

METHODS

The smart analysis for workforce and organization management in corporate environment

K. Aswin¹ and T. Santhosh^{2*}¹Coimbatore Institute of Technology, Coimbatore, Tamil Nadu, India²AVS College of Arts and Science, Salem, Tamil Nadu, India***Correspondence:**

T. Santhosh,

santhoshthangavel18@gmail.com

Received: 28 January 2023; **Accepted:** 04 February 2023; **Published:** 20 March 2023

The overall objective of all management practices is to get work done efficiently, at the lowest cost, in the best manner possible, using selected and trained personnel and machinery. Absolute best results cannot be achieved without the full effort of skilled employees with the best office equipment and a good harmonious office environment. Effectiveness in the successful execution of office tasks lies in the selection and use of office space. The facilities provided to do the work help to do the work in the best way. Office space is a prime factor for successful business execution. It is also clear that it does not come easily. When deciding on the suitability of a building, the manager should prepare a thorough checklist of requirements. Naturally, each business organization, department, and office has its own unique needs. Priority levels are assigned once the checklist is prepared. Discussing what is important, wanted, and useful with subordinates helps everyone get a sense of ownership while also demonstrating and confirming priority levels.

Keywords: organization, management, workforce, skilled, employee

1. Introduction

An building should be planned based on present and future needs. By doing this, one can take full advantage of the location. Own building shows the prestige of the company (1). This shows the credit solvency of the company and creates goodwill about it among customers (2). A native building does not provide a fixed address. Often, the location is not transferable (3). Owning a building involves a lot of investment that is not achievable by small and medium-sized enterprises (4). High maintenance costs and taxes become a burden for the company owner (5). Relocation is easy and the building can be moved anywhere. It is easy to relocate according to the changing situation. Elasticity is seen in the arrangement of the contraction element (6). Provisions should be made for future expansion. According to the nature and needs of the company, he should decide the ways that suit his needs (7). The shape of the office building is considered important. The shape of the building may be square or

rectangular, narrow, long, or vertical or horizontal (8). These make good use of the office building. It helps to increase the efficiency of employees. Their walking area is just right (9). Adequate lighting and ventilation are important for an office building. Providing air and light to the space of the office building will reduce the physical and mental stress of the employees (10). It also increases employee discipline. Doors, windows, and ventilators should be provided in the required number and at the required locations. It helps to get good ventilation (11). The building should be facing south-east, south-west, east, or west to allow enough natural light to enter. Modern business does not only depend on employees and tools (12), but also on how they are properly arranged. In modern offices, interior arrangements are made according to office systems and organizational structure (13). The size, shape, and number of departments, corridors, and other arrangements of the office will be determined by the layout of the departments (14). Departments can also be located on the same site. Customer and employee comfort plays a

major role in office space (15). Sales and finance departments are frequently visited by customers and should be located within easy reach. Tea rooms, washrooms, storage rooms, and water facilities (16) should be set up at appropriate places. Electric hoists should be installed where necessary for the convenience of visitors and staff. Cost also plays an important role in choosing an office building (17). The cost of office space is determined by the area where it is located, its size, and its interior arrangements. Management should try to strike a balance between the total needs of the organization and the costs involved (18, 19). However, the cost of space should be within the scope of the company's operations. At the same time, efficiency should not be sacrificed for cost savings (20).

Other factors to be considered include flexibility in space to meet changing business needs, ease of fitting out equipment and machinery, safety of machinery and equipment, and safety of personnel. Layout is the arrangement of furniture and equipment on the available floor space (21). An important task in office management is preparing an office layout plan. By organizing all the natural elements that can be present in an office, make full use of the floor space and make these sections an efficient, attractive space that provides maximum energy and coordination (22, 23). This is the office layout. Organizational departments, personnel, and office equipment should be properly arranged so that the office space can be fully and profitably utilized (24). Office layout can also be said to be the planning of office space because the emphasis is on making full use of the limited resources available in an office setting (25). The objectives to consider while planning the office layout should be achievable through the best layout (26). This is the job of an office manager. These objectives should be properly defined by the office manager. Only then will this arrangement yield its maximum potential (27). Before deciding on the space layout, the office manager should prepare a pre-model of the office space layout (28). Make a model depicting staff, tools, and household items with some colored pieces of paper ensure seamless work adhesion. Only then will the work be carried out smoothly and in a proper manner (29, 30). Complete space utilization should be ensured. It should provide complete monitoring with minimal effort. Only then will discipline be maintained. It should facilitate the free movement of office workers (31). Workers should have easy access to machinery to create better environment for office workers (32). Only then will it not produce too much output. The workers engaged in hard work should be allotted separate places (33).

