A Conceptual Study on Digital Transformation & its Applications: An Overview

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How to Cite

Meenakshi, Kaushik. and Ravindra, Kumar. (2023). A Conceptual Study on Digital Transformation & its Applications: An Overview. *Sumerianz Journal of Business Management and Marketing,* 6(2): 15-20.

Abstract

This paper describes the emergence of digital transformation in recent years and specially during pandemic COVID-19, has made business processes very simple and easy to connect with people all over the globe due to its unprecedented speed and worldwide connectivity. Digitalization is the use of digital technologies to bring forth changes in business processes, strategies & business models by providing opportunities and new avenues to employers, employees, customers and society as a whole. The evolution of digital technology &digital transformation has made organizations and industries to re-think and re-imagine the use of technology in a better and wider manner including social media platforms and processes to create new business models and new forms of revenue. This paper has highlighted on digital transformation concept & its urgent need in organizations in present scenario. This paper has described technology as a key driver to seek opportunities to digitalize organizational operations to be more ready and prompt to face digital challenges. Creating a digital culture is considered as the single most important task for organizations. This paper also aims to present a deeper insight on digital transformation, digital technology and digitalization of various industries along with its applications. The research paper is exploratory, descriptive and analytical in nature. Data collection is based on primary & secondary data sources. The Primary data has been collected from observation methods and interview techniques. The observation method, and telephonic interviews were conducted from employers, employees and few people Delhi based. The secondary data is collected from existing research articles, journals, e-books publications and other sources. This is a conceptual paper based on true facts and has tried to give a crystal-clear picture on digital transformation issue.

Keywords: Digital Transformation (DT); Discovery Driven planning (DDP); Digital technology, Digitalization.

1. Introduction

1.1. Digital Transformation is the need of the Hour

Organizations and industries in present scenario realized now than ever before that digital transformation is very important aspect to address employers and stakeholders needs. And one of the key drivers to achieve these needs is the fast-paced technology contributing almost in every area and spheres. Digitalization refers to the use of digital technologies in business processes, strategies, and business models and seeking new opportunities and avenues, handling their operations efficiently and thus boosts employee morale and better customers experiences. Organizations need to follow and adopt discovery driven digital transformation approach by applying technology in their operations and by becoming more customer oriented. They also need to interact and take continuous feedback from their customers to harness their knowledge about the products and services, preferences, digitized operations and bring forth required changes and adoption of business models as per the recent digital transformation trends and

practices. The journey of digital transformation from past till present times has been very thrilling and challenging. It has made human life much better, easier, faster and safer. Now digital transformation is prevalent in majority of sectors and industries. Amazon & Alibaba have used digital transformation as a vital tool to automate and digitise all parts of their business. This has brought in significant value to them. In these companies, the digital footprint is all pervasive from customer acquisition to supply chain to digital payment. Nike digital transformation Journey is of great significance. Nike can now connect with customers on a daily basis via a health and wellness system including chips embedded in the shoes. That mainly analyses workouts, and a social network providing advices and support. This new model transformed the company from a maker of athletic gear to a provider of health, fitness and coaching services to stay ahead of competition. Many companies are trying to develop their unique strategies by investing in data gathering and data analysis to explore best innovative ways to use data and information to connect with customers in the best possible manner. Coaching behaviour is very significant in digital transformation. Its more effective when a company needs to receive information from its customers to attain suggestions at right moment. Another example of digital transformation usage is in health area that has also been introduced in wearable devices that customers and patients wear that allows health care companies to have a vigil over their patients by constantly monitoring how and what exactly they are doing and how particularly how the device is facilitating to the customers .Organizations and industries are launching digital apps and through these apps remain in touch with customers through websites and virtually by tracking customer's preferences. This kind of personal connections with customers, build trust and bond with the brand. Organizations and industries by launching such digital apps and remaining in touch with customers through websites and virtually are tracking those customers likings and preferences. Digital transformation concept started reaching more and more people around the globe. Earlier libraries need a big space and structures but now all the academic resources can be housed in a small structure (Digital). Banking and financial activities have also transformed from physical to digital platforms and investors have attained sufficient control over the operations with these organizations. Today we often don't need to visit banks and by simply clicking a mouse from our system or through mobile entire banking process could be managed. Mobile banking is also one of the examples of digital transformation. Green banking, digital banking and carbon trading all are the examples of digital transformation. This all has brought environmental efficiency by bringing all the operations from physical mode to digital mode.

