of organisational objectives.

Keywords: Organizational culture, leadership style, innovation behaviour, employee performance

Background

The handling of the Covid-19 pandemic in recent times has shown promising results. There has been a decline in cases over the past week, as evidenced by the following data: on April 21, 2021, the number of positive cases was 5,720, followed by 6,243 cases on April 22, 2021. The numbers continued to fluctuate with 5,436 cases on April 23, 2021, 4,544 on April 24, 2021, and 4,402 on April 25, 2021. On April 26, 2021, there was a slight increase to 5,944 cases, but by April 27, 2021, the number dropped again to 4,656, and on April 28, 2021, there were 5,241 cases reported. When compared to the figures from the previous year, the daily cases during this period are noticeably lower. This achievement is a result of the combined efforts of the government and all segments of society, particularly the Ministry of Health of the Republic of Indonesia.

This progress, however, is not merely a reflection of public health initiatives but also emphasizes the importance of a supportive organizational culture, effective leadership styles, and a culture of innovation in addressing such complex challenges. The collective efforts in combating Covid-19 can be enhanced through the continued fostering of innovation habits within organizations, leading to improved performance and successful outcomes. In this context, understanding how these factors influence organizational effectiveness is crucial, particularly in public sector organizations that play an integral role in handling national crises. The following article explores how organizational culture, leadership style, and innovation habits contribute to improving employee performance, with implications for organizational success during critical times such as the Covid-19 pandemic.

Literature Review

Creative Leadership is considered to be an effective leadership style that encourages a collaborative culture, which in turn promotes innovation, according to Taylor, Hauer, and Hynes (2019). They further claim that in this type of leadership style, everyone in the organization is considered a leader. This method promotes an entrepreneurial attitude and way of thinking, which encourages people to take risks and be innovative (Taylor, Hauer, & Hynes, 2019, p. 14). They also stress that it is a leader's primary role to create an atmosphere and culture that encourages innovation and creativity. The results of this study are based on research that was done on Boston Engineering's work in helping other companies develop and implement their inventions. This demonstrates how creative leadership can play a major role in the success of an organization by creating a culture that not only promotes innovation but also gives individuals the ability to take risks

and make changes inside the organization. Leadership plays a vital part in creating an innovative environment because it influences the general culture of the firm, encourages employees to perform better, and ultimately results in better outcomes.

Understanding how organizations focus on planning, developing procedures, operational methods, economic processes, and establishing various internal and external elements that influence the organization is heavily dependent on the organization's culture. El Emary, Brzozowska, and Bubel (2020) state that in the current chaotic environment, knowledge has become an essential resource for contemporary organizations. Knowledge management has emerged as a vital skill not only for managers but also for most employees whose jobs involve direct interaction with others. They also claim that organizational culture is vital for recognizing and changing the culture of an organization. This can help in acquiring and sharing knowledge more effectively and, most importantly, applying that knowledge.

This emphasizes the need to have a company culture that encourages knowledge management methods, which enables employees at every level to participate in the efficient use and sharing of knowledge. A supportive culture allows for improved decision-making, innovation, and overall performance inside the firm. This highlights the importance of organizations regularly evaluating and adjusting their cultural frameworks in order to be competitive and inventive in a fast-changing environment. Schulte (2020) writes that, based on the apparent interest in the topic, one would conclude that there is a common understanding of communities of practice (CoP) among employees when it comes to collaboration. However, the CoP construct is still substantially accessible to many conceptualizations and interpretations,

especially when it comes to its most fundamental definition. On the one hand, this difference in understandings has led to the development of lively research in a variety of fields and disciplines.

This suggests that, although the idea of CoPs is generally accepted as being important for encouraging cooperation and information sharing inside businesses, the fact that there are many different interpretations of the concept can result in a variety of methods and approaches being used in reality. The CoP concept is flexible, which allows organizations to customize its implementation to meet their specific needs. This flexibility encourages employees to work together more effectively, increases innovation, and eventually improves the performance of the organization. As a result, additional research into the various aspects of CoPs can assist businesses in improving their strategy for utilizing communities of practice to achieve success.

Rusher (2020) states that varied teams are the most effective when working together. However, if team members do not respect and understand each other, these distinct approaches can lead to misunderstandings and negative assumptions, which can eventually inhibit the formation of a cohesive team. This highlights the significance of cultivating a culture of respect and collaboration within different teams in order to improve productivity and guarantee that differences are perceived as advantages rather than obstacles.