2. Related works

Workflow should be smooth and uninterrupted. Whether the office layout is linear, circular, or "ru" shaped, the flow of personnel, and paper (files) should be minimal (34).

Flooring should, as far as possible, be free of obstructions such as bollards to facilitate unhindered movement, viewing, and observation (35). A dynamic monitoring theory should enable spatial monitoring of the system as a whole. The flexibility principle should be designed to accommodate office layout changes (36) because the business will not stay the same. In large organizations, it becomes necessary to ensure the integrity and discipline of employees (37) because they belong to a social group. A properly designed layout will surely enrich their movement (38). It is essential that the layout is balanced and pleasing to the mind. Equalization can bring accountability. An attractive appearance attracts customers and creates a high level of goodwill toward the company (39). Floor space should be fully utilized. Only then will the cost come down. However, each employee should have a limited amount of space. Only then can we upskill them to keep them in a healthy state of mind (40). The space provided for tools and files should be easily accessible and easy to handle by the employee. Tools should be arranged in such a way that employees can easily reach them without wasting their time (41). Desks should be set up exactly as per existing standards. It is true that monitoring is easier than setting up the office effectively. A good lighting principle is to ensure that natural light comes in as much as possible while setting up the space. Some jobs may require good lighting (42). A place for such work should be set up near windows. Ventilation plays an important role in space organization (43). In spaces where men and women work together, setting the ventilation to everyone's preference is a bit more complicated. Everyone's preference should be considered. Leave a minimum of running space between each table row (44). Its width depends on the number of tools and tables. A complete office layout can be achieved by integrating the above principles. The ultimate goal is to efficiently coordinate personnel, tools, and machinery (45).

A systems approach begins by examining an organization's document flow and verbal communication. When these two movements are fully identified and described, it can be concluded that the office space is moving with message flow and complete efficiency. One of these systems is the open office. The same is explained in the following section (46). If it is decided that it is an open office, employees are provided with work space in a large room or a long hall. All sections and departments are provided separately in the same arena with small partitions and shelves if necessary. These refer to each of the sections or departments. In any case, separate rooms should be reserved for some important officials (47) because their work requires dedication and concentration. An open office is an arrangement where all employees work in one long room according to their divisions. They are monitored by responsible officers.

3. Proposed model

Large companies that traditionally operated in centralized layouts are now setting up branches all over the country. Doing so gives them advantages in terms of proximity to raw materials, regional markets, and economics in transportation. Smaller firms benefit from factors such as ease of administration and close labor-management relationships. Most prefer to move the office from urban proximity to suburbs. The reasons are as follows:

- High cost: The cost per square foot of office space in urban areas is very high.
- Greater proximity: As urban areas become more crowded, there is a greater demand for smaller spaces.
- Better transport and communication facilities: Office buildings in suburbs benefit from modern transport facilities and communication developments.
- Change in industrial activities: As factories move from urban to suburban areas to rural areas, their offices along with some production units are moved to suburban areas.

