



The Profound Influence of Technological Advancements in Organizational Change Management

Nisbath Majnoor^{1*}, Dr. K. Vinayagam²,

¹Research Scholar, Department of Management Studies, Vels Institute of Science, Technology and Advanced Studies, Chennai. nisbath@gmail.com, Ph: 8925476354. [Orcid: https://orcid.org/0000-0001-7990-8342](https://orcid.org/0000-0001-7990-8342)

²Associate Professor, Department of Management Studies, Vels Institute of Science, Technology and Advanced Studies, Chennai. vinayagam.sms@velsuniv.ac.in, Ph: 7708880033. [Orcid: https://orcid.org/0000-0001-6432-9006](https://orcid.org/0000-0001-6432-9006)

Citation: Nisbath Majnoor, et al (2024), The Profound Influence of Technological Advancements in Organizational Change Management, *Educational Administration: Theory and Practice*, 30(4), 9786-9794, [Doi: 10.53555/kuey.v30i6.5426](https://doi.org/10.53555/kuey.v30i6.5426)

ARTICLE INFO

ABSTRACT

Change management holds a pivotal role in any organization as change is inevitable in the current VUCA world. As per prior studies, the success rate of organizational change seems to be very low due to numerous rationales. Technology can assist change management by incorporating it into a selected change model making it more efficacious and faster. Technology also helps with real time feedback from employees regarding change implementation, making it easier to measure change success. This provides better transparency and communication regarding change, helping employees to have a positive approach towards change. The main aim of this study is to fathom how technological advancements and innovations can assist in transcending resistance from employees' side, catalyzing an effective organizational change. The main implication is to assist change leaders to comprehend and adopt technology in their change framework to overcome resistance, making it acceptable and successful.

Keywords: Organizational Change, Change Management, technology driven organizational change

INTRODUCTION

In the current transient digital era, technological innovation and adoption holds great importance. Organizations need to be well updated with the technological advancements to be in business and competitive. Different technology platforms such as Big Data, 5G, AI, cloud computing etc. have become an impetus power these days. Organizations are progressively shifting their business framework and operations to the cloud, resulting in a better scalability, versatility, and cost efficiency. In any organization, transformations cannot be carried out without the assistance of IT or technology, but it required a different approach in comparison to IT project management (Lynne Markus, 2004). Even though change Management is a well analyzed and researched topic since 1950's (David R. Bamford, Paul L. Forrester, 2003), it still holds a low success rate. This is mainly due to the employee resistance to change. The resistance can be due to various reasons such as lack of clarity, communication, time taken for change execution and reluctance in taking up new responsibilities. As per [Waddell, D et al., \(1988\)](#) organizational change often results in failure due to the mismanagement of resistance and management needs to understand the core of problems and act on it. And thus it is very important to understand how organizations develop its systems to get it ready for a change (Baker, S., & Daniels, R 2017). AI powered HR removes biasness, closed communication, gender inequalities, racism and organizational groupism based on culture, color, financial background, etc. AI integrated HR change model can bring in open communication and transparency. It can even assist in building a diverse and inclusive workplace, helping in employee motivation and productivity ([R. B. Jora, K. K. Sodhi, P. Mittal and P. Saxena, 2022](#)). Technological tools can unearth innovative solutions, making employees more positive and agile, transcending resistance. The first step to embrace any major change is being inclusive and diverse. A transparent technology integrated model helps in boosting up employee confidence during a change process. Technological innovations and adoption have impacted HR to a great degree (Bagdasarov et al., 2020; Myounghoon, 2017). Moreover, technology assists change managers to understand the need for change and perform a gap analysis to understand the requirement for change and using IT enabled tools can increase the transparency and visibility of the process. The main objective of this

study is to understand and analyse the significance of technology advancement and innovation on organizational change. By analysing how technological advancements impact the agility and transparency, we intent to lay out our observations about its effect on organizational change management.

1. LITERATURE REVIEWS

Organizational Change Management

Organizational change prevailingly aims on flexible transformations that occurs unceasingly ([Kraatz and Zajac, 1996](#)). The organizations which aims to be ambitious and competing, needs to be conditioned to adjust, modify and develop new strategies ([Van Dijk & Van Dick, 2009](#)). The inability to be flexible in a turbulent transient environment may lead organization change strategies futile ([Van Dijk & Van Dick, 2009](#)). Planning and implementing change models and strategies can be quite demanding. If change is not implemented or directed properly it can cause many set-backs leading the change to a big failure [Prihatini et al. \(2022\)](#). In any type of organizational change the main reason for the failure is due to employee resistance ([Prihatini et al., 2022](#)). Another few factors includes lack of transparent and communication, strategic and technological problems, unfeasible presumptions etc. There are a lot of widely accepted models in change management such as [Lewin's \(1947\)](#) three step model, Kotters model (Kotter. J, 2011), Prosci -ADKAR model, McKinsey 7 Step model, etc. But despite having all these change models still change fails and implementation strategies looks problematical (Burnes and Jackson, 2011)

