Relevance Of Internet of Things in Routine Life with Reference to Generation Z

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Abstract:

Internet of Things has become the integral part in numerous aspects of Z Generation routine life. From their morning routine to fitness schedule to education to knowledge sharing or to work life nothing has been isolated from the usage of IoT. Gen Z is the first generation cohort who has access to IoT from the very tender age. The dependence on IoT is unavoidable in case of Gen Z as IoT has penetrated almost in every aspect of their routine life. This review study on Relevance of IoT in routine life with special reference to Gen Z covers the usage and indulgence of IoT in their routine life for different aspects.

Key words: Internet of Things IoT, Unique Identifiers UIDs, Information Communication Technology ICT, Radio Frequency Identifiers RFID, Generation Z Gen Z, Applications apps Volitality Uncertainity Complexity and Ambiguity (VUCA).

Introduction

In today's scenario, if you think that the Internet has revamped your life, think again. The Internet of Things is about to update it all over again. Kevin Ashton coined the term IoT (Internet of Things) in 1999 during his work in supply chain optimization at Proctor & Gamble. IoT reached market recognition in 2013-14, but IoT is an emerging topic of social, technical and economic significance in today's scenario. It is a new archetype rapidly gaining ground in modern wireless communications. IoT encompasses everything connected to the Internet just by clicking the device to the automated system. According to Yang and Vinel (2012), "IoT also known as internet of objects generally refers to interconnection of everyday objects, which are often equipped with ubiquitous intelligence." The first generational cohort who use IoT from a very tender age mostly surrounds is Generation Z. We tend to separate Gen X from Gen Y, and then Gen Z. Gen X was born between 1965- 1980, Gen Y (The Millennial) was born between 1981-1994, and then Gen Z was born between 1995-2009.

Applicability of IoT

IoT ecosystem incorporates the use of the embedded system of web-enabled intelligent devices such as sensors, communication hardware and processors to consign, accumulate and act on the data they obtain from their environment. IoT has penetrated our daily lives schedule like daily fitness trackers (Fitbit), voice assistants (Siri&Alexa), smart appliances etc. With this rapid evolution of IoT, usage is becoming unavoidable in our daily lives. "According to New York Times The global market for IoT representing a growth about 50 percent in each successive year since 2017". In the present scenario of the emergence of IoT, gen z is the highest no of the upcoming population in the workforce. Gen Z is the first

generation surrounded by an IoT environment from a very tender age. IoT is also a flourishing infrastructure of web-enabled objects in the workplace, which aims to increase control objects ranging from vacuums to intelligent bulbs, intelligent digital assistants for office awareness and track equipment. With the advancement of IoT tagging, and many more such improvements are taking place in every sector.

Generation Z

Zoomer (Gen Z) is the demographic cohort succeeding Millennial (Gen Y) and preceding gen Alpha. "According to Mccrindle & Fell (2019) gen z born between (1995-2009) and succeeding by gen Alpha". Gen z, the next generation of the internet revolution, could be ushered in by an emerging version of IoT, which will connect everything you will ever imagine. Gen z have grown up in the era of rapid technological advancements and expects more innovation than the other generational cohorts. "According to Selvi et al. (2020) Gen Z is also known as Gen C (connected, communicating, computerised, community oriented and concentric)". Gen Z has easy access to mass media, social media and intelligent gadgets like pads, Smartphone's etc. They are considered as the initiator of a paradigm shift in technological empowerment. From the very tender age of schooling, Gen Z started to encourage the instructors who incorporate technology-based teaching aids and do not prefer traditional teaching models.

Gen Z is the first generational cohort to deal with the incorporation of IoT and its upgrades like IPV6 and 6LOWPAN for information harvesting and data searching through the Internet and allow a vast no of intelligent devices to be in position. It also allows various IT solutions to organizations for performance evaluation. Gen Z is pragmatic and rose by the most aware parents from counseling to teaching. This generational cohort is very high on self-esteem and entrepreneurial skills and often choose related career options like social media influencer, you tuber etc.