Once the location of the office has been determined, the building needs to be decided. The building should be the right size and shape to meet all the needs of the company. The scope of this authority should be expandable from time to time as per requirements. The building may be owned, leased, or rented. After deciding whether the office is to be located in the city or in the suburbs, the following factors should be considered in selecting the office building. An open office is economical because rents are higher in big cities. It is economical as it avoids partition and partition walls encroachment of space in an open office. Open office offers good work and better supervision. As the worker comes under direct supervision, it becomes easier to establish better coordination at work. Changes can be made to the layout without any difficulty. This makes it easier to move equipment and fixtures. Communication is better in an open office than in a separate office because, in an open office, employees do not face the communication barrier caused by walls or doors. It only takes a few steps for an employee to move from one location to another to provide consultation, advice, and processes. Thus, it can work in a well-balanced manner. Centralizing stationery and files in an open office is easy, economical, and efficient. It becomes possible to use office equipment such as calculators, telephones, and xerox machines together. This results in full utilization of equipment and savings. Open office economizes on fixed and operating costs such as electricity, refrigeration, air conditioning, and heating. An office with an active appearance is as much an advertisement for the organization as possible. It provides more satisfaction to the customers at no extra cost. It also

adds to the organization and output of work as employees also share in the company's pride. Open offices ensure good lighting and ventilation. This makes the office a healthy place to work.

An open office operates on the basis of democracy. In view of all grade employees, experienced employees have to protect their position with skill and character. An open office is easy to decorate because the employees themselves participate in decorating and make the office a peaceful place to work. Confidentiality cannot always be maintained in an open office because all the work is done before the eyes of all the workers. Open offices can present an untidy, unattractive, and unbusiness-like appearance if not properly maintained. This affects the efficiency and effectiveness of office workers. A large open office is characterized by a non-binding environment. This creates many problems for the management as each employee has only a small attachment to his place of work.

A variety of noises can reduce employee efficiency. The main culprit is the phone itself. Lighting, heating, and cooling differ from each other. An open office ignores these and leads to employee misunderstandings.

- Availability of transport facilities: There should be transport facilities for the employees and customers working in the office. This will help in the smooth functioning of the company. Proximity to railway station, bus stand, or airport is helpful for businesses.
- Availability of various service facilities: If there are service facilities like banks, insurance companies, post offices, transport offices, retail shops, and restaurants, the office workers will put their full effort into the work and help the company to grow.
- Availability of communication with other departments: If all the departments of the company are in the same premises, it is convenient if the office is also in the same premises.
- Good environmental conditions: A good and healthy environment is essential for an office. It should be realized that factors such as noise, fumes, and proximity affect the efficiency of workers.
- Local location: If the office is located in the same place where the business is located, there is an opportunity to provide services to the customer with a good reputation. In recent times, the increase in communication and transport facilities has led to a departure from the practice of localizing the office.
- Acquiring required space: It is becoming increasingly rare to find minimally needed office space in a particular area. This is the main obstacle to choosing the location.

A large open office is not conducive to employee hygiene if it is not hygienically oriented. Infectious diseases are

easily spread from one person to another. This is because of the lack of ventilation and the overcrowding of workers in one place. Changes in layout create an open plan office. This primarily affects the discipline of the working group. A group of employees in a close-knit small office feel their cohesion eroding. Employers are frugal in the use of lighting, air conditioners, and refrigerators by seating all workers close together and allowing shared use of work machines. This constitutes a drawback. Organizations with a high concentration of middle management employ employees in a four-sided closed-form layout, or they are divided by dividing blocks that may or may not touch the apex. Each block has a desk, computer, printer, and personal telephone facility. An individual worker sits on a block. Or sometimes two or three workers occupy a block. Incubator offices have a large number of employees. They may or may not be related to an organization. They are provided with “hot desk” facility. This involves two or more employees sharing the same office space several times a day, or even days a week. A large number of people make the most of the office space provided through the incubator and “hot desk” arrangement. Another modern development is the short-term rental of offices. These are available for daily rent, monthly lease, or for longer periods. Short-term rental rooms are fully equipped with office facilities, internet, and fax machines. It also includes assistants and voice messaging. These are ideal for small businesses and traveling executives. Virtual offices are a variation of short-term offices. Through these, the business people establish the business from home and participate in everything to realize the existence of the special business and provide responsive service.

4. Comparative analysis

The proposed Workforce and Organization Management (WOM) has compared with the existing Human-Inspired Smart Management (HISM), AUTO-Encoder based Neural-Network (AUTO-NN), Mediating Effects of Job Satisfaction (MFJS), and Protocol-Based Local Networks (PBLN).