Technological advancements for Organizational Change

To have a pragmatic approach towards change management or any type of transitions organizations must rely on technology and this needs to be incorporated with change strategies to generate an effective result (O'Leary and Lentz, 2020). As per (Attaran et al., 2019) the key aspects determining a positive organizational change are speed of execution, diverse workspace, transparency in available information and organizational collaborations. And this accelerated changes or transformations can be attributed to the effluence of some primal drift (Morgan, 2013; Deloitte, 2014).

Overcoming Resistance in Organizational Change

A clear knowledge regarding the need for a change will influence employee judgement about the imperativeness of change ([Erwin & Garman, 2010](#)) whereas lack of communication and idea regarding the change can cause resistance from employee side leading it to failure ([Damawan&Azizah, 2020](#)). As per [Gonsalves, J. M et al., \(2012\)](#) resistance shouldn't be observed as a hindrance. Instead, this gives us a chance to identify and examine the causes behind it and employees way of thinking. This resistance can be even caused by job dissatisfaction ([Wanberg& Banas, 2002](#)) or due to the decline in organizational effectiveness ([Jones & Ven, 2016](#)). As per [Jarrod A. Combs-Harris, \(2021\)](#) and inclusive and diverse leadership can result in a successful organizational change. Barth et al., 2021 states that the diverse culture can change the entire dynamics of change policies.

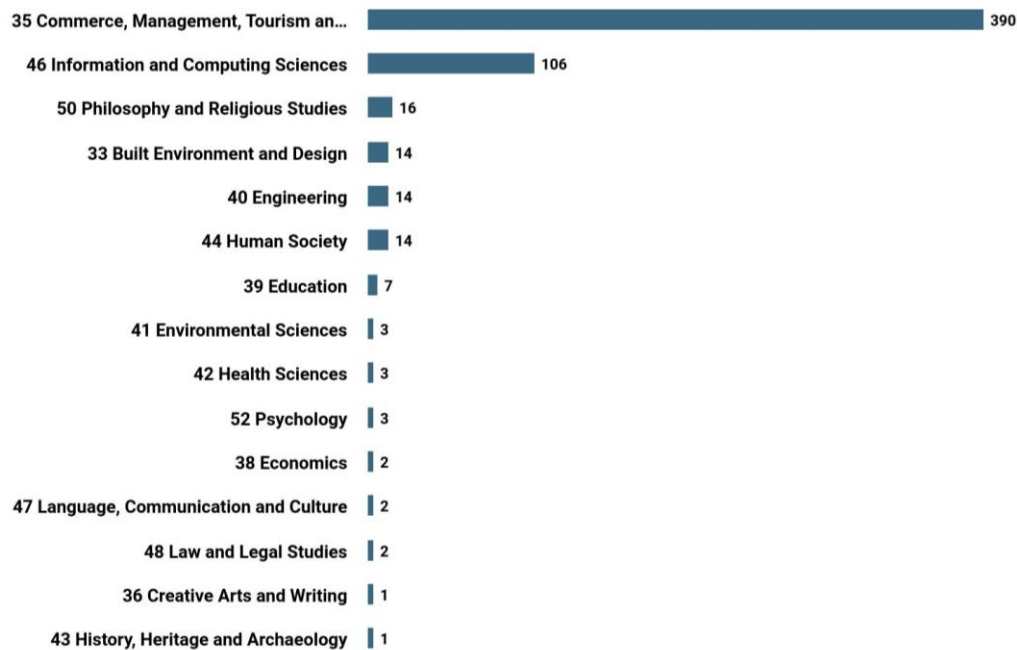
RESEARCH METHODOLOGY

Descriptive analysis of research articles on technological advancements and innovations on change management have been done. Data collection method used here is secondary data mainly based on formerly published research articles. Methodology used here is Rapid Evidence Assessment of Literature (REA) which is more precise, and meticulous review process. It is done in a short lapse of time in comparison to systematic literature review. Systematic review is an elaborate and conscientious review process which is done on a particular content (Beebe. J, [2008](#)). Rapid evidence assessment of Literature is an accelerated and organized form of data collection and analysis, which is done in a lesser time. Bibliometric analysis for last 20 years publications, total of 578 documents, have been done with the help of R-Studio.

