

## Gaps In The Implementation Process Of Remote Work / Telework In Public Management: A Literature Review

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### ABSTRACT

The literature review aims to identify the gaps in the implementation process of remote working / teleworking in public management, through a database of 36 publications in Scopus using the format ( TITLE ("remote working" ) OR TITLE ("telework") AND ALL ("gaps")), thus performing the corresponding bibliometrics. Gaps were identified such as adaptation, retraining of people, digital competencies, geographical factors, job satisfaction, structural decentralization, labor productivity, teamwork, leadership, labor and family conflict, and digital access, which is why it is important that people of any age can adapt to this mode of work, modernizing the development of digital skills and digitization of processes, seeking retraining to employees, taking into account geographical factors, generating the decentralization of work structures, avoiding limitations in the agreements made by the employee with his employer, allowing managers to find resource reductions, increase productivity, thus improving teamwork. It is very important to know that the employee must have all the necessary digital accesses. As results it was identified that the subject of study is given since the 80's, increasing in 2020, being the scientific articles the most published, and one of the authors who has most touched the subject was Abendroth, A.K.

**Keywords:** Telework, remote work, public management, leadership, information technologies, competencies, family and work balance.

### RESUMEN

La revisión bibliográfica tiene como objetivo identificar las brechas en el proceso de implementación del trabajo remoto / teletrabajo en la gestión pública, a través de una base de datos de 36 publicaciones en Scopus utilizando el formato ( TITLE ( "remote working" ) OR TITLE ("telework") AND ALL ("gaps")), realizándose así la bibliometría correspondiente. Se identificaron brechas como son la adaptación, capacitación de las personas, competencias digitales, los factores geográficos, la satisfacción laboral, descentralización estructural, productividad laboral, trabajo en equipo, liderazgo, conflicto laboral y familiar, y accesos digitales, es por ello la importancia de que las personas de cualquier edad pueden

adaptarse a esta modalidad de trabajo, modernizando el desarrollo de competencias digitales y la digitalización de los procesos, buscando la capacitación a los colaboradores, tomándose en cuenta los factores geográficos, generando la descentralización de las estructuras de trabajo, evitando las limitaciones en los acuerdos que realice el empleado con su empleador, permitiendo a su vez a los directivos encontrar reducciones de recursos, aumento de productividad, mejorando así el trabajo en equipo. Es muy importante conocer que, el empleado deberá contar con todos los accesos digitales necesarios. Como resultados se identificó que el tema de estudio se da desde la década de los 80, incrementándose en el 2020, siendo los artículos científicos los que más

se publican, y uno de los autores que más ha tocado el tema fue Abendroth, A.K.

**Palabras claves:** Teletrabajo, trabajo remoto, gestión pública, liderazgo, tecnologías de información, competencias, equilibrio familiar y laboral.

## INTRODUCTION

In 2021, the worldwide pandemic of the coronavirus (COVID-19) has continued, but this time with more variants appearing in other countries and spreading to others, but thanks to the existing diversity of vaccines, the world has generated a temporary defense to reduce the effects of the virus even to death, creating in some of them a vaccination passport.

When speaking of remote work, the Ministry of Labor and Employment Promotion of Peru, describes it as the provision of services of a collaborator physically at home, while telework, the Association of Academies of the Spanish language (ASALE) and the Royal Spanish Academy (RAE), indicate that it is the performance of work from a place outside the organization using information and communication technology (ICT's) for the performance of their duties. Thus, due to the existing situations, remote work / teleworking has continued its way in private companies and in the public sector so that its implementation remains effective and can continue to evolve even post pandemic, since this new way of performing the functions / work activities from home or somewhere where you are, has adapted to people of any age, where (Bjursell et al., 2021), details that as people increase their age, the need to work from home increases, also citing Eurostat (2020) in a study before the pandemic, presented in their results that people in the age range of 15 - 24 years and 50 - 64 years work from home 2.1% and 6.6% respectively.