4.1. Decoration management

Decorations with good color enhance the look of the room and the minds of those who work in it become active. Vivid and vibrant colors create a pleasant atmosphere and help to do good work. Rooms that receive good sunlight should be decorated with neutral colors. Curtains add more pride to an office. It creates a pleasant atmosphere that usually applies to officers’ quarters and the curtains absorb noise. The color of the curtain blends with the wall color and sometimes creates a different living environment in the room. The decoration management is shown in Figure 1.

4.2. Noise management

Noise affects the productivity of an average office worker. Experiments show that the less noise there is, the fewer errors there are in the task. As the quantity of work increases, so does its quality. Employees are also healthy. The issue of noise reduction is an easy task for every office manager. However, it needs to be given due attention. Most of the noise in the office is out of control, but it is worth investigating and making efforts to reduce it. The noise management is shown in Figure 2.

4.3. Environment management

Noise reduction is the first step to be taken when choosing an office building. It is good that the office building is some distance from the road. Otherwise, the trees should be separated. Air-conditioned offices located in the city prevent noise pollution. It is the responsibility of the office manager to control the internal noise problem. Noisy sectors

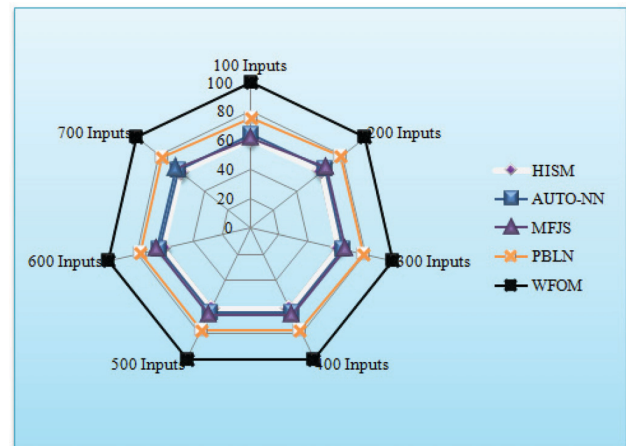


FIGURE 1 | Decoration management.

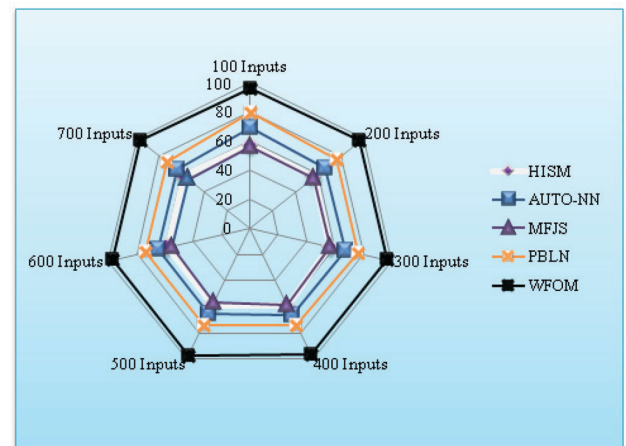


FIGURE 2 | Noise management.

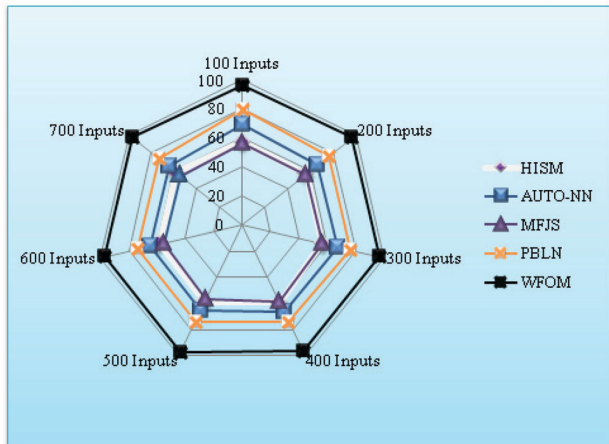


FIGURE 3 | Environment management.