The only materials gathered were books, articles, and papers that were written in English. The purpose of manual reading was to save articles that improved or expanded upon the various technical frameworks and approaches needed for article processing. Out of 697 documents collected by keyword search only 578 was finally selected for the final study after applying inclusion and exclusion criteria.

Analysis on the relativity of prior studies

Three commonly used bibliometric analysis techniques—evaluative, relational, and review techniques—were employed to examine the literature that was available (Echchakoui, 2020). This assessment method concentrates on the scholarly impact and comprises three categories of measurements: productivity (number of publications annually and per author, for example), hybrid (a mix of productivity and influence) (e.g., average number of citations per paper), and influence (number of citations annually and per author).



Source: <https://app.dimensions.ai>
 Exported: March 28, 2024

Criteria: "technological advancements" and "change management" in full data; Publication Year is 2005 or 2006 or 2007 or 2008 or 2009 or 2010 or 2011 or 2012 or 2013 or 2014 or 2015 or 2016 or 2017 or 2018 or 2019 or 2020 or 2021 or 2022 or 2023 or 2024; Fields of

Fig1: number of publications on selected topic in different fields

As per the analysis, it is found that the selected topic "technological advancement in change management" have been conducted in various fields. It shows the relevance of subject currently. It is noted that highest number of research have been done in the field of commerce, management, and tourism.

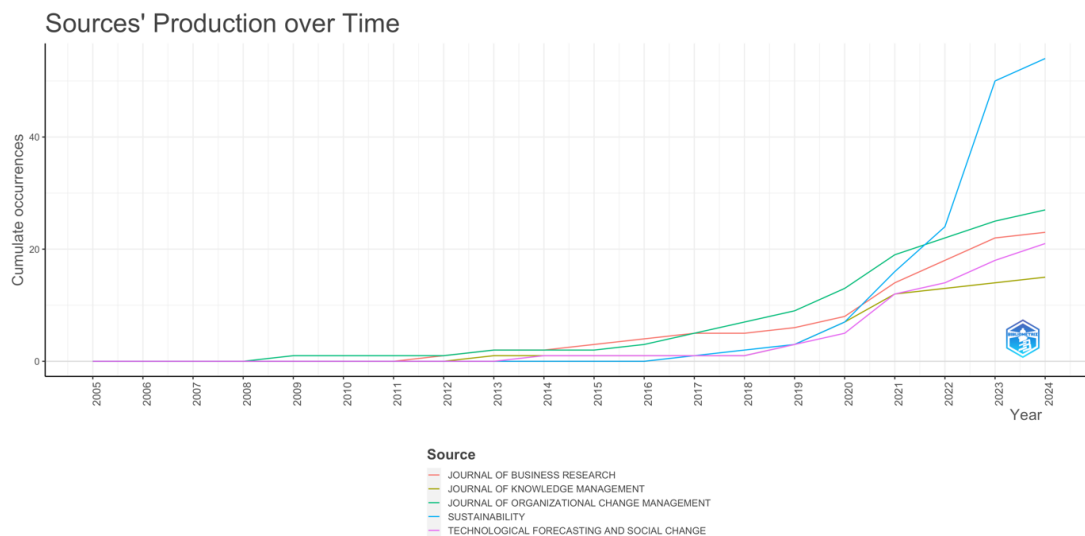


Fig2: Main journal sources production over time (2005-2024)

Above figure (Fig 2) shows sources production over a period of 20 years, 2005-2024. It is plotted against cumulative occurrences and for this analysis top five journals and their growth over time was taken into consideration.

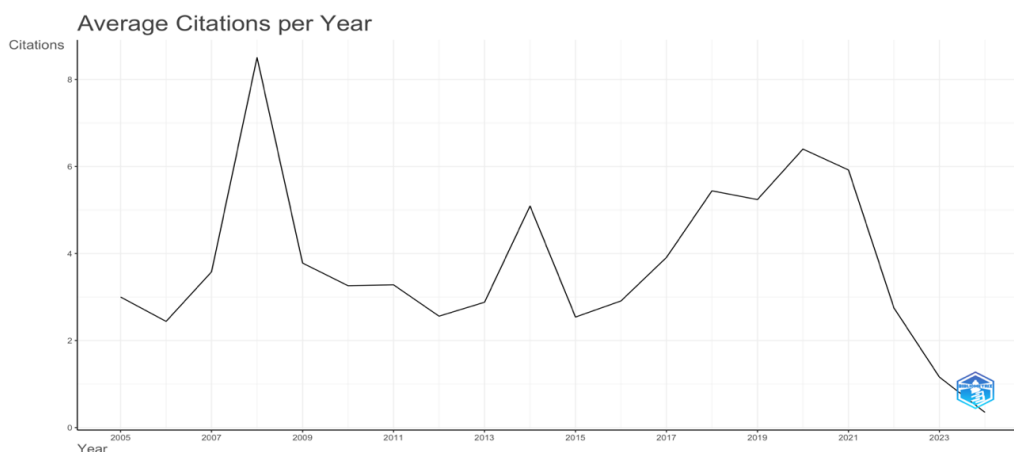


Fig3: Average citations for publications from 2005-2024

Fig 3 shows the graphical representation of citations for the publication from a time period of 2005-2024. As per this analysis we can find an irregular pattern in graph with the highest citation on 2008.