Leadership is essential for keeping the team productive. According to Cai (2021), there has been a constant emergence of new theories, schools of thought, and approaches relating to leadership throughout the past few decades. Several characteristics representing different viewpoints have been examined under the name of leadership. These include techniques that are communication-oriented, controlling-oriented, coaching-oriented, change-oriented, psychology-oriented, team development-oriented, and organizational behavior-oriented. These different points of view emphasize the complex nature of leadership and how it has a significant impact on team dynamics, development, and the overall success of an organization. In order to guide teams through problems, encourage collaboration, and ensure that the team stays aligned with the organization's goals while maintaining a productive and positive environment, effective leadership is vital.

Hieker and Pringle (2021) state that both writers have been working in the subject of leadership development for almost 30 years. At the beginning of their conversations, they thought about how they wanted to spend the next stage of their careers. This led them to try to understand their experiences over the past thirty years. When they shared their thoughts, they often had a sense of "déjà vu" as they remembered previous programs and changes in leadership philosophy. They talked about how systems thinking, which was influenced by thought leaders like Nicolas Luhmann and Juergen Habermas, changed the leadership landscape in Germany in the 1990s. Meanwhile, in London, the idea of the authentic leader came about, driven by thinkers like Goffee and Jones at the London Business School.

As a result of this reflective process, they decided to write a chapter about the history of leadership development. They believed that "looking back" was essential for understanding how leadership concepts have changed over time and for preparing for the future. The necessity for leadership styles, as emphasized by their experience, arises from the fact that organizational environments are constantly changing and that it is important to have leaders who can adapt to these changes. They may gain a

better understanding of how leadership development has affected the organizational landscape and how it will continue to evolve in the future by studying prior leadership theories and practices. This would ensure that leadership stays effective in steering organizations toward success in the future.

Kaihara (2021) proposes that, in order to establish a new systems approach in leadership, one must start with a notion that displays various modes from those of conventional sections and research groups. The goal of this method is to thoroughly investigate scientific ideas in well-established fields. In order to accomplish this, an effort is made to gather and arrange themes by collecting opinions through questionnaires and conversations. This is done utilizing a process that entails repeating diverging and converging ideas in a workshop-style setting. This strategy includes concepts like design thinking, which promotes creativity and problem-solving by working through many viewpoints and coming up with new solutions.

Kaihara's method emphasizes the need of systems thinking in leadership, which necessitates a comprehensive comprehension of complicated problems as well as the capacity to adjust and include a variety of perspectives. Leaders can use techniques like as design thinking and collaborative workshops to investigate new ideas, encourage innovation, and improve their methods in order to deal with the changing difficulties that businesses face. This method emphasizes the importance of having leaders who can encourage dynamic discussions, question conventional ways of thinking, and accept a variety of viewpoints in order to achieve long-term success for the organization. Ganasegeran and Abdulrahman (2020) say that when it comes to design thinking, we interpret an object or

image, or even the sounds around us, immediately. They next examine whether or not artificial intelligence (AI) is capable of doing these important intellectual tasks. Yes, the answer is definitely yes, but it will be done in a different way. Human interpretation depends just on cognitive functions, whereas artificial intelligence (AI) needs mathematical algorithms to automate computers in order to carry out these duties. These machines are programmable computers that can carry out tasks that would normally require human intelligence.

One way that artificial intelligence is applied in design thinking is by visualizing the source of an outbreak, such as Dengue, Chikungunya, or Zika, which are frequently transmitted by the mosquito vector. In the case of large-scale epidemics, it is essential to eliminate the vector, since human cognitive powers are not capable of detecting every mosquito in an outbreak investigation region. On the other hand, artificial intelligence can be used in places where there are a lot of mosquitoes in order to help with control measures, find the vectors quickly, and assist with managing epidemics.

This shows that when artificial intelligence is included into design thinking, it can improve decision-making and problem-solving processes by automating jobs that need the analysis of large volumes of data. This can lead to new solutions to complicated problems in many areas, including public health.

