

Digital Workplace Implementation To Promote Gender Equality

Nita Yalina

Faculty of Science and Technology
 UIN Sunan Ampel Surabaya
 Surabaya, Indonesia
 nitayalina@uinsby.ac.id

Abstract—The focus of this research is to provide an explanation of how the digital workplace can help to promote gender equality in the organization. We conduct interviews with 4 managers and 8 selected woman on different organization regarding expected condition at the workplace. In the Organization perspective, Interviews revealed Regulation and Financial problem is the most important things before implementing digital workplace while for the employees adequate training is needed. This paper provides an explanation of why it is important, challenge and barrier and strategy that organization could adopt to implement digital workplace to promote gender equality. Future research would also be proposed.

Keywords—Digital Workplace, Gender Diversity, Digital Transformation

I. INTRODUCTION

Digital Transformation is more than digitizing product and processes. It creates a new value and business model in the organization. Digital transformation is a continuous complex undertaking that can substantially shape a company and its operations[1]. Digital transformation needs to be addressed in a complex digital transformation strategy. The implementation of the digital workplace is one strategy that could be adopted. Working environments in traditional organizations are characterized by siloed technologies, segregated physical spaces and asynchronous email communications. In order to succeed in the digital era established companies will need to transform how work is done through performing companies design digital workplaces [2]. In contrast to the traditional workplace, the digital workplace doesn't require a physical location, with all the traditional physical office attributes (desks, offices, support facilities, etc). It offers high flexibility and customizable option for the employee.

It is important to involve a woman in the organization. The impact of gender diversity on innovation performance has been proven[3]. Companies that are gender-diverse and utilise female talent effectively are 45% more likely to report improved market share[4]. Upgrading the role of women in the labour market, as well as the elimination of roadblocks and obsessions are a must for the equal right to employment regardless of gender. ICT could create new opportunities for the employability of women[5]. The use of Information Communication and Technology could also contribute as effective tools for women to have equal opportunities with men in business development [6].

The most recent study only talked about the advantage of digital workplace while the issues about gender and digital workplace are rarely mentioned. However, the issues about gender on this case should not be overlooked. The purpose

of this study is to explore the strategy of digital transformation in the organization. The focus of this research is to provide an explanation of how the digital workplace can help public sector organization to promote gender equality in the organization. This paper provides an explanation of why this is important, challenge and barrier and strategy that organization could adopt to implement it.

II. THEORETICAL FRAMEWORK

A. Digital Transformation Strategy

Potential benefits of digitization are manifold and include increases in sales or productivity, innovations in value creation, as well as advanced forms of interaction with customers, among others. As a result, entire business models can be reshaped or replaced[7]. Independent of the industry or firm, digital transformation strategies have certain elements in common. These elements can be ascribed to four essential dimensions: use of technologies, changes in value creation, structural changes, and financial aspects[1]. The organization need to define digital transformation strategy in order to be successful to comply with the digital era. The strategy could be different from one organization to the others. However, there are some aspects that an organization should consider regarding digital transformation since the impact of it could be massive and essential for the organization.

B. Digital Workplace

In the traditional workplace, based on a survey conducted from previous research, the activity most prevalent during work hours was sitting[8]. It could lead to health issues and reduce the satisfaction of the workforces[9].

Digital workplaces enable modern workers to be more agile and productive in a digital environment. The objective of implementing digital workplace is to accelerating collaboration and communication among stakeholder within the organization, increasing engagement both with employees and customer and improving productivity.

Based on Google Trend Analysis the word "Digital Workplace" has significantly increased in the past 10 years. It shows that the interest in the digital workplace increasing every year.

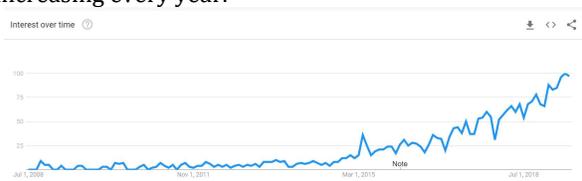


Figure 1. Google Trend Analysis of "Digital Workplace"

The digital workplace concept consists of social technologies tools, contextual intelligence tools, communication infrastructure and mobility. Social Technology tools refer to the technology that enables employees to engage with each other using collaboration software. Intelligence Contextual tools refer to tools related to information retrieval and knowledge management system in a daily situation. Intelligence Contextual tools and Social Technological tools have a strong relationship and bundled as an advanced technological tool. Mobility means every stakeholder in the organization enable to access information and interact with each other remotely without obligation to physical contact and limited time. Communication infrastructure refers to the backbone of the communications system[10]. All of this element need to work together in order to form a solid digital workplace.