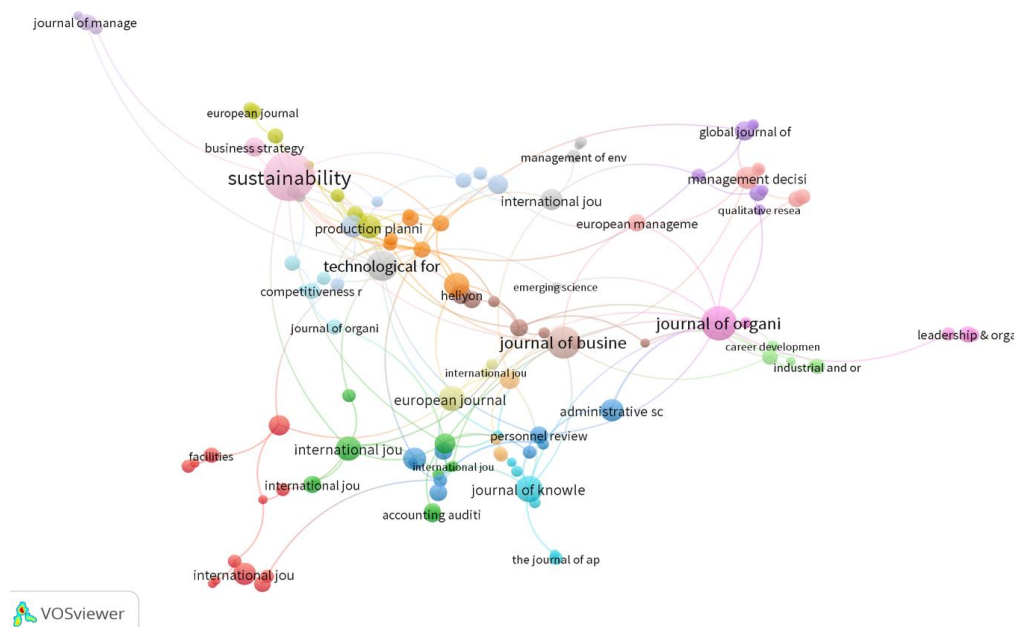


Fig4: Network Visualization of Journal Sources

Table 1: Journal Sources with Highest Number of Publications

Journals	No: Of Publications	Citations
Sustainability	54	760
Journal of Organizational Change Management	27	366
Journal of Business Research	23	1188
Technological Forecasting and Social Change	21	1016
Journal of Knowledge Management	15	758
European Journal of Innovation Management	14	287
International Journal of Organizational Management	13	179
Benchmarking an International Journal	13	175
Production Planning and Control	12	398
Management Decision	11	164

Above table (Table 1) shows the top ten journal sources and their number of publications. As per the figure Journal “Sustainability” tops the list with 54 documents, followed by Journal of Organizational Change Management (27), Journal of Business Research (23), Technological Forecasting and Social Change (21), Journal of Knowledge Management (15), European Journal of Innovation Management (14), International Journal of Organizational Management (13), Benchmarking an International Journal (13), Production

Planning and Control (12) and Management Decision (11). As per the above table Citations are found not in correlation with number of publications.