According to research, the first batch of Gen Z would graduate in 2017 or 2018 if the course duration is long; thus, gen z has entered the workforce during 2018. As per the HR experts, in the year 2020 approx 30% of the workforce will consist of gen z. They will be more competitive than any other generation and will follow their own mentality in the workplace. Gen Z is very high on self-esteem in career, learning and motivation but low on volunteering compared to previous (Gen Y). The values of Gen Z are more towards self-reliance and autonomy. They do not favour tight schedules or extended working hours as a sign of commitment; they focus on outcomes and select critical thinking abilities and innovation.

 Gen Z likes to work on flexible timings and share a global mindset believing in workforce diversity which will be a good fit for the VUCA business environment. The pace of change in the current scenario is unpredictable, rapid and pervasive, and Gen Z proclaims to be impulsive, resilient, dynamic and acceptable to change and would possess skills to take on the VUCA world. Most engaged parents are raising gen Z, so they would not like authority even at the workplace. They focus more on entrepreneurial careers and are prone to changes as they are grown up in an uncertain and complex environment. At the workplace, they tend to favour communication through technology, like providing feedback channels or checklists. They tend to incorporate the use of ICT through different means.

Literature Review:

Internet of Things:

The Internet of things acts as an amendment procedure in numerous aspects of our regular life and resumes validating its vital position in the context of ICT. Rehman& Ghazal et.al (2016) The term IoT was coined by innovator & entrepreneur Kevin Ashton in 1999."IoT refers to the things (objects) connected to the Internet that one can access through ubiquitous technologies". (French & Shim., 2016)"According to Yang &Vinel (2012)IoT is also known as internet of objects generally refers to networked interconnection of everyday objects, which is often equipped with ubiquitous intelligence." The two fundamental precepts to define IoT are the Internet and the objects. French & Shim (2016)

IoT ecosystem assimilate the use of the embedded system of web-enabled smart devices such as communication hardware, sensors and processors to consign, amass and act on the data they obtain from their environment. IoT has been identified as a new aspect of procedure by allowing communication infused with smart devices leading to the sight of any media related to communications or anytime and anywhere. Atzori & Iera et al. (2010) An object must be capable of preceding commands or information to another network to enable IoT.

Human interactions can trigger sensors, IoT-enabled objects, or commodities to generate an interconnected network of objects and devices with ubiquitous control. The connected network may be personal, public, or private through the most common conceptualised structure for technology is the Internet. French & Shim (2016) "The foremost factor of this promising paradigm is the integration of various technologies and communications solutions include identification and tracking technologies, wired and wireless sensor and networks, enhanced communication protocols shared with the next-gen internet". Atzori & Iera et.al. (2010) As a result, IoT came with many new genres of technology related to health, home appliances and many more. French & Shim (2016)

The system offers advanced connectivity of devices and services beyond machine-to-machine communications (M2M), and learning covers various domains, protocols, and applications in the new paradigms of IoT. French & Shim (2016) The principle enabling constituent of this encouraging paradigm and actualisation of IoT concept in the physical world is possible by integrating several enabling technologies. Atzori & Iera et.al. (2010) Recently, in the e-health services, various solutions like "WISP (wireless identification and sensing platforms)" and passive RFID tags enabled many new applications. WSIP project has been carried out at Intel labs and used to calculate scales at a certain atmosphere like strain, liquid level, temperature, etc. Atzori & Iera et al. (2010). The IoT allows counting and tracking, identifying and observing, evaluating and acting the circumstances of people in daily life through smart devices like Fitbit, smartphones, smart cars and shipping containers etc. All these devices are secure faster than ever. Some of the most popular applications of recent scenarios are smart homes, smart cities, smart health equipment and smart cars etc. French & Shim (2016)