Maze (2019) claims that the belief that cognition is connected to purpose was one of the primary factors that led to the creation of the Stimulus-Response (S-R) learning theory, according to the cognitive interpretation. Behaviorism, which was centered on being deterministic, effectively denied the presence of cognitive processes,

even though it did not do so directly. However, it has become increasingly clear that denying the reality or behavioral importance of cognitive processes is futile. As a result, the function of cognitive processes in learning is being examined again, and it has become vital to separate cognition from purpose. In order to conduct a valid empirical research of cognition, this dissociation is required.

Maze goes on to propose that by looking at how cognitive processes have changed in modern learning theory and artificial intelligence (AI) theorizing, we can investigate various methods of thinking about cognition that do not allow for meaningful study. This contemplation could help us find a better way to comprehend cognition, one that is in line with current ideas of learning and the use of artificial intelligence. This viewpoint highlights the significance of acknowledging cognition as a separate process from goal and proposes that by redefining and examining cognition, we can acquire a more profound understanding of learning and artificial intelligence systems.

Wu, Song, and Xu (2021) emphasize the contribution made by a Chinese corporation in the development of learning theory procedures. They claim that the transition of 123langlang was the result of both technology and business model transformations. Its "double helix innovation" ability and continual evolutionary capability are the keys to its success. According to the concept of "double helix innovation," technology innovation and business transformation are connected to one another in a way that resembles the structure of a "double helix." The evolution of the business model for social companies is driven by two main factors: technological innovation and

market demand. These two factors also have an active relationship with one another.

The connection between technological innovation and market demand innovation can be described to a "double helix." The interaction of these two factors is what drives the change of 123langlang's business model as a social enterprise. 123langlang's quick and ongoing development is driven by the company's continual technological innovation and the growing demand for dyslexia repair and training in reading and writing skills. These forces combine and evolve together like a "double helix," which strengthens the core competitiveness of 123langlang. This example shows how a company's innovation in both technology and business models may lead to success and growth, especially in industries that require constant adaptation to satisfy changing market demands.

The Culture of the Organization

Larentis, Slongo, and Antonello (2019) state that organizational culture can be seen from an inter-organizational perspective in that groups do not restrict themselves to the realm of a single organization. On the other hand, relationship marketing tactics and techniques depend on how deeply they are buried in organizational cultures, whereas interactions with people depend on cultural principles. These cultural roots make it possible to create venues where people from diverse cultures can meet. This emphasizes the significance of comprehending organizational culture not just inside the confines of a particular company but also in relation to its interactions with outside organizations and cultures. It highlights how the culture of an organization can affect methods like relationship marketing, which helps to bridge cultural divides and promote

collaboration across different organizational boundaries.

The idea of organizational culture is directly connected to the relationships that exist within the organization. As stated by Larentis, Slongo, and Antonello (2019, p. 13), "Relationships are cultural because interactions depend on meanings and symbols, under different cultural perspectives." In their work, they provide a framework that focuses on the formation of inter-organizational culture. This framework is formed by taking into account the three-perspective framework of organizational culture on one hand. This viewpoint highlights the fact that the culture of an organization is not solely determined by the internal characteristics of that company, but is also affected by the interactions and relationships that exist between different companies. The ties between these companies are influenced by shared meanings, symbols, and cultural norms, which might differ from one context to another and impact how organizations work together, communicate, and collaborate. By understanding this framework, you may evaluate how organizational culture changes through contacts with outside parties and how this affects strategies, decision-making, and collaboration between organizations. Collins (2021) goes into greater detail about organizational culture. He notes that the term "culture," as we use it today to define the systematic body of learned behavior handed from parents to children, emerged within a limited and specialized group of professional anthropologists. The modern world has become so accustomed to the idea of culture that educated people use the phrase "in our culture" as casually as they would use other common phrases that refer to time and place.

In addition, Collins notes that the culture of an organization, such as a factory, is the way that the organization typically thinks and operates. All of the members of this culture have an impact on it to different extents, and in order to be accepted into the organization, new members must learn about this culture and partially accept it (Collins, 2021, p. 23). Collins (2021, p. 26) summarizes the concept of corporate culture as it changes throughout time with the following straightforward statement: "Culture is simply how we do things around here." Like other cultures, workplaces develop and maintain themselves based on shared rituals and fundamental values. Some of these ideas are exclusive to a particular group, while others are long-standing practices that can be found in many different organizations and places. This emphasizes that organizational culture is not solely about the behaviors or customs of individuals; it also encompasses the shared practices and beliefs that determine how things are done in a certain workplace.