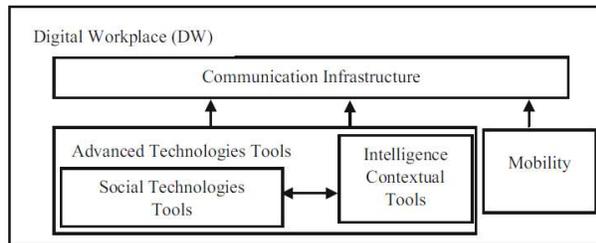


Figure 2. Element of Digital Workplace [10]

C. Gender Diversity

Gender become critical issues around the world. This issues related to empowering woman and protected them in various aspects of life. One major problem in gender issues is gender equality in the workplace. Therefore, gender equality in the workplace should not be overlooked. The previous study shows that gender diversity has a strong positive relationship to innovation capability performance[3][11]. It could also increase market valuation and revenue [12].

Previous research provides an explanation of why only a few women working in IT. There are 70% of companies surveyed have proportionately fewer women in their workforce that are available in the labour pool[4]. It gives an insight into the perception of a woman working in IT and find 4 major hindrances which are gender stereotypes and attitude, family responsibility, working time constraint, and lack of confidence [13].

III. METHOD

This study is part of a qualitative study of “Acceptance and Rejection of the Future of Work” project. The purpose of this study is to investigate woman perception of Digital Workplace and its impact on their life. In order to get a deep answer, 4 selected managers and 8 selected woman were interviewed using semi-structured interviews. The manager's interviews included several main questions:

1) *What do your organization think about gender diversity?*

2) *Does your organization have a particular policy about work/life balance?*

3) *To what extent your organization utilize IS/IT to support employees in the work*

4) *What do you think if your organization implement a digital workplace?*

5) *What challenges do you think you could face?*

The question to the selected women are started from these questions:

1) *What issues at the workplace faced by a woman in the workplace?*

2) *Have you experienced any conflict between family and working life?*

3) *What do you think about the digital workplace?*

4) *What are your expectations regarding digital workplace and woman issues at the workplace?*

The question is varied and developed further based on the answer given by the respondent. The objective of these questions is to explore the perception of digital workplace impact from both perspectives, organization and woman employees respectively.

IV. ANALYSIS AND RESULT

Based on the answers that we got from the interviews processes. We conduct content analysis and categorize the answer based on the narration from the respondent. We divide the answer based on two perspectives, organization (managers) and employees (woman).

From the perspective of woman, there are several issues that the faced at the workplace such as sexual harassment. She felt very annoyed and from the behaviour, I can feel the emotion she felt about the experienced. Two other woman mention about a gap between facilities among man and woman at the workplace. They said that man has enough facilities even on channelling their hobbies an fulfil their needs such as smoking room and game room while the woman doesn't even have a private room to pump or breastfeed. The most woman said about having hard time balancing working life and their personal responsibility as a wife and a mother. They also said about unrespected behaviour from others in the matter of expressing opinion and participating in a discussion on solving the problems. Woman tend to be seen as incapable and less experienced.

“I hate it when they said that you knew nothing about the issues even it just a problem that can be solved by logic easily.” (Anita, former employees on construction company).

“Sometimes, I just feel invisible, they don't even listen about the solution that I try to give” (Nazli, public civil servant).

When they are being told about the concept of the digital workplace that can offer flexibility in time and place, all of them feel excited. They said that it is likely to solve the problems they faced in the workplace. They could improve the balance between working and personal life. However, there are some issues that could not be solved. It is possible that the digital workplace could prevent sexual abused physically, but it could still happen even in cyber life with inappropriate content. They also see some challenges.