The current shift of IPV6 address to structure another network junction looks more acceptable to the traditional paradigm. "The emerging paradigm for the future context is the web squared evolution of web 2.0 aims to enrich the content provided to its users by integrating web and sensing technologies". Atzori & Iera et al. (2010) The new trends of technology advancements such as Big data and 5G pave

the way for new IoT industries. Mobile technology and the Internet have a wider impact on the technological revolution. French & Shim (2016) Organizations, individuals have widely acquired the IoT and big data analytics in the present scenario of ubiquitous computing era with the next genre of 5G interconnected networks on the vanguard. Ubiquitous computing and IoT continues to whirl around emerging research areas. French & Shim (2016) some organizations view them as upsetting technologies, while others view them as a gain for competitive advantage and innovation. French & Shim (2016) "Companies like Boeing have begun to extend the use of technology to create an IT-based ecosystem". French & Shim (2016) Expanding 5G and IoT will increase and move to the ubiquitous world where everything will be connected. French & Shim (2016)

IoT enabled systems and processors have enormous perspectives for the future to bring appreciable changes and valued systems to higher education by motivating the staff or engaging the students to increase learning speed and productivity. Rehman & Ghazal et al. (2017) Institutes can enrich learning outcomes by providing more rich motivating experiences with improved operational efficiency. IoT proceeds to be in its vital position in the conditions of the development of society through ICT by reducing the risks and maximizing the benefits. Rehman & Ghazal et al. (2017)

Generation Z:-

The initiator of the social globally-connected, visual and most technologically driven generational cohort is Generation Z, also called as Post Millennial. Selvi & Saranya (2020) This generation is brought up in the 2000s by the most engaged and aware parents from counselling to teaching. This generation is born between 1995-2009 and have easy access to gadgets from a very tender age. McCrindle & Fell (2015). Gen Z varies from all the previous generation cohorts because they are grown up by watching global events like Brexit or Trump's election since childhood. McCrindle & Fell (2019) This generation is raised by Gen X or late Gen Y and is grown with fewer siblings as compared to other generational cohorts Selvi & Saranya (2020) As per the approaches of Bencsik et al. (2016), "Previous generational cohorts are classified as follows: The Silent Generation (1928-1945), Baby Boomers (1944-1964), Gen X (1965-1980) and Gen Y (1980-1994)". Among these cohorts, Gen X is the first one with media experience, and Gen Z shares many traits with Gen Y and brings a unique set of characteristics in the workplace.

Gen Z is also known as Gen C (connected, communicating, computerised, community oriented and concentric). Selvi & Saranya (2020) "Gen Z is digital-centric, and technology is their identity as they are raised with the social web". Dangmei & Singh (2016) Gen Z can also be described as hyperlinked generation as user-generated and into the wireless world. McCrindle & Fell (2015) They are the most technologically sophisticated and ethnically diverse generation. Dangmei & Singh (2016) As per the studies of McCrindle & Fell (2015) Gen Z is just a few clicks away to acquire knowledge and being privy to everything from a very young age. They spend most of the time online to grab knowledge or upgrade, for business deals, online shopping, and would not even hesitate to share information on social media or with a virtual stranger. Gen Z access to images, sounds, information and ideas is precedent. At the same time, they are scheduled to the degree of isolation which the children of previous generational cohorts have never been. Tulgan (2013)As per Schroth (2019) Gen Z shares many traits with Gen Y but also bring a unique set of attributes and experiences in technology usage. Experiences of internet usage

and how it impacted life may differ in terms of generation cohort. The preference in the use of services or products also differs as what buying behaviours they have. Jilkova & Kralova (2020)