El Emary et al. (2020, p. 32) state that during its development, some aspects of an organization's culture are easy to see, while other aspects are not as noticeable or are not visible at all. These levels are also linked to different kinds of knowledge to different extents. The first level of organizational culture is sometimes compared to the top of an iceberg, which is the part that is above the water and readily visible. However, in order to fully comprehend the organizational culture, it is necessary to have a proper understanding of the meanings of the observable artifacts.

The second level of culture is only somewhat noticeable. This encompasses both written norms and values that are contained in an organization's mission, regulations, charters, and other official acts, as well as unwritten standards that define human relations and influence behavior. The manner that people

interact and operate within the organization is influenced by these informal conventions.

The third level is totally concealed beneath the surface and primarily pertains to the informal parts of an organization's operations. It is connected to the unspoken information that people have, which reveals not just their cognitive abilities but also their emotional responses to different events, ideas, and experiences. Even though this hidden layer is not readily visible, it is essential for understanding the underlying dynamics of organizational culture since it affects behavior, decision-making, and the general climate within the organization.

In addition, El Emary et al. (2020, p. 32) indicate that the approaches to organizational culture that were addressed earlier are based on the functionalist paradigm and causal links, which restricts them to an instrumental approach to managing an organization. These methods see organizations as complicated adaptive systems that are always changing. This viewpoint tends to concentrate on the practical elements of culture, with the aim of improving or controlling it in accordance with particular objectives or results. That being said, it does not completely take into consideration the fact that organizational culture is constantly changing and developing.

Furthermore, the individuals who are part of these cultures, especially those who are trying to change them, frequently go through a lot of anxiety and strong feelings. According to MacQueen (2020), this emotional charge is a normal result of trying to change cultural components that are deeply rooted in an organization. These emotional and psychological responses can affect the success and speed of cultural change initiatives because individuals may resist or struggle with changes that contradict their established ways of thinking and behaving inside the business.

Leadership Style

Cai (2021, p. 1) points out that there have been many ideas, schools of thought, and methods relating to leadership that have come out over the past several decades as people have tried to comprehend leadership style. A range of characteristics representing diverse viewpoints have been examined under the name of leadership. These include communication-oriented, controlling-oriented, coaching-oriented, change-oriented, psychology-oriented, team development-oriented, and organizational behavior-oriented techniques.

This demonstrates that leadership is complex, with each style focusing on distinct goals and ways to influence and guide others. Leadership that is focused on communication emphasizes good communication as a key component, whereas leadership that is focused on control uses more directive approaches. Leadership that is focused on coaching emphasizes personal development, while leadership that is focused on change emphasizes driving transformation. Leadership styles that are focused on psychology, team development, and organizational behavior demonstrate the many different ways that leadership may be understood and practiced in different organizational contexts. These varied points of view demonstrate how complicated leadership is and how different approaches can be used to satisfy the particular requirements and goals of an organization.

In addition, Cai (2021) claims that various leadership styles, which concentrate on one or more particular elements of leadership, are often incorrectly seen as representing the entire or overall picture of leadership. It is clear that leaders frequently have difficulty

resolving complicated management problems and dealing with the constantly changing difficulties of leadership when they depend only on these limited models. This emphasizes a significant drawback of concentrating on leadership styles that are one-dimensional. Although each mode provides useful information about some elements of leadership, they do not take into consideration the complicated and ever-changing nature of leadership situations in the actual world. In order to be effective, leaders must take a more comprehensive strategy that incorporates a variety of viewpoints and is flexible enough to respond to the different needs and difficulties that develop in an organization. As a result, it is crucial for leaders to view leadership as a multi-faceted and dynamic activity in order to successfully traverse the complicated organizational contexts of today.

Pendleton, Furnham, and Cowell (2021) state that the subject of leadership is a contentious one. Some say that leadership is greatly overestimated, claiming that the success of businesses depends at least as much on serendipity as it does on strategy, vision, or leadership. According to these critics, attempts to determine the qualities of effective leaders have frequently yielded equivocal or inconsistent results, and it is challenging to define lessons about leadership that can be applied in a general sense.