This new way of adapting work activities, is one of the actions that will allow modernizing the way of developing digital competencies to people, allowing public management to modernize, thus breaking different paradigms that help globalization in this sector to continue growing, especially in the permanent application of remote work / teleworking. In a report of the world economic forum (2020) cited by (Bjursell et al., 2021) estimated that approximately 40% of workers participate in retraining with a maximum duration of six (6) months. In addition, the governments of each country, in order to continue to take advantage of this modality of work, must give the initiative and encourage both sectors to be taken into account, and an important point is the digitization of existing processes, and today thanks to artificial intelligence (AI) there are virtual assistants, which if they continue to take advantage of them, especially in the public sector should be part of a government public policy, as in the case of Japan, which has a proposal defined as society 5. 0 to which it aspires as a country, and is focused on people in their economic and social development through cybernetic systems integrated with reality (Hosogaya, 2021).

Remote work / teleworking has also allowed to find positive and negative results in terms of performance, attitudes, family well-being, stress, in addition to balance and work life (Beauregard et al., 2019), in addition before the existence of the pandemic Beauregard et al, cite Bloom et al., (2014), who conducted an experiment on call center employees for 9 months, evidencing an increase in their work performance by 13%, allowing it to improve the rating by supervisors, in addition they also cite Gajendran, Harrison, & Delaney-Klinger, (2015), where they conducted another study between employees and supervisors, having as a result, that telework and performance of activities were positively related.

Another of the gaps or situations found was the existence of inequalities between men and women, since despite being a work agreement to balance personal life with work, and is that this mode of working is also an opportunity to reduce inequalities between different genders or stereotypes towards women, since those who will most take advantage of it are mothers of families to have a balance, in addition men take advantage of it to meet the high demands of work that arise, in addition to other extra work that they generate. (Abendroth and Diewald, 2019). Said author had as results, that men with children earn 15.1% additional salary for each hour, than women with children, while men without children earn 6.9% more than women with children, based on professional characteristics, hours worked and occupation, since this way of working (remote work/telework) is part of the human resources policies, that is, it is very important that in the public sector, through the governing body that governs the management of human resources, establishes as a post pandemic policy, the application of remote work/telework. In addition, for the decrease of these inequalities, there must be a great support from the supervisors and/or superiors of the companies or entities, as long as they do not differ from the organization, that is, that the application of telework/remote work leads to a transformation or adaptation of the organizations, in terms of their culture, composition, relations with their environment and in their inequality regimes, otherwise it would influence income inequalities in the company or entity. (Abendroth and Diewald, 2019).

Based on the above, the United Nations, in its Sustainable Development Goals 2030, and relating it to the elimination or reduction of inequalities, there are six (6) SDGs that would help to strengthen this new way of working and reduce inequality, such as gender equality (SDG 5), decent work and economic growth (SDG 8), industry,

innovation and infrastructure (SDG 9), education of inequalities (SDG 10), sustainable cities and communities (SDG 11) and responsible consumption and production (SDG 12), Thus, by taking advantage of these strategies, the great potential of remote work/teleworking could be generated to be able to agree with the different cases of life of each person, taking advantage of the management of space and time, allowing in turn to reduce costs to entities or organizations, despite the existence of work overloads and family, but in turn reinforces the role of women to take advantage of this form of work, allowing sharing responsibilities among the whole family and not only in it (Gálvez et al. , 2020).

Thus, the application of remote work/telecommuting will continue to present different gaps in different entities or organizations until they can adapt their processes, retrain their employees, but also depends on geographical factors, since not all countries or regions of a country have the same characteristics, thus allowing different models of work related to remote work/telecommuting and the availability of human resources that may exist, in addition to the different digital communications or cyberspace and the value chain of the entity or organization (Donnelly and Johns, 2020).