Gen Z customers perceive online shopping or e-commerce services as more comfortable and convenient than going to stores in large crowds among all generational cohorts. (Jilkova & Kralova (2020) Social media use and demography have an impact on the attitude component. Astuti & Ulfa (2019) As per Mahadi & Raudzah (2019), Gen Z kids who have not received the required attention from their parents tend to have negative impacts like cyber addiction, .i.e, exhibiting the inability to control the urge to surf the net and anxiety. As a result, it is ruining the communication, family bond and drop in performance etc. Social media plays a vital role in Gen Z lives as they favour informal and straight communication. Gen Z is a Do-it-yourself generation and less motivated by money than other generational cohorts. Singh & Dangmei (2016) Gen Z does not prefer traditional methods of learning, teaching, or acquiring knowledge. They rely on variations in learning models like the use of mobile apps and podcasts. Dabic & Melovic (2021) Gen Z is also known as iGeneration, as they are born when technology has mastered the world. Gen Z is multitasking as they can use social media and listen to music at the same time. Thus, the educational pedagogy also involves new styles of learning like critical thinking and problem-solving. Murad et al. (2019)

Students of Gen Z perceive the importance of skill development and learning at a very tender age. They tend to focus on hands-on experience, storytelling or integrating with IoT. Ladwig & Schwieger (2018) Gen Z in the workplace Gen Z will showcase the considerable paradigm shift and present earnest challenges to HR leaders, mentors, instructors, managers etc. Unlike any other generational cohort, Gen Z believes in workforce diversity and share a global mindset. Tulgan (2013) Gen Z is working in the most tiring jobs, which didn't exist in the early 2000s. They have to entail a multidimensional learning environment to develop novel skill sets that fit the VUCA business environment. Walia & Kaur et al. (2021)Gen Z will spend they are work-life more than their predecessors in the VUCA environment. Sharma & Hameed (2020) The acronym 'VUCA' denotes Volatile, Uncertain, Complex and Ambiguous. Kukreja (2019) The current scenario would demand the upcoming workforce, Gen Z, to be ready and aware to deal with the challenges, disruptions and all segments that expound VUCA. Sharma & Hameed (2020) Gen Z would do surprising things at the workplace but would carry the baggage of responsibilities as previous generational cohorts have never done before. Sharma & Hameed (2020) Gen Z tends to have the highest rate of anxiety issues, followed by depression. Schroth (2019) Compared to their predecessors, Gen will invest more work in the VUCA environment because they are impulsive, dynamic and adaptable to change. Sharma & Hameed (2020)

Gen Z tends to have an entrepreneurial spirit higher than millennials but low on the volunteering aspect. The values of Gen Z tend to be more self-reliant and independent on their abilities and potential than their co-workers with the same generational cohort. Meechee Cho et al.(2018) They are more optimistic, trustworthy and are motivated by other factors rather than money. (Gaidhani et al., 2019) Generation Z is the most technologically sophisticated and current upcoming workforce and tends to have multiple expectations at the workplace. The expectations are related to the job description, and the training, work culture, management style, and flexibility in timings could motivate them. McCrindle & Fell (2019) This generation is exposed to more life experiences than previous cohorts as entry-level employee managers

should facilitate communication through technology, providing checklists and focusing on delivering feedback channels. Schroth (2019) Even they are conscious of environmental safety, and they are aware of the scarcity of natural resources. They favour less paper work and initiate towards sustainability. Gaidhani et al. (2019)

Generation Z cohort is the initiator in a paradigm shift with technological empowerment. Selvi & Saranya (2020) They enhance their personal development by continuously learning and creating opportunities through free mentorship and virtual education through videos and online courses. They want their mentor/instructor to focus on results rather than work schedules. They might like to work in more than one company at a time. They focus on freelancing. Facilities like paid vacation and health insurance will work as motivators and prefer face-to-face communication at the workplace.

Objectives of the study:
1. To study the role of IoT in routine life of Generation Z
2. To analyze the impact of IoT in Generation Z routine life.
3. To understand the relevance and dependence on IoT in different paradigms of Generation Z routine life.