The authors, on the other hand, think that even while these arguments might have some merit, they do not accurately represent the enormous amount of evidence that has been gathered through research. This indicates that, even while there are difficulties in defining leadership in a way that everyone agrees on, there is still a significant amount of research that supports the notion that leadership is essential for the success of

an organization. The authors recognize that leadership is complicated, but they stress that the data mostly indicates that it is important for managing businesses and attaining long-term success.

Pendleton et al. (2021, p. 2) indicate that leadership has always been examined from the standpoint of different methodologies or disciplines, with each one providing its own distinct perspective. For example, a historian will have a different approach to leadership than a psychologist or a management scholar. These fields of study look for and analyze information in different ways, concentrate on different causes, and provide diverse explanations for leadership phenomena. Even within a same field of study, there can be major variances in how leadership is understood and assessed.

The authors do not mean to claim that one method is better than the others. On the contrary, they emphasize the fact that leadership is complicated and can be viewed and interpreted in a variety of ways. This emphasizes that leadership is a complex idea, and the many viewpoints on it enhance our understanding by giving us with various insights into how leadership operates and affects companies.

Pendleton et al. (2021, p. 7) point out that traditional leadership relied greatly on the compliance of junior members and their faith in or acceptance of the authority of senior figures. On the other hand, the new leadership pattern shows that there is a move toward a more equal model, which is in line with the values of a society in the twenty-first century, especially in wealthier countries. This new method places a strong emphasis on involvement and the development of commitment among all those who are involved in the business.

There are a number of important differences that may be seen in this developing leadership style:

- Vision, generating alignment, and motivating individuals have taken the place of planning, delegating responsibilities, and controlling.

- Instead of creating routine, retaining authority, and enforcing conformity, the focus has shifted to embracing change, empowering others, and fostering commitment.

- Leadership that is more involved has replaced the detached reasoning of remote leaders who emphasize contractual duties. This new leadership style emphasizes the use of emotions and intuition and the pursuit of discretionary effort.

This transition is indicative of a larger transformation in the culture of the business, in which leadership is perceived as being more participatory and collaborative. The emphasis is on inspiring and motivating individuals rather than simply regulating and directing activities. It emphasizes how crucial emotional intelligence, empowerment, and adaptability are for leaders in today's world.

However, experts agree that the current scholarly consensus regarding the best leadership approaches is more focused on transformational leadership styles than on the earlier transactional or traits-based models. Although there is still considerable disagreement over the precise definition of transformational leadership and the effects it has on leaders and followers, there is at least some acknowledgment—whether implicit or explicit—that change is a significant aspect in the lives of leaders. As a result, transformational leadership is the style that most readers will be familiar with.

Importantly, this style is consistent with the learning approach that serves as the foundation for the leadership process model that is described in Chapter Two.

Today, a lot of these changes are caused by improvements in efficiency and effectiveness, which are typically connected to increased automation, the implementation of artificial intelligence systems, or the analysis of large amounts of data from social media and customer feedback. For instance, the number of autonomous devices that are connected to the internet is increasing and is predicted to reach 200 billion by 2020, which would drastically change the industrial sector (Smith & Cockburn, 2021). These trends demonstrate that the environment in which modern leaders must operate is becoming more dynamic and driven by technology. This reinforces the importance of transformational leadership in responding to and managing change successfully. In addition, Smith and Cockburn (2021, p. 11) argue that global leadership models need to be regularly evaluated and improved in order to stay up with these complicated and ever-changing pressures. Leaders today are looking for a realistic and sustainable approach that not only helps them develop strong personal leadership skills but also takes advantage of the strengths of their organizations through action plans that consider the complexity of new situations. This covers the process of learning and reciprocal unlearning to exploit technology promise efficiently.

These leadership approaches must also take into account a variety of elements, including professional silos, time pressure, change management, influence, and cultural transformation. Leaders may more effectively deal with the challenges posed by a global environment that is becoming more complicated and changing more quickly by

recognizing and adjusting to these elements. This focus on flexibility and adaptability emphasizes the significance of ongoing development and strategic thinking in leadership practices. It guarantees that businesses can stay competitive and inventive in a world that is changing quickly.

The idea of charismatic leadership is well-known in the field of leadership theory today. Angawi (2021) states that it is essential to comprehend the reasons for the differences between Neocharismatic leadership and other leadership styles, as well as to investigate the connection between Neocharismatic leadership and transformative leadership. According to Angawi, both transactional and transformational leadership styles deal with the issue of influence by connecting it to a leader's altruistic or egoistic perspective.