This literature review document will allow to address different aspects that have been generated before and during the pandemic of COVID-19, in order to respond to the research problem: What are the gaps that occurred during the process of implementation of remote work / telework in public management, allowing thus, to provide rich scientific information for future research post pandemic, also allows to generate a practical implication to put into practice experiences already carried out in other countries, allowing to generate new and improved strategies of remote work / telework, especially in the public sector, as

in Peru, which is modernizing it, knowing in turn, the gaps that have been generated in the implementation and execution. The following section details the method used, and then continues with the results obtained, and finally discusses these in order to develop the conclusions.

## METHODOLOGY

The research has been developed in two stages. The first stage consists of a bibliometric analysis of the gaps in the process of implementation of remote work/teleworking and the second stage is an analytical review of the most relevant literature on the phenomenon.

Regarding bibliometrics, it is specified that it is the application of mathematical and statistical fundamentals to written sources found in databases containing metadata and elements such as authors, title of the publication, type of document, language, abstract and keywords or descriptors (Solano et al., 2009). This methodology is being used more and more frequently to analyze the state of the art of the phenomena under investigation, thus making it possible to know the categories of analysis in which authors abound, the areas of knowledge interested in the subject, relevant authors, countries, types of publication and institutional affiliations of the authors.

Unlike some years ago, when it was necessary to invest a lot of time and money to classify information, since the process was manual, today with technological progress computer systems improve data processing and more accurate and reliable information can be obtained. Ding et al. 2014; Garfield, 1955 and Merigó et al. 2015b, as cited in (Cancino et al., 2017).

For the bibliographic exploration regarding the gender pay gap topic, a search argument was conducted in the Scopus database. The search protocol was applied in the month of May 2021 with the following structure: ( TITLE ( "remote working" ) OR TITLE (

"telework" ) AND ALL ( "gaps" ) ). Thirty-six records were identified, which were subjected to bibliometric analysis, considering the categories of evolution of publications by year, by authors, by areas of knowledge and by countries.

The export of the data in comma separated format (CSV), has allowed the integration of the information to the VOS Viewer program with which the analysis of co-occurrences of key terms was performed, as an exploration of the thematic associated with the gaps in the process of implementation of remote work / teleworking.

For the analytical review of the most relevant documents of the data, full text readings have been performed, which has allowed to identify categories such as theoretical approaches to the phenomenon, theoretical models, methodologies, gender inequalities, retraining of collaborators, the importance of applying the Sustainable Development Goals (SDGs) and the development of public policies for its formalization post pandemic.

## RESULTS AND DISCUSSION

Next, we will present the results of the research related to the gaps in the process of implementation of remote work / teleworking in public management in relation to everything mentioned in the previous point (methodology). In this last point it has been possible to indicate that the information used is based on the Scopus database through a search argument, which allowed to obtain metadata that have allowed to develop the following analysis.

In relation to the publications made (Figure 1) it can be seen that the gaps of the implementation process remote work / telework in public management had beginnings in the year 1999 with one (1) publication, having a variation of 1 to 3 from 2005 - 2019 and it is in 2020 due to the pandemic of COVID-19 publications on the subject of study grew to 10, so that currently

there are 4 of these, being a total of 36 articles.

The author (Dangelmaier et al., 1999) who initiated this growth of research on the subject of study, emphasizes the decentralization of work through new organizational structures, also mentions that teleworking had its first research in the 80s but with limitations in the technical requirements and as globalization has increased, new business models were presented, which allowed to distribute the work, taking into account the availability of digital network, standardized software and assisted design software, in addition to