Business organizations could be more socially responsible by making savings in their operational components through digitization processes in operations by making them more cost effective, user friendly and bringing more profitability. Even governance part has also become more transparent, faster, responsive and tremendously improved. People now operate majority of operations and activities and transactions through their mobile devices. Digital transformation has revolutionized the business processes and thus increased organizational efficiency and effectiveness. Different information technology tools like artificial engineering, business analytics, machine learning have facilitated digitization of all the business organizations and industries increasing their efficiency and effectiveness. Several fast-food companies like Domino's, Pizza hut, McDonald, Subway, Burger king etc, Wendy's and many more are coming up with food delivery apps all converting physical processes to digital ones. Similarly in entertainment industry OTT platforms have completely transformed the systems by introducing amazon Prime, Netflix, Hot star and similarly in music industry Gaana app ,Wynk Music ,Apple Music ,YouTube music ,Spotify ,SoundCloud ,Music Player Amazon Music etc. have transformed the music industry. Amazon, Flipkart, Myntra, Meesho are some examples of domain transformation. Organization culture is also shifting to Work from Home (WFH) mode and flexible workflow and creating a digital ecosystem leading to cost reduction and enhanced product and service quality.

1.2. Digital Transformation & Online Public Access Catalogue (OPAC) System

OPAC system is also implemented in library systems for providing library s online or digital library system like online databases, e-books, e-journals availability online to the stakeholders, online public access catalogue (OPAC). Through OPAC whole library can be accessed by the students, researchers and academic scholars and professional online. Managing a library manually is a very difficult task for the librarian as well as staff members right from managing, stocking and upgrading it. Library catalogue management, issuing books, keeping a record on the due date, late fee collection and several other library related activities. During present scenario the creation of a digital library along with the implementation of library software is the best solution for any system to make the processes more automated, streamlined. OPAC (Online public access catalogue) facilitates the students access to any book, e-content from anywhere & at any time with the OPAC by mentioning the name of the book, title, author's name, volume number, and much more. Thus, we can say that OPAC contributes to students' success in the long run by helping them carry on their e-learning journey seamlessly. The objective of introducing OPAC system (Online Public Access Catalogue) to make the digital resources search easier and faster for the students by offering a digital library catalogue. The educational institutions, libraries need to have internet connectivity & log-in ID to get started with the OPAC and thus enhancing better productivity and proper management of books e-journals, e-books, e-notes.

1.3. Discovery Driven Planning (DDP)

The discovery driven approach mainly looks deep into the problem and tries to explore the various causes of the problem and gives rise to innovative solutions with the help of digital technology. A discovery driven approach exploits rich knowledge of customers and tries to understand their needs & preferences, broad operational scope, deep talent pools and a new business model. The Digital driven process translates challenge into transparent and

clear project goals. The digital transformation converts a platform into an attractive one as it needs less capital and in determining a vision of where they want to go by continually finding opportunities to digitize problematic processes in their core operations. Digital transformation requires new ways of approaching strategy. Starting big, spending a lot, and assuming you have all the information is likely to produce a full-on attack from corporate antibodies - everything from risk aversion and resentment of your project to simple resistance to change. DDP helps firms confront digital challenges and learn their way toward a new business model. This approach was developed in recent decades with the advance of technology. Discovery driven planning is an ongoing learning approach to strategy helps organizations and industries to confront digital challenges and make step by step transformations for their betterment and to attain competitive edge. Discovery driven planning and digital transformation imparts digital competencies to organizations by taking technology as an opportunity. Discovery driven planning always try to create value to customers & helps companies to make their vision, mission and goals more clearly. Digital transformation is driven by changes in customer expectations, and its more apparent since 2020, when the COVID-19 pandemic took hold of the world. Businesses needed to adapt to the changing circumstances. Discovery driven transformation mainly refers to identifying problems and challenges faced by organizations and then systematically handling and addressing these challenges and problems with the help of digital technology and then identifying a metric for assessing the progress of various activities and assignments and systems.