“However, at my office, only a few women have IT skills, most of them unlikely to operate the computer. If the digital workplace wants to be implemented, there should be held a training session. Besides, the regulation must be developed clearly, so that we could work without worrying that our job would be easily replaced”

From the perspective of the organization, we got a different opinion. Some of them think that gender diversity is quite important but others said it is less important than competencies.

In the public sector organization, we do the interview with the managers of IT Center and she said that the most important things are regulation, and evaluation, and performance monitoring system.

“For us who work in a public sector organization, the most important things before implementing digital workplace is regulation and policy. However, in order to maintain the work-life balance, I also encourage my employees to finish the jobs at work hour and I won’t call them in the matter of office work in non-working hours” (Imas, Head of IT & Datacenter).

From the behaviour of the respondent, I suspect a mistrust and doubt about how their employee would meet the target if they work at home. She says the word “Evaluation” and “Monitoring” several times.

Different from the public sector, in the private sector such as property management company, the manager said that it is likely possible for them to implement digital workplace.

“However it would quite challenging for us especially in the customer service division since we usually have them stay at the office in the working hour in case our customer need further explanation about our product and most of them unskill in IT. In addition, we also need to invest more in IT, and for now, we don’t have enough money to do that” (Ridho, General Manager of Property Management Company).

From all the answer gathered. The word “Finance” and “Regulation” is frequently mentioned. The other word like “Skills” and “Service” was also mentioned often for the challenge that they could face regarding digital workplace implementation.

V. DISCUSSION

The result from the interview then is compiled with available literature and previous research. This section will be divided into several parts, the importance of digital workplace, how it can promote gender equality and what are the challenges in implementing it.

A. Importance of Digital Workplace

Generally, the implementation of a digital workplace offering many advantages for all stakeholders. It gives an option which is negotiable and high flexibility for both employees and organization. There are several possible impacts of a digital workplace which are talent attraction, employee productivity, employee satisfaction, employee retention, communication tools improvement[14].

Work-life balance is important for every human being. Work-life balance can be achieved by scheduling the time between personal life and working hours. Digital Workplace makes schedule control more feasible. Schedule control could improve work-life balance[15]. Every employee has their own unique needs. It can be a difference from one to

another. The digital workplace is the concept that offers flexibility on time and place. Employees enabled to work remotely without ignoring the collaboration and knowledge sharing with another coworker. Thus, the organization should develop a mature framework to keep them on the track and achieve performance goals.

The implementation of a digital workplace enables the organization to be more agile and gain a competitive advantage in the digital era. It also attains the satisfaction of their current workforces, offers better tools for employee engagement, and improve their capability to manage and develop their workforces[10].

Figure 3 describes 4 layer component which is: Use (collaborate, communicate, connect), Technology (the digital toolbox), Control (Governance, Compliance, Risk), and Business Driver (Measurable Business Value) [14]. This framework help organization to understand digital workplace comprehensively and identify the new business model in the organization.

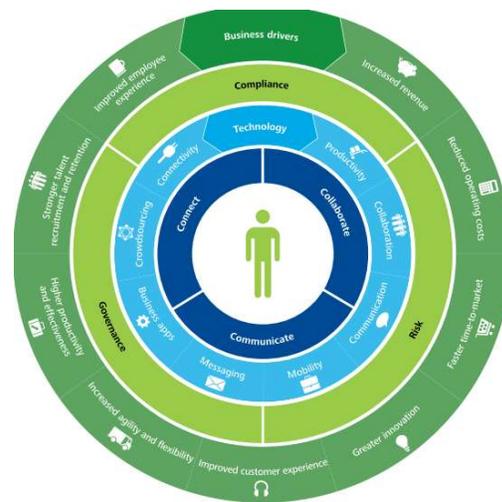


Figure 3. Digital Workplace Framework[14]

B. Digital Workplace Implementation Strategy To Promote Gender Equality

There are various techniques that can be used to promote gender equality in the organization. These technologies could also be possible to tackle the problem mentioned[13]. ICT also proven could make a woman more independent and organized regarding work[16]. The first one is about gender stereotypes and attitude. Sexual harassment is one of the essential issues for a woman in the workplace. Sexual harassment define as “where any form of unwanted verbal, non-verbal or physical conduct of a sexual nature occurs, with the purpose or effect of violating the dignity of a person, in particular when creating an intimidating, hostile, degrading, humiliating or offensive environment”[17].