**Figure 1** Documents published by year.



Source. Scopus database

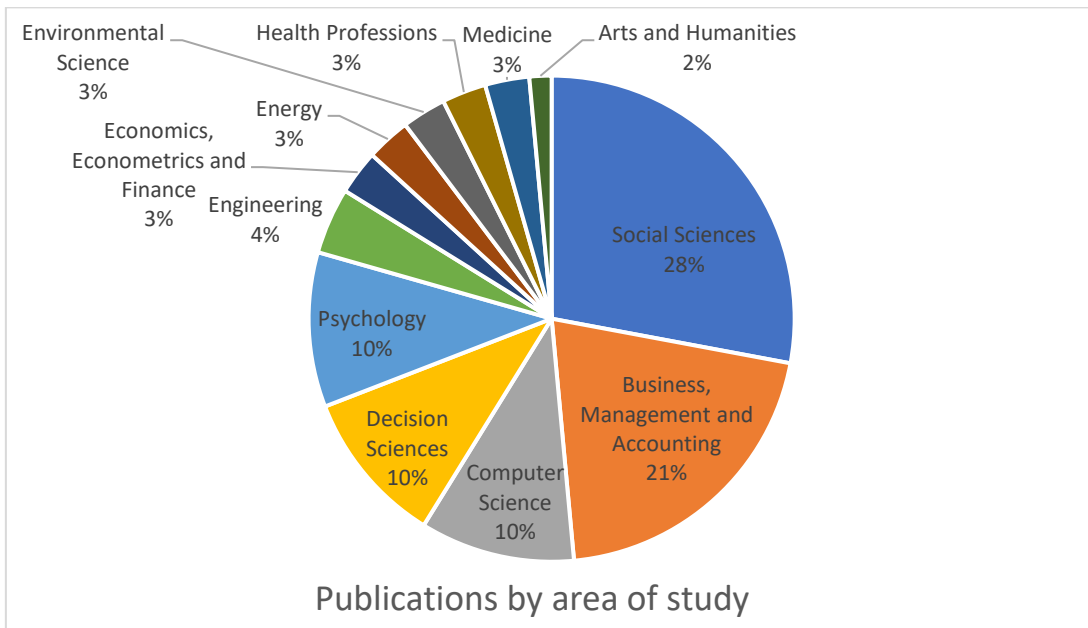
Regarding the areas of study in relation to the research topic, 28% of articles belong to

**Figure 2** Papers published by area of study.

different standards of data transmission to work digital orders, also indicates that since 1993 the European Union has promoted the modality of teleworking, mainly in the countries of United Kingdom, Germany, Italy, France and Spain, showing an increase of 1.25 million teleworkers.

In the case of (Neirotti et al., 2012), where he evaluated the impact of telework in relation to productivity, where he used the treatment regression model to evaluate the impact of this modality, and the least squares regression model to evaluate the differences of different telework modalities.

the social sciences, followed by 21% corresponding to the area of business, management and accounting.

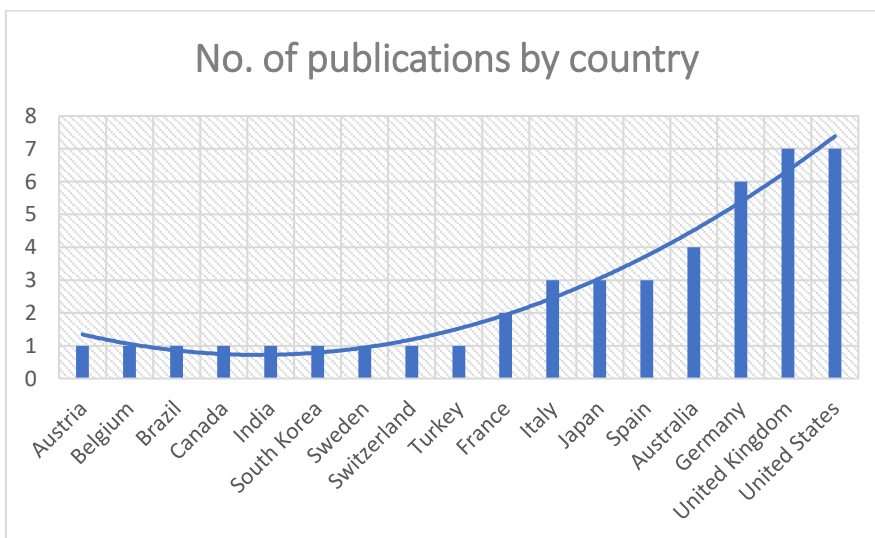


Source. Scopus database

Figure 3 shows the number of articles published in Scopus by country, where the United States and the United Kingdom lead

with 7 publications, respectively, followed by Germany with 6 articles; thus, at the continent level, only 3 countries are from the Americas, while the majority are from Europe.