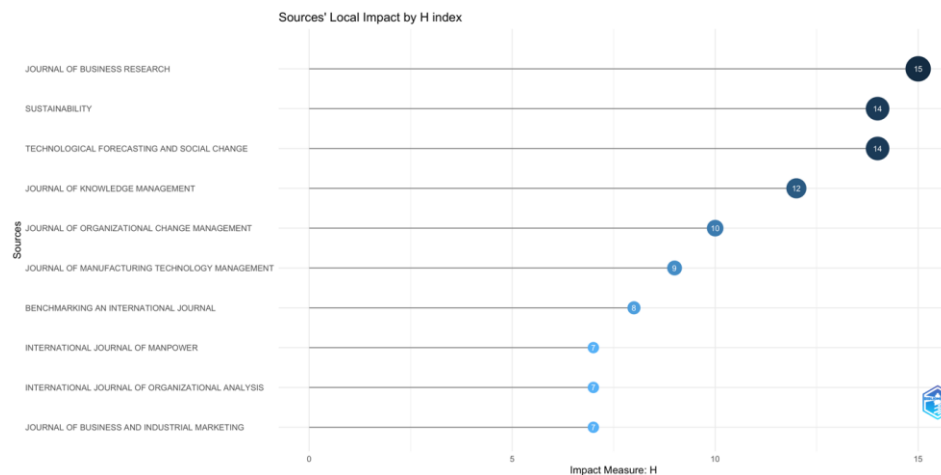


Fig5: Top 10 Journal Sources with based on impact factor

Figure 5 shows the top ten journals based on impact factor, H index. It is found that it doesn't have any correlation with the number of publications of Journals. As per this analysis Journal of Business Research top the list with H index 15, closely followed by sustainability (14), Technological Forecasting and Social Change (14), Journal of Knowledge Management (12), Journal of Organizational Change Management (10), Journal of Manufacturing Technology Management (9), Benchmarking an International Journal (8), International Journal of Manpower (7), International Journal of Organizational Analysis (7), and Journal of Business and Industrial Marketing (7).

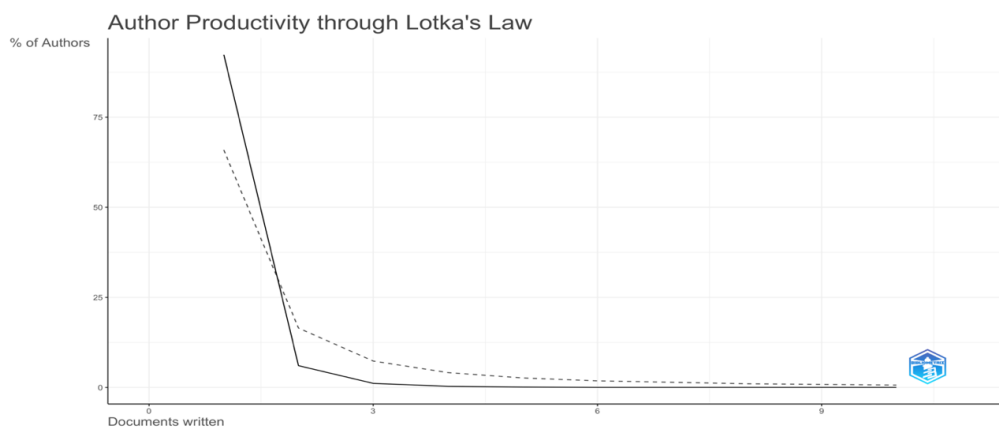


Fig6: Author Productivity Based on Percentage of Authors and Documents Written

As per the analysis done, we have found as increase in studies in relation to technology and change management.