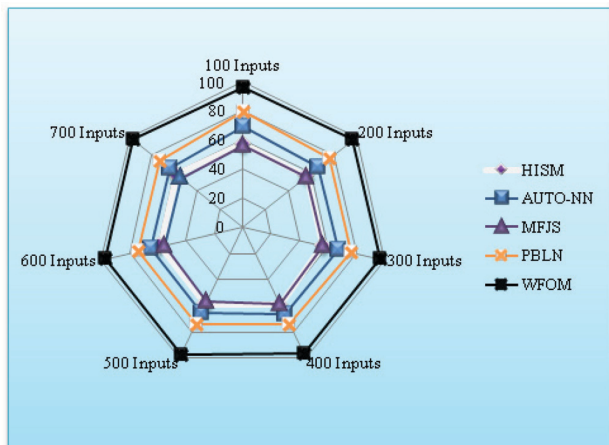


FIGURE 4 | Ventilation management.

should be segregated. It requires good planning for the building. Noise in an office is amplified by polished and hard floors, the occasional ringing of telephones, whirring machines, conversations, footsteps, and doors opening and closing. The environment management is shown in [Figure 3](#).

4.4. Ventilation management

This is a popular problem as unventilated offices are hot and stuffy. As a result, the workers are likely to experience problems such as fatigue and burnout. Hence, the work is done slowly and without precision. The main requirement of good ventilation is to relieve fatigue without creating grip due to constant ventilation. In addition to access through windows, they increase through openings in roofs, and internal openings in exterior walls. Artificial ventilation is available through fans and coolers. Office layout should be clean and tidy. An unsanitary office affects pleasant work and employee health. The ventilation management is shown in [Figure 4](#).

5. Conclusion

An office should have adequate fire protection devices. Some precautions should be taken to protect against fire hazards. People should behave appropriately when given the right circumstances. They take pride in keeping the place in good shape. If we involve the employees in the ongoing events while designing the office environments, space layouts, and facilities, it is ensured that they will maintain them in good order and clean. As a result, employees perform their tasks as a team with enthusiasm, engagement, and mental focus, creating mutual benefit for management and employees.

References

- Lopez-de-Ipina K, Iradi J, Fernandez E, Calvo PM, Salle D, Poologaindran A, et al. HUMANISE: human-inspired smart management, towards a healthy and safe industrial collaborative robotics. *Sensors*. (2023) 23:1170.
- Ramesh G, Logeshwaran J, Kiruthiga T, Lloret J. Prediction of energy production level in large PV plants through AUTO-encoder based neural-network (AUTO-NN) with restricted Boltzmann feature extraction. *Fut Intern*. (2023) 15:46.
- Haskasap E, Saner T, Eyupoglu S, Günsel Haskasap CS. Influence of organizational democracy on organizational citizenship behaviors in digital transformation: mediating effects of job satisfaction and organizational commitment for smart services. *Sustainability*. (2023) 15:452.
- Logeshwaran J. The topology configuration of protocol-based local networks in high speed communication networks. *Multidiscip Appr Res*. (2022) 15:78–83.
- Ramesh G, Logeshwaran J, Aravindarajan V. A secured database monitoring method to improve data backup and recovery operations in cloud computing. *BOHR Int J Comp Sci*. (2022) 2:1–7.
- Spoladore D, Trombetta A. Ambient assisted working solutions for the ageing workforce: a literature review. *Electronics*. (2023) 12:101.
- Khatri KCA, Shah KB, Logeshwaran J, Shrestha A. Genetic algorithm based techno-economic optimization of an isolated hybrid energy system. *ICTACT J Microelectron*. (2023) 8:1447–50.
- Bardhan R, Byrd T, Boyd J. Workforce management during the time of COVID-19—lessons learned and future measures. *COVID*. (2023) 3:1–27.
- Logeshwaran J, Shanmugasundaram N, Lloret J. L-RUBI: an efficient load-based resource utilization algorithm for bi-partite scatternet in wireless personal area networks. *Int J Commun Syst*. (2023).
- Chu JC, Hsu HC, Chang SY. A study on how workforce diversity affects business management strategies. *Int J Organ Innov*. (2023) 15:100–8.
- Adhikari N, Logeshwaran J, Kiruthiga T. The artificially intelligent switching framework for terminal access provides smart routing in modern computer networks. *BOHR Int J Smart Comput Inf Technol*. (1111) 3:45–50.
- Modliński A, Fortuna P, Rożnowski B. Human–machine trans roles conflict in the organization: how sensitive are customers to intelligent robots replacing the human workforce? *Int J Consum Stud*. (2023) 47:100–17.
- Vaniprabha A, Logeshwaran J, Kiruthiga T, Shah KB. Examination of the effects of long-term COVID-19 impacts on patients with neurological disabilities using a neuro machine learning model. *BOHR Int J Neurol Neurosci*. (2022) 1:21–8.
- Mohammad S, Husted B. Skilled workforces and law-abiding organizational climates in emerging markets. *J Bus Res*. (2023) 158:113530.