**Figure 3** Publications by country.

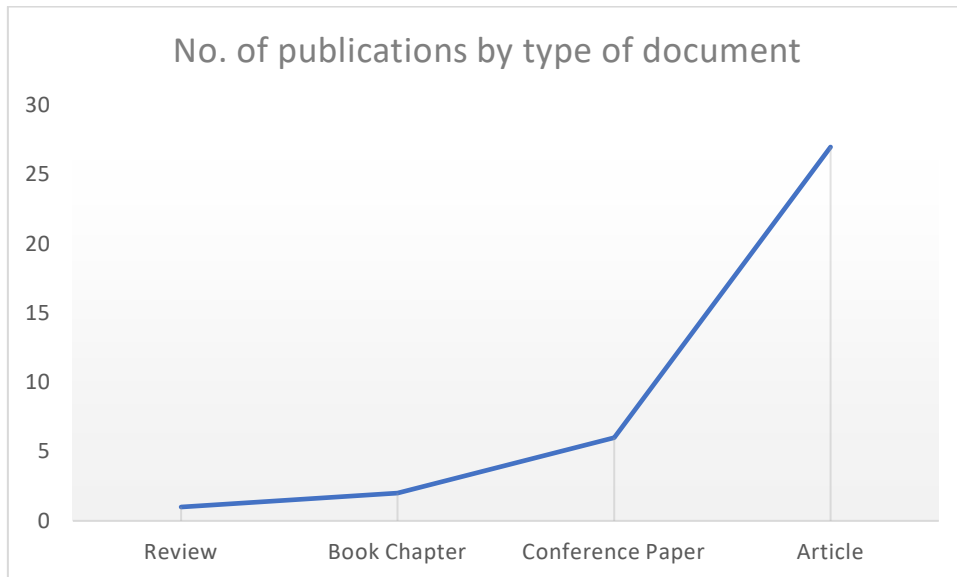


Source. Scopus database

Also, Figure 4 shows that the majority of publications (27) are scientific articles,

followed by conference papers (6), and only one (1) review paper was found.

**Figure 4** Publications by type of document.

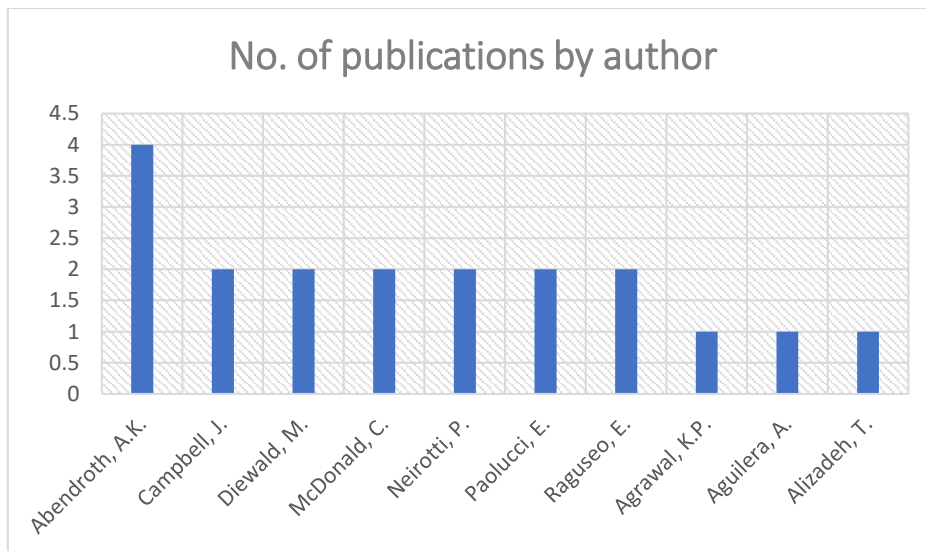


Source. Scopus database

In Figure 5, stands out as the author with the highest number of publications (4), Abendroth, A.K. from Germany, followed

by Campbell, J., Diewald, M., McDonald, C., this highlights the above mentioned, that in Europe is where most advanced studies of telework / remote work.