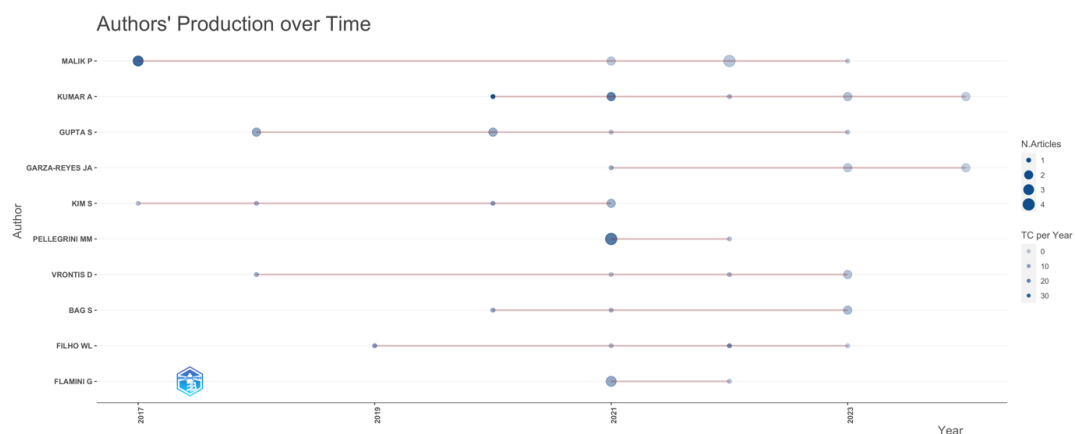


Fig7: Authors production over time: 2017-2024

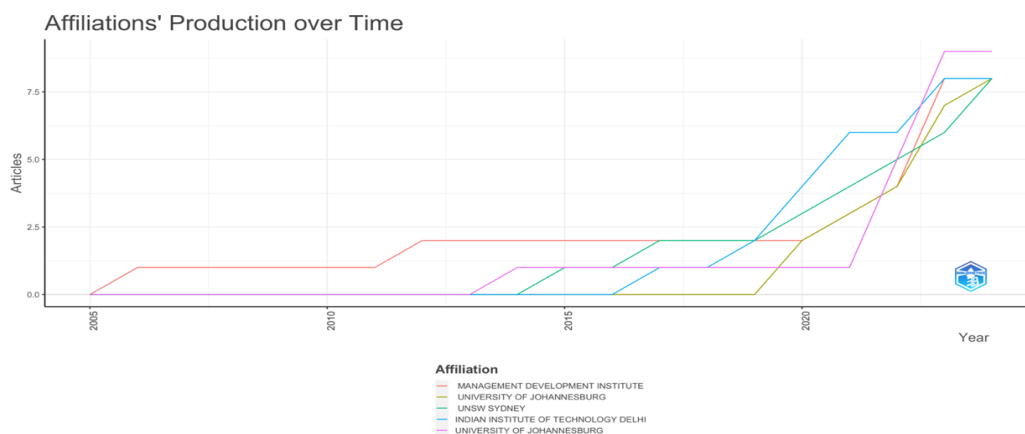


Fig8: Affiliation production over time: Evolution & Growth

Above figure (Fig 8) shows the top five institutes and their growth in research and publication of related topics over a time period of 20 years, 2005-2024.

The table (2) below shows the top 10 authors with maximum publications. But if we take citations or impact factor into consideration it shows no co relation with the number of articles. Table (3) shows the top ten authors with high impact factor.

Table2: Top 10 Authors with highest number of publications

Authors	Articles	Articles Fractionalized
MALIK P	10	6.00
KUMAR A	8	1.96
GUPTA S	6	1.98
GARZA-REYES JA	5	1.13
KIM S	5	1.34
PELLEGRINI MM	5	1.20
VRONTIS D	5	1.20
BAG S	4	1.45
FILHO WL	4	0.65
FLAMINI G	4	1.00

Table3: Top 10 authors with highest impact factor

Element	h_index	g_index	m_index	TC	NP	PY_start
GUPTA S	5	6	0.714	142	6	2018
KIM S	5	5	0.625	153	5	2017
KUMAR A	5	8	1.000	289	8	2020
PELLEGRINI MM	5	5	1.250	103	5	2021
BAG S	4	4	0.800	81	4	2020
FLAMINI G	4	4	1.000	50	4	2021
MALIK A	4	4	0.667	157	4	2019
MALIK P	4	10	0.500	247	10	2017
MANESH MF	4	4	1.000	43	4	2021
SARKIS J	4	4	1.000	788	4	2021

DISCUSSION

As per prior studies, there are many benefits as well as impediments when it comes to the adoption of technology advancements. Technological innovations and advancements help in change management in many as it helps in the augmentation of communication system, change execution, data management, training, and feedback system. It is impossible to overstate the contribution that technology makes to organizational transformation. In most firms, there exist silos of people, processes, content, and information. To respond to the changes that digitalization brings about more quickly, businesses need the exact opposite: increased connectedness among various resources to give improved clarity, concentration, and agility. The current issue is that a lot of businesses are disadvantaged and unable to compete with rivals that are more digitally savvy. Systems that are too complicated and take too long to implement or modify have imprisoned them. Businesses are burdened with intricate, monolithic legacy systems and technologies that are typically not interoperable because they were created for highly specialized uses. Improved employee productivity can be greatly aided by "leveraging change management to optimize the discovery and assembly of resources, whether they be people or information, in real-time,".

An effective change management strategy can assist in bringing together all the required data, expertise, personnel, and corporate resources into a single hub of efficiency. Organizations can gain a competitive advantage and a decisive edge in the modern workplace by using real-time collaboration capabilities like phone, video, and live chat. With the use of technology, you may evaluate and enhance your preparedness for change by obtaining stakeholder input through focus groups, interviews, and surveys. It can also assist you with data analysis to find gaps, dangers, and areas that could use improvement. Efficiency benefits are one of the most significant ways that technology has impacted modern corporate administration. Many organizational procedures have been made simpler by technology, which helps businesses do jobs more quickly and accurately.