15. Gopi B, Ramesh G, Logeshwaran J. The fuzzy logical controller based energy storage and conservation model to achieve maximum energy efficiency in modern 5g communication. *ICTACT J Commun Technol.* (2022) 13:2774–9.
16. Sarabdeen J, Balasubramanian S, Lindsay V, Chanchaichujit J, Sreejith S. Employer branding: confirmation of a measurement model and its implication for managing the workforce. *J Gen Manag.* (2023) 48: 153–70.
17. Raja S, Logeshwaran J, Venkatasubramanian S, Jayalakshmi M, Rajeswari N, Olaiya NG, et al. OCHSA: designing energy-efficient lifetime-aware leisure degree adaptive routing protocol with optimal cluster head selection for 5G communication network disaster management. *Sci Program.* (2022).
18. Gutu I, Agheorghiesei DT, Tugui A. Assessment of a workforce sustainability tool through leadership and digitalization. *Int J Environ Res Public Health.* (2023) 20:1360.
19. Gopi B, Logeshwaran J, Gowri J, Aravindarajan V. The identification of quantum effects in electronic devices based on charge transfer magnetic field model. *Neuroquantology.* (2022) 20:5999–6010.
20. Zeitlin W, Lawrence CK, Armendariz S, Chontow K. Predicting retention for a diverse and inclusive child welfare workforce. *Hum Serv Organ.* (2023) 47:9–27.
21. Logeshwaran J. AICSA – An artificial intelligence cyber security algorithm for cooperative P2P file sharing in social networks. *ICTACT J Data Sci Mach Learn.* (2021) 3:251–3.
22. Ramesh G, Logeshwaran J, Aravindarajan V. The performance evolution of antivirus security systems in ultra dense cloud server using intelligent deep learning. *BOHR Int J Comput Intell Commun Netw.* (2022) 1:15–9.
23. Sarkar SS, Biswas J. Environmental perspective of workforce across industries. In: *Advances in Management Research.* London: Routledge (2023). p. 91–115.
24. Ramesh G, Logeshwaran J, Gowri J, Mathew A. The management and reduction of digital noise in video image processing by using transmission based noise elimination scheme. *ICTACT J Image Video Process.* (2022) 13:2797–801.
25. Logeshwaran J, Ramkumar M, Kiruthiga T, Sharan Pravin R. SVPA – The segmentation based visual processing algorithm (SVPA) for illustration enhancements in digital video processing (DVP). *ICTACT J Image Video Process.* (2022) 12:2669–73.
26. Gilliam NJ, Settle D, Duncan L, Dixon BE. Health worker registries: managing the health care workforce. In: *Health Information Exchange.* Cambridge, MA: Academic Press (2023). p. 329–41.
27. Logeshwaran J, Adhikari N, Joshi SS, Saxena P, Sharma A. The deep DNA machine learning model to classify the tumor genome of patients with tumor sequencing. *Int J Health Sci.* (2022) 6:9364–75.
28. Bruch JD, Foot C, Singh Y, Song Z, Polsky D, Zhu JM. Workforce composition in private equity-acquired versus non-private equity-acquired physician practices: study examines physician workforce composition comparing private equity-acquired with non-private equity-acquired practices. *Health Affairs.* (2023) 42:121–9.
29. Logeshwaran J, Malik JA, Adhikari N, Joshi SS, Bishnoi P. IoT-TPMS: an innovation development of triangular patient monitoring system using medical internet of things. *Int J Health Sci.* (2022) 6:9070–84.
30. Owens-Young JL, Leider JP, Bell CN. Public health workforce perceptions about organizational commitment to diversity, equity, and inclusion: results from PH WINS 2021. *J Public Health Manag Pract.* (2023) 29:S98–106.