**Figure 5** Publications by author.



Source. Scopus database

In relation to the studies made in the documents obtained from Scopus, there are marked themes in relation to the subject of research highlighting the ways in which remote work / telework is performed taking into account the balance of life with work, adopting models for its implementation in relation to motivation, flexibility and role

that will take, taking into account the roles they perform, the technology, its impact against the results and possible changes that are generated throughout the implementation phase.

**Figure 6** Semantic map on the study of the gaps in the process of implementation of remote work / telework in public management.





leadership, in addition that the managerial part, can find a reduction of resources, increased productivity and increased working hours, so for the state, would find in this mode of work a saving of workspaces, provided that their processes are digitized and workers adapt quickly, i.e. the state (employer) and the employee, must standardize their processes with lifestyles, allowing also, that the types of communication improve outside the office, and thanks to tools such as zoom or Google meet, it has been possible to move face-to-face meetings to videoconferences, in addition to being able to record and repeat them several times, avoiding displacements that generate expenses. Therefore, for a good development of this modality of work it is important that the trust between the entity and the collaborator is reciprocal, so (Bjursell et al., 2021), mentions that the relationship of trust between the employee and the employer will allow less control and greater productivity, generating that the commitment is the necessary endorsement to perform this modality of work, in addition for its better application, the policies must be adapted, to have greater positive effects and obtain desired results as an entity or organization, so it is important the digitization of daily life, to take advantage of the necessary tools.

This new modality of work is an opportunity to generate autonomy as described above, but at the same time conflicts may arise in personal life, which may occur with women, since (Çoban, 2021), in his research article, mentions that due to the pressures that may arise, they generate a conflict between both roles, in addition, gender stereotypes are on the rise, as in women who according to authors he cites, mention that they are more exploited in both roles (work and family), and in some cases having more control from their husbands, in addition to this, those women with children, they favor more the application of telework / remote work. Remote work / telework as discussed in

previous paragraphs, has intensified due to the pandemic of COVID-19, and this has generated that companies or entities in different countries have to intensify the digitization of processes, and (Galvez et al., 2020) mentions that from the point of social sustainability, for this modality to advance correctly based on the results effectively, it is very important that all actors must have as a point of attention the reconciliation of family life with work, being important point of the sustainable development goals. In addition the realities of each country at the economic level is very different so that the existing jobs are not all adapted to this new reality, generating that the consumption of material goods is readjusted, in addition to the knowledge required with information technology, therefore the author based on their results obtained, for the work to be effective, you must have the appropriate technological support from the company or public entity, including programs to have a reconciliation between work and family life.

At the managerial level, it is very important to take into account the different problems that may arise on the part of subordinates, generating that the practice of leadership is visualized in greater depth. In the case of (Dolce et al., 2020) highlights that due to the current situation in which we find ourselves, people to compulsorily perform their functions using remote work / telework, allowed these to get closer to the technology and seeking support with their co-workers and seek to share the necessary information for the execution of their functions, allowing the leader-collaborator relationship to be a positive link to study, since in the administrative management the work of the leader is fundamental, and in this case in front of the COVID-19, is a much more important aspect for the results of the entity or organization to be crucial along with the welfare of the collaborator, so it becomes a transforming leadership, but different authors cited by the author, mention that leadership also has a dark side in

coordinators or supervisors, such as toxic, abusive or destructive leadership or the dark triad of personality, described by intimidation, manipulation, intimidation, narcissism, or unethical behavior, leading to harm the organization or their subordinates. It is also so that human resources management plays a fundamental role in the development of leadership in the management of remote work / telework, so that (Donnelly and Johns, 2020), mention that due to digitization and leadership, the work done by employees can be carried out digitally without the need to be at home, and can be done anywhere with the necessary access (internet, digital communication), since the differences that exist at national or global level by individuals or entities themselves, are given by social inequalities, urban locations, which is why digitization should be adapted more deeply to the different realities that may present a city or country, so that the role of human resource management is more relevant.