Methodology:
The Descriptive research method is used to understand the Impact of IoT in routine life of Generation Z with reference to their different aspects like working in VUCA environment etc. This study is based on secondary data collected from different platforms like web pages, magazines, journals and articles through the Internet,

Recommendations:
This review study focuses on the relevance of Internet of Things in the routine life of Z Generation. This study helps parents, instructors, organizations, educational institutes and various employers etc to understand the relevance & dependence on IoT for numerous aspects in routine life of Gen Z. with the help of this review study the parents and instructors will learn to cope with the technological skills of Gen Z as this generational cohort is higher in I.Q. as compared to previous cohorts. This review study will also help various organizations to cope up with the needs of youngest workforce in this VUCA environment and to perceive their technological requirements in routine life.

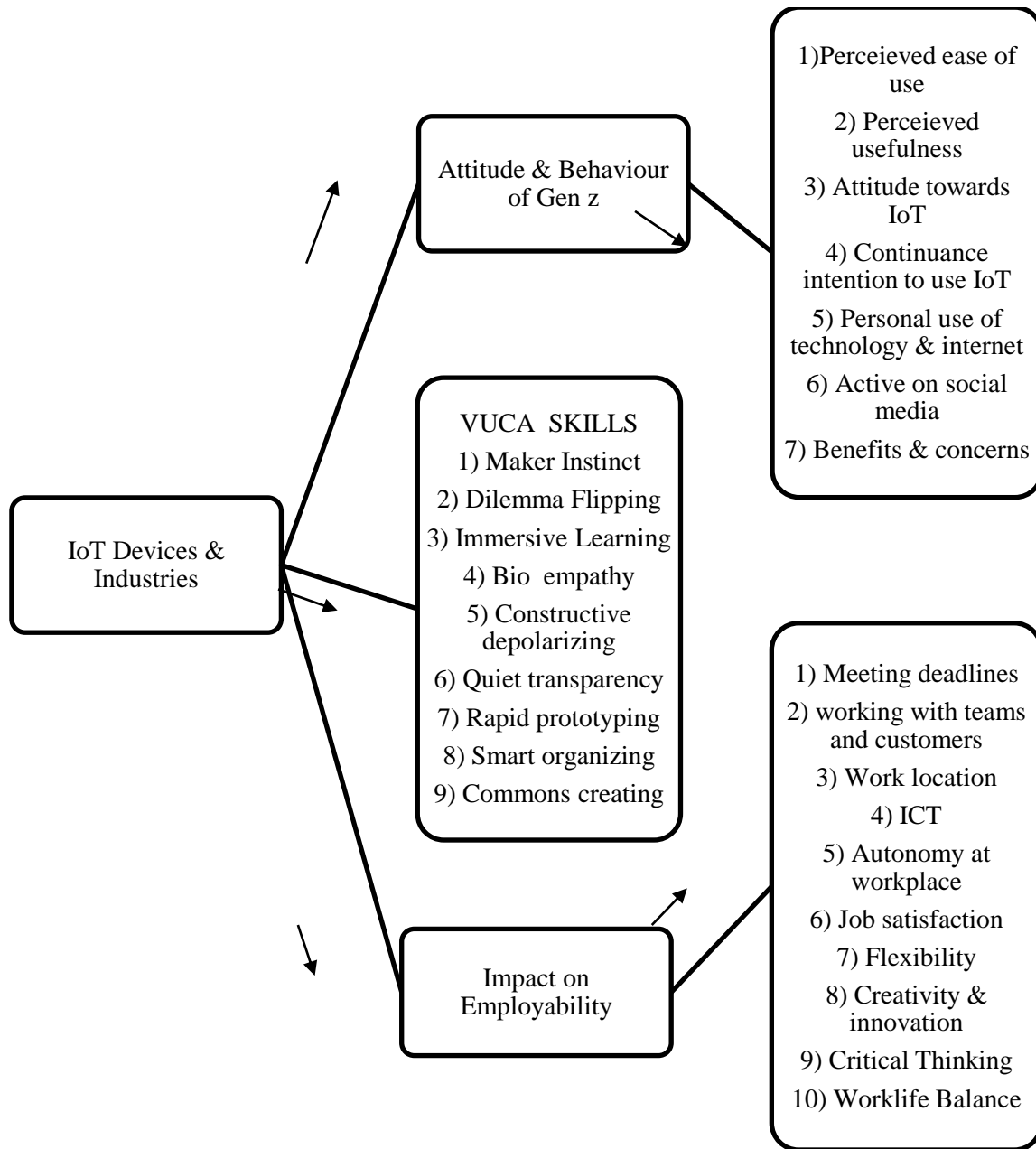**Impact of IoT in Routine Life of Generation Z:-**