The level of sexual harassment is varied from one to the others, however, they don’t feel comfortable and concentrate on the work itself if there are men who don’t treat them properly even on the lowest level. The other problem such as cultural and racial beliefs, faith and

religiosity is the other aspect that woman also considered. In the digital workplace, they don't have to intensively meet with other people physically, in this case, a man. It could prevent such harassment in the workplace and create a more comfortable environment for a woman.

The other factor could be bundled as a one, is about family and working time constraint. Digital workplace open opportunity for a woman working from home or other places. ICT tools such as Virtual Collaboration Application, Video Conferences enabling a woman to work remotely and flexibly. They could choose their own free time and a place that they like in more negotiable constraint.

Last but not least is lack of confidence. Woman are less skilled in technology if we compare it to men[18]. However, in most recent studies, the gap related to preference in technology is not quite significance[19]. Adequate training needs to be addressed to improve woman competencies in every aspect. Knowledge sharing management facilitates by ICT enable the woman to learn autonomously. Lack of confidence also caused by lack of woman role model in the top management team. It happens because of subjective review from management regarding their employee's performance. IT could reduce bias by using a more objective approach in recruitment processes, performance management and human resource information system. Therefore, a woman has the same opportunity as a man to be on the top management team.

C. Digital Workplace Implementation Challenge

In order to successfully implement digital workplace in the organization, there are several aspects that should be considered. There are four essential dimensions in Digital Transformation Strategy[1] which are the use of technologies, changes in value creation, structural changes, and financial aspects. Every single aspect has its own challenge. In *Technological Aspect* the organization should be ready for technical and non-technical issues. On technical issues, an organization should evaluate the readiness of their infrastructure and capital assets. Implementing digital workplace requires adequate infrastructure. On non-technical issues, employees, in this case, a woman, should have sufficient technical skills in order to be able to use technology in the digital workplace.

In *Business Model Aspect*, the organization should reengineering the value creation of the organization since the use of technology could change the business model significantly. For example, the digital workplace could change how stakeholder interacting with each other, the relationship between employees and customer could also be impacted. Therefore, analyzing new business model should be considered. In fact, this would not be easy to be done. A new paradigm of bureaucracy, policy, and corporate structure are parts of *Organizational Aspect* that should be reconsidered. All of this challenge summarize in table 2.

TABLE I. FOUR DIMENSION CHALLENGE

Aspect	Challenge
Technological Aspect	Infrastructure and Skills
Bussines Model Aspect	Reengineering business model
Organizational Aspect	Bureaucracy, policy, and corporate structure
Financial Aspect	Budget limitation

VI. CONCLUSION

To sum up, gender diversity is important in the organization since it could increase market share, profit and organization performance. However, it is hard for a woman to work since they have other responsibility in life. The research revealed that most women feel excited about the concept of the digital workplace and argue that it could solve most of their problem at the workplace. However, there are some challenges that should not be overlooked by the organization such as the technological aspect, business model aspect, organizational aspect, and financial aspect.

VII. FUTURE RESEARCH

Empirical Analysis to prove the relationship between the implementation of the digital workplace to promote gender equality should be done. A various case study from the private sector and public sector could give insight contribution to the theoretical framework. The proposed model (fig,4) and framework to enrich the explanation in this paper could also be interesting to be explored since Innovation Capability could be impacted by the implementation of the digital workplace. The quantitative approach would be interesting to be used to prove the relationship between these 3 variable (Digital Workplace Gender Equality, and Innovation Capability).

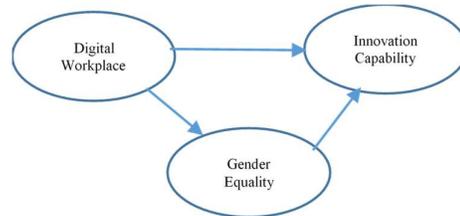


Figure 4. Proposed Model

Promoting gender equality in the workplace should also be considered from other perspectives such as organizational culture and behaviour and human resource perspective. It requires further research and studies.

REFERENCES

[1] C. Matt, T. Hess, and A. Benlian, "Digital Transformation Strategies," *Bus. Inf. Syst. Eng.*, vol. 57, no. 5, pp. 339–343, 2015.