(Hosogaya, 2021) mentions that in this modality of work must be taken into account characteristics required for its better development around the place and the work environment, having to be a suitable environment, so the collaborator must prepare the space where he will perform his activities taking as an initiative his commitment to the entity or organization with his family life, also includes the gender of each worker, his personality, educational level, occupation, family characteristics, quality of the environment where he lives and what the entity or office can provide such as ICT equipment, as they are very important for the planned results, in addition to reducing the employee's stress, anxiety and can also experience inclusion, due to the exchange of information through the correct means of communication to be determined or implemented, improving in turn a better relationship between the boss and subordinate. On the other hand (López-Igual and Rodríguez-Modroño, 2020) through the

compilation of information from various authors, mentions that people of low status in the labor market have taken advantage of the new ICT to implement teleworking. In addition, of these people, organizations in the European Union have implemented an ICTTM agreement with professionals, technicians, administrative and managers who perform full-time work allowing the tasks that they had to perform on a mandatory basis at a desk of the organization, become more flexible, due to the positive results that has brought telework / remote work, in turn as mentioned above, it is still evidenced the reduction of costs, in addition to hiring more competent staff, allowing to have heterogeneity in the feasibility of the implementation of this modality by occupation. In addition, (Neirotti et al., 2012) indicates that for a greater benefit of teleworking should be given a greater retention of human resources with greater commitment, better qualified, labor creativity, dynamism, elearning.

## CONCLUSIONS

Remote work / teleworking has continued its way in private companies and in the public sector so that its implementation remains effective and can continue to evolve even post pandemic, since this new way of performing work functions / activities from home or somewhere where you are, has allowed people of any age to adapt.

This new way of adapting work activities, is one of the actions that will modernize the way to develop digital skills to people, allowing public management to modernize, thus breaking different paradigms that help globalization in this sector to continue to grow, especially in the permanent application of remote work / teleworking.

The application of remote work / telework will continue to present different gaps in different entities or organizations until they can adapt their processes, retrain their employees, but also depends on

geographical factors, since not all countries or regions of a country have the same characteristics.

The author Dangelmaier et al. (1999) who initiated this growth of research on the subject of study, emphasizes the decentralization of work through new organizational structures, also mentions that teleworking had its first research in the 80s but with limitations in the technical requirements and as globalization has been increasing, new business models were presented, which allowed to distribute the work, taking into account the availability of digital network, standardized software and assisted design software.

The types of people who perform their activities under this modality, such as part-time and full-time collaborators, including the extra hours that they would have to use in the night shift or weekends, when they are already out of working hours, generating a limitation in the agreements that the employee can make with his employer.

Satisfaction can be both a positive and contradictory consequence, since it can have a flexibility where the employee has total autonomy (family and work life), as there may be greater control by the employer, in addition to the extensive that could become the type of work to be done (number of hours worked), the effects that could cause (isolation, frustration), dependence on technology, work stress or personal life conflicts that may arise. It is very important that all actors should focus on the reconciliation of work and family life, which is an important point of the sustainable development objectives.

Due to technology, workers tend to have greater flexibility in managing their work life with their personal life, allowing to increase leadership, in addition to the management can find a reduction of resources, increased productivity and increased working hours.

Due to digitization and leadership, the work performed by employees can be carried out digitally without the need to be at home, and can be done anywhere with the necessary access (internet, digital communication), since the differences that exist at national or global level by individuals or entities themselves, are given by social inequalities, urban locations.

It must take into account the characteristics required for the best development around the place and the work environment, and it must be a suitable environment, so the employee must prepare the space where he/she will perform his/her activities taking as an initiative his/her commitment to the entity or organization with his/her family life, also including the gender of each worker, his/her personality, educational level, occupation, family characteristics, quality of the environment where he/she lives and what the entity or office can provide as ICT equipment.

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