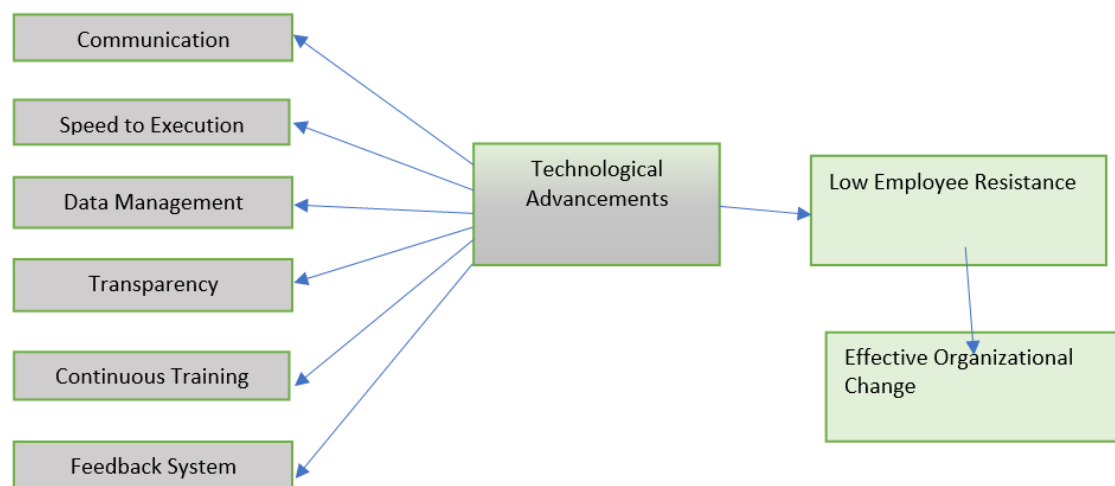


Fig9: Areas where technology can be applied & its result in change (Conceptual)

Technology has a profound effect on different areas of management. It helps in effective and fast communication, data management and training. It even helps in developing and implementing a transparent system in organization. With the help of various audio-video tools and real time feedback software a better platform can be maintained for an effective feedback system. As per previous studies most of the change initiatives fails due to employee resistance. In most of the cases these resistances are formed due to lack of communication and transparency about the change. Primarily, technological advancements and adoption can identify the need for training and act on it. It also helps in error free work with enhanced speed. These all factors help in transcending resistance leading to an effective change management.

FINDINGS

Technology has got a massive role in data management, process transparency, communication, execution speed, training, and feedback systems. These are the main aspects that can reduce resistance during an organizational change. So the study here shows technological advancement has got a great influence on effective change management. Organizations that are equipped with the most modern or advanced technologies are able to carry out the change process in a positive way. It creates more transparency in executing the change. Technology can be helpful in carrying out the change process with an accelerated speed. Building tailored dashboards with important performance indicators like change efficacy, leaders dedication, effective communication, and monetary realisation is another advantage of integrating technology

into the change management process. With the aid of technology, change leaders can strategically lay out their rationale for change, analyse the "gap" between the intended and actual states, and schedule implementation. Agile organizations with an updated technological infrastructure were found to have a better impact in organizational change. Technology even supported open communication and removed biasness creating increased resilience in employees. Technology can also sense the need for training, and the continuous training and development can in turn empower and motivate people. This motivation help in increasing the resilience and confidence of employees towards their work as well as the organization they work for. This really helps in bringing down the resistance during an organizational change.

CONCLUSION

This study, on the significance of technological advancements in the transmutation of organizational change management has shed light on several key areas where technology can be adopted while implementing change and its impacts. The study examined various factors such as open communication, transparency, speed of executions, data management, training assistance and feedback analysis that can be improved with the use of technology. Furthermore, the research highlighted the need for technology advancements and its adoption in an organization for a better performance. It shows organizations with better technological infrastructure helps in having a better work quality with reduced error and high efficiency as well. This in turn can make the employees confident and motivated towards their work. In total technology adoption helps employees and organizations in various ways and this helps in increasing the resilience and transcending resistance, making a positive impact on organizational change.

IMPLICATIONS

- The main reason for the failure of any transformation or organizational change is due to employee resistance . Employee resistance can be due to lack of transparency, communication, and a restricted or single- minded work culture. Technological adoption can augment the execution speed and aids with better communication and transparency when it comes to implementation any change model.
- Technology supported change model can reduce errors and biasedness. This creates positivity in employees boosting their morale and motivation, resulting in higher resilience and lower resistance.
- Unlocking the true potential of technology in the workplace can lead to enhanced innovation, better decision-making, and increased employee engagement.