2. Objective

- To understand and to present a deeper insight on digital transformation, digital technology and various discovery driven transformation approaches and digital transformation applications.
- To emphasize the urgent need to incorporate digitalization and digital transformation in various organizations considering technology as a key driver.
- To highlight the urgent need of digital transformation and various IT tools applications in organizations in present scenario to make them more ready and prompt to face digital challenges.

3. Research Methodology

This paper aims to present a deeper insight on digital transformation and digitalization and various other aspects related to DT and its application in various industries. This research paper is basically exploratory, descriptive and analytical in nature. Data collection is based on primary and secondary data sources. Primary data has been collected from observation methods and interview techniques. The observation method, and telephonic interviews were conducted from employers, employees and few people Delhi based. The secondary data is collected from existing research articles, journals, e-books publications and other sources. This is a conceptual paper based on true facts and has tried to give a crystal-clear picture on digital transformation issue.

4. Literature Review
4.1. An Overview on Digital Transformation

Digital transformation is the combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace, or complement existing rules of the game within organizations, ecosystems, industries, or fields (Hinings *et al.*, 2018).

Liu *et al.* (2011), defined digital transformation is an organizational transformation that integrates digital technologies and business processes in a digital economy.

According to Martin (2008), Digital transformation is the use of information and communication technology, not when trivial automation is performed, but in the case where fundamentally new capabilities are created in business, public government, and in the lives of people and society.

Bendor-Samuel (2017), states 'Digital transformation is a consistent networking of all economic sectors and an adaption of actors to new circumstances of the digital economy".

Fitzgerald *et al.* (2014) Digital transformation is the use of new digital technologies such as social media, mobile technology, analytics, or embedded devices to enable major business improvements including enhanced customer experiences, streamlined operations, or new business models.

Westerman *et al.* (2011). Digital transformation is the use of technology to radically improve the performance or reach of enterprises. Solis et al. (2014, p. 3). Digital transformation is the re-alignment of new investment in, technology and business models for engaging digital customers at every touch point in the customer experience lifecycle. (Hinings *et al.*, 2018).

Digital transformation is the result of digital disruption and disruptive changes. These disruptive changes not only affect companies but also impact environment on a global perspective and create high level of uncertainties. This all results into a pressure over business organizations to adapt themselves as per the recent trends of the dynamic market. Efficient integration can only be achieved through digital processes and collaborative tools. The importance of digital transformation (DT) has increased. Digital transformation is significant and technology is used to radically improve the performance of enterprises is becoming now a days a very hot topic for companies across the globe. Executives in all industries are using digital advances such as analytics, mobility, social media, and smart embedded devices and improving their use of traditional technologies such as ERP — to change customer relationships, internal processes, and value propositions." "DT is the deliberate and ongoing digital evolution of a company, business model, idea process, or methodology, both strategically and tactically."

4.1.1. Digital Transformation as the Fundamental

Transformation of the entire business world through the establishment of new technologies based on the internet with a fundamental impact on society as a whole. DT imparts the opportunity to gain new knowledge and re-imagine business models and operations. Airbnb turned its attention from processes to data. Airbnb does not own its own physical assets (e.g., hotels). The old, rule-based processes in the hotel industry can be completely re-imagined in a data-driven world. Digital transformation as an enabler, transforms a person's skills enabling data collection and exchange as well as the ability to analyse, calculate, and evaluate options.