Leaders that use the transactional leadership style make sure that their followers comply with their wishes by rewarding them or punishing them. The leaders themselves are primarily concerned with meeting their own wants, interests, or aims. This method is only effective for a short period of time, and it frequently causes followers to feel like avoiding the leader. This is because trust levels are decreasing and there is a lack of honest communication between the leader and their followers, which leads to frustration. Furthermore, this approach often drains the resources of the firm as the leader tries to keep things the same, steering clear of the risks and uncertainties that come with innovation and change.

On the other hand, Neocharismatic and transformational leadership styles concentrate on motivating followers, establishing trust, and promoting innovation. As a result, they are more effective and sustainable in supporting long-term growth and participation inside organizations. These styles highlight a leader's capacity to form a stronger connection with their followers, which fosters a culture of collaboration and forward-thinking.

According to Angawi (Angawi, 2021, p. 13), the neocharismatic leadership theory may be explained further by saying that it can be put into practice by creating a model in which a leader performs certain roles and exhibits certain behaviors at certain moments. We experience leadership through the positions that leaders take on and the actions they take. These roles consist of particular actions that we refer to as behaviors. Certain roles do not require demonstrated behaviors, such as strategic thinking. The position is only experienced by leaders, and we only perceive its impact when it is utilized as a plan. However, it is part of a larger responsibility that we refer to as vision and planning. If we want to define the behavioral role in a systematic fashion, we could say that it is "an observable behavioral process that can be described and analyzed in terms of a formal model." As a result, it is not just one action, but rather a collection of behaviors that, when combined, will demonstrate a model for managing a process in order to accomplish a goal through a series of objectives. It is possible to recognize and quantify the behavioral components. The most important thing to remember is that a position is a more general way of articulating what a leader does.

Innovative Behavior

Valinurova, Leibert, and Khalikova (2020) emphasize that, in the last ten years, business systems have changed dramatically due to the conditions of informational openness. This is in relation to the development of innovation in the field of information technology. This change has had a major impact on the way that businesses

manage their finances. One of the main reasons for these changes is that modern corporate systems have become more complicated in terms of their organizational and functional frameworks, and there are more managers involved than before. Businesses are also very diverse, and the number of transactions in sales markets has increased significantly.

In addition, business systems are now expected to publish the outcomes of their actions in the IT environment in accordance with international standards. This is due to the fact that there is a high level of interest from stakeholders and a desire for transparency. Corporate financial management systems have been greatly affected by these changes, and they must now be agile and adaptable in order to deal with the uncertainties of the external environment. As a result, firms are increasingly embracing new approaches to financial management, which include the use of accounting and analytical tools as well as current financing methods. In a market that is constantly changing, where information and openness are critical to making decisions, these advances are necessary for businesses to stay competitive and responsive.

Furthermore, the present evolution of technology has made innovation an essential component of success in the field of information technology. The word "smart" encompasses all of the advances that are being developed. Aiyoshi and Murata (2021) state that the term "smart" is not only used to refer to "smart society" and "smart energy" when it comes to innovation, but it is also often used to characterize the new characteristics of social systems. Nonetheless, its definition and use are still not fully understood, and research into its

implications in the fields of systems science and engineering has only recently started.

Aiyoshi and Murata suggest a systems approach to developing, planning, and managing "smart platforms" as social infrastructures in their work. They specifically focus on optimizing the system. They represent these platforms as networks that include a large number of parties. From the perspective of system optimization, four conceptual frameworks of "smartness" that are connected to the design, planning, and operation of these platforms are examined. This method shows how advancements in "smart" systems are changing the way social and technological infrastructures are created and administered. The focus is on improving the systems so that they are more efficient, sustainable, and collaborative among stakeholders.

When the system is optimized, computational intelligence becomes an essential component of the habits that are involved in innovation. Land Jr. and Schaffer (2020) state that a simulated evolutionary approach has three key components: (1) a population of alternative "machines," which are always coded as a string of symbols known as a "chromosome," (2) some form of inheritance with variation, and (3) some form of survival of the fittest. Numerous versions of these operations have been investigated, and additional improvements are still being developed.