Figure 1: Impact of IoT in routine life of Gen Z
Source: Developed by Researcher

Discussion:

IoT has surrounded Generation Z from a very tender age. In the current scenario, IoT plays a vital role in every aspect of their daily chores. Firstly they are brought up by very aware parents from their counseling to overall learning who emphasizes building a good curriculum. Gen Z perceives ease in using IoT as they have access to various resources from a tender age. Gen Z is not shy about sharing or gaining knowledge via different social media platforms. The attitude of Gen Z towards IoT is that they perceive its usefulness in different means of their daily life like tracking the live location of consignments or either their weight loss journey. They perceive it's easy even on days when they are traveling to their office.

IoT helps Gen Z to achieve work-life balance as it gives autonomy at the workplace by providing access to different work locations through connecting with different teams as well as their clients through ICT. Gen Z favours diversity in the workplace and IoT makes it easy for them to connect with people from different backgrounds which enhances creativity and innovation in their daily work targets. Gen Z likes creativity and innovation in their work so they work on upgrading themselves with new skills like immersive learning, rapid prototyping, etc. which also continues the intention to use IoT and increases positive attitude towards the use of IoT. Sometimes it becomes challenging for organizations to meet their technical requirements and provide flexibility to that extent. Gen Z works in a VUCA environment so they are prone to change and favors flexibility in work like working via different modes such as work from home or hybrid mode. They work on transparency and smart organizing this is possible through IoT and its new paradigms that Gen Z is meeting their work deadline on time with flexibility that also helps them to maintain a work-life balance. Thus it is difficult for them to undergo the avoidance of IoT in their routine life.

The positive attitude of Gen Z towards using IoT makes them continuous users but sometimes the lack of attention by both parents makes them addicted to using the technology more than needed. Gen Z is proactive and ready with solutions beforehand so there is also a need for their school instructors and parents to be upgraded beforehand. Gen Z is high on critical thinking skills so dilemma flipping is easy for them when it comes to working. Similarly in daily household chores use of IoT is not avoided they rely on personal digital assistants like Siri, and Alexa to manage the temperature or for reminding about certain things. IoT has penetrated to that extent in the routine life of Gen Z and its use cannot be avoided in major aspects like work, education, fitness, travel, etc.

Conclusion:

This study revolves around the use and relevance of IoT in routine life of the Zoomer generation (Gen Z) and its impact on them. The study is specifically designed for Gen Z because this is the first generational cohort surrounded by IoT. From a very tender age, they have witnessed the technological innovation of IoT (Internet of Things), also called the Internet of Objects. Generation Z is advanced in every aspect of life and workplace compared to any other previous generational cohort; thus, their lifestyle preferences, attitude, behavioural traits are also different, likewise their work style and mindsets. Gen Z is the highest upcoming workforce in the VUCA business environment. Organisations face a significant problem these days.i.e., to retain employees even after incurring the high cost of recruitment, training, and other processes.In this unpredictable scenario of the VUCA world, Gen Z tends to switch jobs and career options more frequently than any other generation. They don't consider long working hours or spending many years as a sign of commitment. Several comprehensive studies in foreign countries have covered the aspects of technology on gen z higher education, social media behaviour, online shopping preferences etc. Recent trends of IoT have also been covered. Still, there is a dearth of research on how IoT impacts routine life of Gen Z. The lack of research in the area has prompted the researcher to propose to carry to this research

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