4.2. There is an Urgent need to Incorporate Digitalization and Digital Transformation in Various Organization

Research emphasizes that DT should be included into the existing business perspectives, as this topic addresses much more than just technological shifts (Bouncken *et al.*, 2021), and affects many or all segments of business: Successful business transformation is achieved by simultaneously exploiting and exploring what it offers to achieve organizational agility (Hess *et al.*, 2016). Innovative agile businesses introduce transformation requirements into their strategies to maintain their positions in competitive markets. By doing this, they respond to new opportunities and work to become resilient against risk (Bendor-Samuel, 2017). This implementation emphasizes the importance of DT for staying competitive in a digital economy (Liu *et al.*, 2011). Digital technologies not only impact the transformation of products, business processes, or sales, but entire business models as well Hess *et al.* (2016). Hess *et al.* (2016) develop the digital transformation framework (DTF) that identifies four key dimensions for a company-wide DT strategy formulation: the use of technologies, changes in value creation, structural changes, and how to finance DT.

In present scenario when there is cut throat competition and specially during pandemic COVID and post Covid, organizations need an online presence to reach out to the customers. Most companies during COVID and post Covid were looking at work from home model as an integral business model an example of digital transformation. The WFH mode is helping some industries and functions in keeping its operations going on. People-Connect, adoption of a system of Skilling, re-skilling, Up-skilling and multi-skilling people about technology, design thinking, storytelling, analytics, Artificial intelligence to prepare workforce to be more competent and talented by enhancing their skill set in this digitalized modern world. Digital transformation assists organizations to form their own websites and reaching out to the customers globally through various social media platforms. In a digital age, businesses need to reconfigure the customer value proposition and what they offer customers. He suggests re-thinking and restarting from the fresh what customers value the most to recognize new possibilities in an effort to set their own company apart from the competition. Thus, digital transformation is to innovate and integrate technologies into business processes to re-shape their business models. Digital transformations yield ongoing business benefits and enable organizations to respond to customer needs. Digital transformation also enables an organization to be more proactive towards market, environment, and competitors' strategies. The process of digitization in society including companies started in the late 20th century and underwent rapid acceleration in the first two decades of the 21st century, spurring a growing need for digital transformation across industries. Many of the organizations and industries have realized this fact very well that if they will not accommodate themselves as per the changes & challenges in the dynamic market and booming technology and adapt to the changing market forces driven by digitization then they will have to face extinction in upcoming years. The power of digital technologies and digital disruption is very evident through the example of the transition of Amazon from online book-seller to an electronic commerce (e-commerce). These have multistore portals reaching to targeted audience with multiple storefronts that improve marketing ROI and google ranking. Digital technology also helps manage inventory management, custom deal and shipping from a common dashboard. Digital transformation and digital technology help in creating domains for your business to ensure better marketing and promotion, better SEO and SERP and different URL. Digitalization helps E-commerce businesses through different payment gateways by offering multi-store shopping cart based on geographical location of customers along with a seamless shopping experience to the customers. So basically, it brings organizations closer to the customers considering customers as the king. Technology means the ability to rapidly collect, generate, analyse and transmit data and is the main key driver of digital transformation. Artificial intelligence (AI), cloud computing, mobile technologies, social media platforms and next-generation technologies, such as the internet of things (IoT), edge computing and robotic process automation (RPA), have dramatically changed the way how quickly we get information. Few examples of digital transformation are OLA and UBER are the best examples by having many new devices at workforce and then matching and identifying the locations of devices and passengers.

Digital transformation helps in streamlining business process automation and avoid overlapping in business activities by reducing cost and improving product quality and prompt delivery. Digital technology facilitates increased transparency, maintain records, quality and consistency.

5. Findings & Discussion of the Study

- Digital transformation brings productivity, efficiency and decreases rote and repetitive ways. Digital transformation is of utmost importance and the need of the hour by speeding up the journey and being open to these transformations.
- Thus, definitely makes a profound difference in the society.