Their effort aims to lay the groundwork for understanding the fundamental mechanisms of evolutionary computation (EC) and to construct a variation that addresses the feature subset selection challenge in some detail. This job is frequently used in a variety of machine learning applications. In this case, it is used to create a diagnostic test for Alzheimer's disease that is based on a

sample of a person's speech. This program has a lot of features that are common in machine learning activities. Although there are other sources available for readers who are interested in different applications, such as parameter optimization problems, the purpose of this exposition of these fundamental theoretical notions is to be useful in a variety of machine learning fields. This emphasizes how computational intelligence may promote innovation using approaches such as evolutionary computation, particularly in fields like healthcare diagnostics, where enormous datasets are evaluated in order to create solutions that are more precise and efficient.

As information technology continues to evolve, the connection between technological breakthroughs and human society has become more and more significant. Shimohara (2021) states that in order to create Society 5.0, which is a human-centered society that balances economic advancement with the resolution of social problems by using a system that highly integrates cyberspace and physical space, it is necessary to establish a systems approach toward System-of-Systems (SoS). This method is essential for creating effective functional collaboration and/or the merger of numerous separate systems.

A system of systems (SoS) is a collection of independent systems that work together as a single system through interactions and collaboration. It contains elements of meta-systems, such as organization and discipline, planning and implementation, and operation and management, all of which are the focus of research in this context. This method focuses on the combination of several systems, making sure that technical progress is utilized not just for economic development but also for tackling complicated social problems, resulting in a future that is more balanced and sustainable. The idea of SoS is essential for ensuring that technical advancements are in line with human requirements, which makes it a key component in the creation of Society 5.0.

Research Methodology:

This study adopts a qualitative research approach to explore the integration of technological advancements with human-centered society concepts, particularly in the context of Society 5.0 and the System-of-Systems (SoS) approach. The following methods will be used to gather comprehensive insights into the implementation and impact of these concepts:

1. **Case Study Approach**

   A case study approach will be employed to investigate the practical applications of the System-of-Systems (SoS) approach in the creation of Society 5.0. This method allows for an in-depth examination of real-world examples, such as organizations or government initiatives, that integrate cyberspace and physical space. The case study will focus on how these systems collaborate to address social issues while fostering economic growth.

2. **In-Depth Interviews**

   In-depth interviews with key stakeholders, including policymakers, experts in technology and social systems, and members of affected communities, will be conducted. These interviews aim to capture diverse perspectives on the relationship between technological progress and society. The interviews will explore how leaders and

practitioners view the role of technology in solving social challenges and creating a balanced, human-centered society.

3. **Participatory Observation**

Participatory observation will be used to observe the implementation of initiatives related to Society 5.0 and SoS in real-time. The researcher will actively engage with the stakeholders involved to understand the dynamics and interactions that occur when independent systems collaborate. This approach provides a first-hand account of the challenges and successes in integrating technology for social good.

4. **Document Analysis**

Document analysis will be used to examine relevant reports, policies, strategic plans, and research publications related to Society 5.0 and System-of-Systems approaches. By analyzing these documents, the study will assess how the concepts are framed and applied across different sectors, including government, industry, and academia.

5. **Focus Group Discussions (FGDs)**

Focus group discussions will be organized with stakeholders who have experience or knowledge in implementing or studying Society 5.0 and SoS. These discussions will provide deeper insights into the challenges, opportunities, and strategies related to achieving the goals of Society 5.0, allowing participants to share their experiences and thoughts on the

collaboration between different systems.

Data Analysis:

Data collected from interviews, observations, document analysis, and focus group discussions will be analyzed using thematic analysis. The goal is to identify recurring patterns, themes, and relationships that emerge around the integration of SoS and the impact of technology on society. By analyzing these themes, the study will provide a comprehensive understanding of the challenges and opportunities in creating a balanced, human-centered society that uses integrated technological systems to solve societal problems.

Discussion

In the context of this research, various concepts related to organizational culture, leadership style, and innovation habits interact to shape employee performance. This discussion will delve deeper into how these factors influence performance within an organization, as well as their relevance in navigating the dynamics of change, particularly in crisis situations such as the Covid-19 pandemic. Understanding how organizational culture fosters collaboration, how leadership styles guide and motivate teams, and how innovation habits drive problem-solving and adaptation is crucial for organizations to thrive in times of uncertainty. The interplay of these elements not only impacts day-to-day operations but also enables organizations to adapt to rapid changes, ensuring resilience and long-term success even in the face of unprecedented challenges like a global pandemic. By exploring these interactions, this research aims to provide a comprehensive understanding of how these factors

contribute to employee performance and organizational effectiveness in the midst of change.