REFERENCES

1. Attaran, Mohsen & Attaran, Sharmin & Kirkland, Diane. (2019). Technology and Organizational Change: Harnessing the Power of Digital Workplace. 10.4018/978-1-5225-8933-4.
2. Bagdasarov, Z., Martin, A., & Buckley, M. R. (2020). Working with robots: Organizational considerations. *Organizational Dynamics*, 49(2), 100679. <https://doi.org/10.1016/j.orgdyn.2018.09.002>
3. Bamford, D. R. and Forrester, P. L. (2003), Managing planned and emergent change within a n operation management environment, *International journal of operations and production*, 23(5), pp 546-564. <https://doi.org/10.1108/01443570310471857>
4. Barends, E., Rousseau, D.M. & Briner, R.B. (Eds). (2017). CEBMa Guideline for Rapid Evidence Assessments in Management and Organizations, Version 1.0. Center for Evidence Based Management, Amsterdam. www.cebma.org/guidelines
5. Beebe J. (2008). Rapid assessment process. In Given L. M. (Ed.), *The SAGE encyclopedia of qualitative research methods* (pp. 726–728). Thousand Oaks, CA: Sage.
6. Bernardo, Claudio Goncalves. The resistance to change in an organization: a review in light of the integrated change control process of the PMBOK3. Unibero, 2005. Available in www.unibero.edu.br/download/revistaelectronica/Set05, accessed 01/jun/07.
7. Burnes, B. Introduction: why does change fail, and what can we do about it? *J Change Manag* 2011; 11: 445–450. <https://doi.org/10.1080/14697017.2011.630507>
8. Burnes, B., Jackson, P., Success and failure in organizational change: an exploration of the role of values. *J Change Manag* 2011; 11: 133–162.
9. Combs-Harris, Jarrod A., "An Inclusive Leadership Model to Integrate Organizational Dynamics, Change Management, Change Leadership, and Diversity and Inclusion Needs for the Successful Implementation of Business Transformations" (2021). Full-Text Theses & Dissertations. 16. https://jdc.jefferson.edu/diss_masters/16
10. Connie J. G. Gersick. (1991). Revolutionary Change Theories: A Multilevel Exploration of the Punctuated Equilibrium Paradigm. *The Academy of Management Review*, 16(1), 10–36. <https://doi.org/10.2307/258605>

11. Erwin, D.G. and Garman, A.N. (2010), "Resistance to organizational change: linking research and practice", *Leadership & Organization Development Journal*, Vol. 31 No. 1, pp. 39-56. <https://doi.org/10.1108/01437731011010371>
12. Jones, S. L., & Van de Ven, A. H. (2016). The Changing Nature of Change Resistance: An Examination of the Moderating Impact of Time. *The Journal of Applied Behavioral Science*, 52(4), 482-506. <https://doi.org/10.1177/0021886316671409>
13. Kraatz, M. S., & Zajac, E. J. (1996). Exploring the Limits of the New Institutionalism: The Causes and Consequences of Illegitimate Organizational Change. *American Sociological Review*, 61(5), 812–836. <https://doi.org/10.2307/2096455>
14. Kotter, J.P., Leading change: why transformation efforts fail. *Harv Bus Rev* 1995; 59–67, <https://hbr.org/1995/05/leading-change-why-transformation-efforts-fail-2>
15. Kotter, J. (2011), Change Management vs. Change Leadership – what is the difference”. Forbes online, July 11. <https://www.forbes.com/sites/johnkotter/2011/07/12/>
16. Lewin, K. (1951). *Field theory in social science: selected theoretical papers* (Edited by Dorwin Cartwright.). Harpers.
17. Markus, L. (2004), State of Art Techno change Management: Using IT to drive Organizational Change, *Journal of Information Technology*, 19, 4–20. doi: 10.1057/palgrave.jit.2000002
18. O’Leary, Ryan & Lentz, Elizabeth. (2020). Technology’s Impact on the Performance Management Transformation. 10.1093/oso/9780190942878.003.0014.
19. R. B. Jora, K. K. Sodhi, P. Mittal and P. Saxena, "Role of Artificial Intelligence (AI) In meeting Diversity, Equality and Inclusion (DEI) Goals," 2022 8th International Conference on Advanced Computing and Communication Systems (ICACCS), Coimbatore, India, 2022, pp. 1687-1690, doi: 10.1109/ICACCS54159.2022.9785266.
20. Rebecca van Dijk & Rolf van Dick (2009) Navigating Organizational Change: Change Leaders, Employee Resistance and Work-based Identities, *Journal of Change Management*, 9:2, 143-163, DOI: 10.1080/14697010902879087
21. Waddell, D. and Sohal, A.S. (1998), "Resistance: a constructive tool for change management", *Management Decision*, Vol. 36 No. 8, pp. 543-548. <https://doi.org/10.1108/00251749810232628>
22. Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85(1), 132–142. <https://doi.org/10.1037/0021-9010.85.1.132>