31. Logeshwaran J, Ramkumar M, Kiruthiga T, Sharanpravin R. The role of integrated structured cabling system (ISCS) for reliable bandwidth optimization in high-speed communication network. *ICTACT J Commun Technol.* (2022) 13:2635–9.
32. Ramesh G, Aravindarajan V, Logeshwaran J, Kiruthiga T, Vignesh S. Estimation analysis of paralysis effects for human nervous system by using neuro fuzzy logic controller. *Neuroquantology.* (2022) 20:3195–206.
33. Karakhan AA, Nnaji CA, Gambatese JA, Simmons DR. Best practice strategies for workforce development and sustainability in construction. *Pract Period Struct Design Construct.* (2023) 28: 04022058.
34. Gopi B, Ramesh G, Logeshwaran J. An innovation for energy release of nuclear fusion at short distance dielectrics in semiconductor model. *ICTACT J Microelectron.* (2022) 8:1430–5.
35. Maqsoom A, Musarat MA, Mubbasit H, Alaloul WS, Ashraf H, Rabbani MBA, et al. Extrinsic workforce diversity factors: an impact of employee characteristics on productivity. *Ain Shams Eng J.* (2023).
36. Gopi B, Logeshwaran J, Kiruthiga T. An innovation in the development of a mobile radio model for a dual-band transceiver in wireless cellular communication. *BOHR Int J Comput Intell Commun Netw.* (2022) 1:20–5.
37. Gupta N, Balcom SA, Singh P. Looking beyond parity: gender wage gaps and the leadership labyrinth in the Canadian healthcare management workforce. *Healthcare Manag Forum.* (2023) 36:49–54.
38. Gopi B, Logeshwaran J, Gowri J, Kiruthiga T. The moment probability and impacts monitoring for electron cloud behavior of electronic computers by using quantum deep learning model. *Neuroquantology.* (2022) 20:6088–100.
39. Gayatri G, Jaya IGNM, Rumata VM. The Indonesian digital workforce gaps in 2021–2025. *Sustainability.* (2023) 15:754.
40. Ramesh G, Logeshwaran J, Aravindarajan V, Thachil F. Eliminate the interference in 5g ultra-wide band communication antennas in cloud computing networks. *ICTACT J Microelectron.* (2022) 8: 1338–44.
41. Ranjan D. Rebuilding organizations post-pandemic. In: *Re-Envisioning Organizations Through Transformational Change.* New York, NY: Productivity Press (2023). p. 145–56.
42. Ramesh G, Logeshwaran J, Rajkumar K. The smart construction for image preprocessing of mobile robotic systems using neuro fuzzy logical system approach. *Neuroquantology.* (2022) 20:6354–67.
43. Sekar G, Sivakumar C, Logeshwaran J. NMLA: the smart detection of motor neuron disease and analyze the health impacts with neuro machine learning model. *Neuroquantology.* (2022) 20:892–9.
44. Logeshwaran J, Karthick S. A smart design of a multi-dimensional antenna to enhance the maximum signal clutch to the allowable standards in 5G communication networks. *ICTACT J Microelectron.* (2022) 8:1269–74.
45. Jasmine J, Yuvaraj N, Logeshwaran J. DSQLR-A distributed scheduling and QoS localized routing scheme for wireless sensor network. *Recent Trends Inf Technol Commun Indust.* (2022) 1:47–60.
46. Ramkumar M, Logeshwaran J, Husna T. CEA: certification based encryption algorithm for enhanced data protection in social networks. *Fund Appl Math Softw Comput.* (2022) 1:161–70.
47. Logeshwaran J. The control and communication management for ultra dense cloud system using fast Fourier algorithm. *ICTACT J Data Sci Mach Learn.* (2022) 3:281–4.