- Any organization's success depends on the potential use of digitization. Digital transformation is majorly affecting all the sectors of industries and economies & opens new networking possibilities and enables cooperation among various sectors.
- The rise of smart devices and social media platforms led to a sea-change in the methods of customers communication with businesses, and also the expectations customers had with regards to response times and multi-channel availability.
- Business organizations started communicating digitally with their customers on an individual basis in real time.
- Now a days, there is more focus on mobile devices with multiple tasks and apps in one system and on creating value to the customers by leveraging the kinds of personalized customer data.
- Digital transformation refers to re-energizing businesses to capture the full potential of information technology and improving the organization's performances. Thus, DT is now a days a very hot topic for companies across the globe.
- Executives in all industries are using digital advances such as analytics, mobility, social media, and smart embedded devices and improving their use of traditional technologies such as ERP — to change customer relationships, internal processes, and value propositions imparts the opportunity to gain new knowledge and re-imagine business models and operations and processes.
- The upcoming of multinational companies, cut-throat competition in the dynamic market and technology boom are the main drivers for making digital transformation a priority for organizations and industries.
- Digital transformation as a modern approach meets the specific needs of your employees and your customers.
- The digitization of the business world has evolved over the years as it helps in formulating a vision of where they want to go by finding opportunities to digitize problematic issues with practical solutions and new business models in their operations and processes.
- Organizations and industries started responding and interacting with customers through various digital and social media platforms. For many of these changes, respondents say, companies acted 20 to 25 times faster than expected. In case of remote working, companies moved 40 times more In In actuality, it took an average of 11 days to implement a workable solution, and nearly all of the companies have stood up workable solutions within a few months.
- Digital transformation gave rise to many changes in the organizations and industries by increasing remote working practices and collaborations, increasing customer demand for online purchasing /services, increasing use of advanced technologies in operations and in business decision, changing customer needs and expectations.
- Digital transformation changed the customer preferences, needs and expectations by providing them several brands and services. Digital transformation leaded to the establishment of IT infrastructure in most of the organizations that was lacking and insufficient in traditional marketing.

6. Conclusion

As digital transformation enables an organization, community and society as a whole and better serves the customers, employees, partners and shareholders.it is always must to integrate digital technologies in business, products, services processes, strategies to increase companies' productivity, major market share, employee productivity, increasing responsiveness towards customers' needs and wants. Digital transformation helps organizations gain more insight into individual customers to better anticipate and personalize products and services leading to improved customer services by opening up new market opportunities, enabling innovation and increasing operational efficiency. Automation, artificial intelligence (AI) and machine learning is the present and future of the industries and organizations.

Recommendations

1-Companies those adopted technology shall reap the benefit of this in the future.

2-The implementation of technologies is must in all kinds of organizations and industries as it boosts productivity, reduce by revamping business processes and the pace of business improved engagement with customers, employees and business partners. Organizations are becoming more agile and responsive to changing markets with enhanced ability to innovate and digitalization.

3-These benefits help fuel ongoing transformation and enable employees to shift to more innovative and higher-value work and more agility enables the organization to better and identify opportunities and pivot resources toward seizing upon them.

4-Creating a digital culture is considered as the single most important task for organizations engaged in transformational change.

5-Digital transformations yield ongoing business benefits and enable organizations to respond to customer needs. Digital transformation also enables an organization to be more proactive towards market, environment, and competitors' strategies & also builds the infrastructure and skills required for taking advantage of fast-evolving technologies that could confer a competitive advantage.

6-executives in all industries are to implement digital advances like analytics, mobility, social media, and smart embedded devices and improving their use of traditional technologies such as ERP — to change customer relationships, internal processes, and value propositions.

7-Digitization and digital transformation have two aspects. So, if we use DT as positive and value adding advancement it's going to revolutionize the lives of the people and organization.

8-A proper understanding of AI, Machine learning, Predictive analytics, Predictive modelling and better understanding of customers is must for organizations to survive and thrive in this competitive age.

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