- [2] K. Dery, I. Sebastian, and N. van der Meulen, "The Digital Workplace is Key to Digital Innovation," *MIS Q. Exec.*, vol. 16, no. 2, pp. 135–152, 2017.
- [3] Y. Dai, G. Byun, and F. Ding, "The Direct and Indirect Impact of Gender Diversity in New Venture Teams on Innovation Performance," *Entrep. Theory Pract.*, vol. 43, no. 3, pp. 505–528, 2019.
- [4] M. Molina, S. Lin, and C. Wood, "Accelerating the digital economy: Gender diversity in the telecommunications sector," 2015.
- [5] M. A. Pappas, Y. Papagerasimou, A. Drigas, D. Raftopoulos, and P. Nikolaidis, "ICT-based Innovation and Employability for Women," *Int. J. Eng. Pedagog.*, vol. 7, no. 2, p. 36, 2017.
- [6] V. Mathew, "Women entrepreneurship in Middle East: Understanding barriers and use of ICT for entrepreneurship development," *Int. Entrep. Manag. J.*, vol. 6, no. 2, pp. 163–181, 2010.
- [7] L. Downes and P. F. Nunes, "Big-bang disruption," *Harvard Business Review*. 2013.
- [8] C. L. Brakenridge, G. N. Healy, E. A. H. Winkler, and B. S. Fjeldsoe, "What do workers do to reduce their sitting time? the relationships of strategy use and workplace support with desk-based workers' behavior changes in a workplace-delivered sitting-reduction and activity-promoting intervention," *J. Occup. Environ. Med.*, vol. 60, no. 11, pp. 1026–1033, 2018.
- [9] M. Quarterly, "How companies are benefiting from Web 2.0: McKinsey global survey results," *Bus. Technol. Off.* 2009) http://www.mckinseyquarterly.com/How_companies_are_benefiting_from_Web_2_0_McKinsey_Global_Survey_Results_2432, 2009.
- [10] M. K. M. Dahlan, N. Abdullah, and A. I. H. Suhaimi, "A study on supporting factors of digital workplace diffusion in public sector," in *International Conference on User Science and Engineering*, 2018, pp. 327–335.
- [11] T. Garba and E. Kraemer, "Gender Diversity and enterprises' innovative capability: Evidence from mediating effect of women years of education in Nigeria Gender Diversity and Gender Diversity and enterprises' innovative capability: Evidence from mediating effect of women years of education in Nigeria," no. May, 2019.
- [12] Z. Letian, "An Institutional Approach to Gender Diversity and Firm Performance," pp. 1–40.
- [13] J. Liu and D. Wilson, "Developing women in a digital world," *Women Manag. Rev.*, vol. 16, no. 8, pp. 405–416, 2001.
- [14] Deloitte, "The digital workplace: Think, share, do. Transform your employee experience," *Deloitte Touche LLP*, vol. 37, no. 3, 2010.
- [15] M. Tausig and R. Fenwick, "Unbinding time: Alternate work schedules and work-life balance," *J. Fam. Econ. Issues*, vol. 22, no. 2, pp. 101–119, 2001.
- [16] L. M. Martin, "No gender in cyberspace? Empowering entrepreneurship and innovation."
- [17] A. McGolgan, "REPORT ON SEXUAL HARASSMENT IN THE WORKPLACE IN EU MEMBER STATES REPORT ON SEXUAL HARASSMENT IN THE WORKPLACE The Irish Presidency of the European Union," no. June, 2004.
- [18] J. Reinen and T. Plomp, "INFORMATION TECHNOLOGY CONTRADICTION AND GENDER EQUALITY: A IN TERMINIS ?? Using the rich data source of the Computers in Education project (Comped), carried out under the auspices of the International Association for the Evaluation of Educational Achi," *Science (80-.)*, vol. 28, no. 2, pp. 65–78, 1997.
- [19] C. Davison and E. Argyriou, "Gender Preferences in Technology Adoption: An Empirical Investigation of Technology Trends in Higher Education," *Int. J. Gender, Sci. Technol.*, vol. 8, no. 3, pp. 405–419, 2016.