This research is relevant to the challenges faced by many organizations in navigating rapid changes, especially in crisis situations such as the Covid-19 pandemic. The pandemic has highlighted the need for organizations to quickly adapt to new circumstances, adjust their operations, and ensure that employees remain motivated and productive. The interplay between organizational culture, leadership styles, and innovation habits plays a critical role in how effectively an organization can respond to such challenges. Understanding how these factors contribute to employee performance during times of crisis can provide valuable insights for organizations looking to enhance their resilience, foster innovation, and maintain high levels of performance even under difficult conditions. This study aims to shed light on the key strategies that organizations can adopt to thrive amidst rapid change and uncertainty.

Organizational Culture and Innovation

One of the key findings of this article is the role of organizational culture in creating an environment that supports innovation. As explained by El Emary et al. (2020), a strong culture can foster effective collaboration, enabling employees to share knowledge and work together to generate new ideas. This view is supported by Schulte (2020), who emphasizes the importance of Communities of Practice (CoP) within organizations as platforms for employees to exchange information and develop innovations. In this context, organizational culture is not just a set of written values but a system that promotes the acceptance of new ideas and supports collaborative learning among employees. By fostering such an environment, organizations can encourage the continuous development of innovative solutions, thereby enhancing their ability to adapt and thrive in dynamic markets.

Leadership that Supports Innovation

While organizational culture plays a significant role, leadership style is also a key factor in driving innovation habits. Cai (2021) highlights that effective leadership does not solely rely on control or commands but also on the ability to empower employees, foster open communication, and facilitate change. This is especially relevant in situations that require quick adaptation, such as during the Covid-19 pandemic. Leaders who create space for innovation and collaboration can encourage employees to actively engage in addressing the challenges at hand. Therefore, leadership styles that focus on empowerment, communication, and change have proven to be more effective in enhancing employee performance, particularly in dynamic environments. By fostering a culture of trust and support, leaders can inspire innovation, helping the organization navigate uncertainties and maintain resilience in the face of rapid change.

Practical Implications for Organizations

From a practical perspective, this article emphasizes the importance for organizations to create a culture that supports collaboration and innovation, as well as to adopt a transformational leadership style. Innovation is not solely the responsibility of individuals but is the result of collective efforts within the organization. Leaders who facilitate spaces for idea sharing and encourage risk-taking can cultivate a culture that inspires employees to think creatively and innovate. Furthermore, organizations should pay attention to the less visible aspects of

organizational culture, such as unwritten norms and values, which influence how employees interact and collaborate. El Emary et al. (2020) describe organizational culture as an iceberg, where most of the essential elements lie beneath the surface, not immediately visible, yet profoundly influencing individual behavior within the organization. By understanding and addressing these underlying elements, organizations can create a more inclusive and supportive environment that nurtures innovation and enhances overall performance.

Relevance to the Covid-19 Pandemic

The reported decrease in Covid-19 cases mentioned in the introduction of this article reflects the success of collaboration between the government and society in addressing the crisis. This success is closely linked to the crucial role of creative leadership and organizational culture that supports innovation, particularly within the healthcare sector. The pandemic has taught us that, in times of crisis, success often hinges on an organization's ability to rapidly adapt through innovation, both in policies and ways of working. In this context, leadership that is open, change-oriented, and able to mobilize all members of the organization to collaborate becomes a key determining factor in successfully managing a pandemic.

The ability to foster a collaborative environment, encourage innovative solutions, and effectively communicate and execute change is essential for overcoming such large-scale challenges, underscoring the importance of leadership and organizational culture in crisis response.

Conclusion

The findings of this study provide valuable insights into the relationship between organizational culture, leadership style, and innovation in enhancing employee performance. By applying the theories discussed, organizations can become more effective in creating an environment that fosters creativity and productivity. Transformational leadership and a culture that supports collaboration and innovation are key to improving performance, both in normal situations and in times of crisis, such as the Covid-19 pandemic. Therefore, the development of policies that support the implementation of an adaptive organizational culture and leadership that empowers employees will have a significant impact on achieving organizational goals more effectively and efficiently. This approach not only strengthens resilience in the face of crises but also promotes long-term success and sustainability for organizations.

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