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Evolving Digital Natives: Intergenerational Differences In Technology Adoption

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ABSTRACT

The concept of "digital natives" refers to individuals who have grown up immersed in digital technology, such as computers, the internet, and smartphones. The term was popularized by Marc Prensky in 2001 to describe the generation that grew up during the information age. Millennials, Generation Z, and Generation Alpha are distinct generational cohorts, each with its own characteristics and experiences. The data was collected from a sample of five individual from each generation using certain variables like Frequency of digital device use, Social media engagement, online shopping, banking, learning purpose, attitude towards privacy, internet anxiety, using artificial intelligence and digital wellbeing. The present study explores generational difference in the adoption of technology. The study also compares and contrast how generation difference integrate technology into their daily lives. The study also investigates the difference in their preference, behaviours and attitudes towards technology.

Keywords: - Digital Natives, Millennials, Generation Z and Alpha, Technology adoption

INTRODUCTION

Technology has inseparable from modern life, but each generation interacts with it differently. The concept of "digital natives" refers to individuals who have grown up immersed in digital technology, such as computers, the internet, and smartphones. They are considered fluent in the language of technology and are comfortable using various digital devices and platforms from a young age. Millennials (also known as Gen Y) are generally defined as those born between 1981 and 1996. Generation Z (Gen Z) follows, with birth years typically between 1997 and 2012. Generation Alpha, the youngest group, includes those born

from 2013 to 2024. Each generation's relationship with technology is shaped by the digital environment in which they matured. While Millennials witnessed the digital revolution, Gen Z was born into a connected world and Gen Alpha is being raised in an AI-driven, hyper-connected environment. While Millennials adapted to a growing tech world, Gen Z embraced it from birth, and Gen Alpha is being moulded by it.

THEORETICAL OVERVIEW

A "digital native" refers to individuals born during or after the information age, particularly those from the late twentieth century into the twenty-first century. These individuals have grown up surrounded by digital technology, such as the Internet, cell phones, and computers, making them inherently familiar with these tools from a young age. The term was popularized by Marc Prensky in 2001 to highlight the educational challenges posed by a generational divide, contrasting digital natives with "digital immigrants," who were born before the digital era and adopted technology later in life. Digital natives often process information differently, favouring multitasking and rapid information absorption, which can create gaps in communication and understanding with their teachers.

The rapid development and integration of digital technologies into everyday life have significantly impacted how individuals across different generations interact with digital tools and platforms. This study is based on a multifaceted theoretical framework that incorporates ideas from digital behaviour, generational theory and various important theories of technology adoption. The selected variables viz., frequency of digital device use, social media engagement, online shopping, banking, learning purpose, attitude towards privacy, internet anxiety, use of artificial intelligence (AI), and digital wellbeing are explored through these focuses to provide a comprehensive understanding of generational differences in technology adoption. Digital wellbeing refers to the overall impact of digital technology on our physical and mental health (WHO,2021).

Millennials, Generation Z, and Generation Alpha are distinct generational cohorts, each with its own characteristics and experiences. Millennials (also known as Gen Y) are generally defined as those born between 1981 and 1996. Generation Z (Gen Z) follows, with birth years typically between 1997 and 2012. Generation Alpha, the youngest group, includes those born from 2013 to 2024 (Strauss & Howe, 1991).

A generational overview is given below:

- 1901–1924: The Greatest Generation.
- 1925–1945: The Silent Generation.
- The 1946–1964 Baby Boomer Generation.
- Gen X was born between 1965 and 1979
- Millennials: those born between 1980 and 1994.
- Gen Z: those born between 1995 and 2012.

- Gen Alpha: 2013–2025 birth year.

Generation birth years – key digital milestones

➤ Millennials (Gen Y):

Grew up with the rise of the internet and social media, they can still a time before digital technology was widely used.

➤ Generation Z (Gen Z):

The first generation to be truly digital natives having grown up with the social media as an integral part of their lives.

➤ Generation Alpha:

They are the first generation to have grown up in a world where technology is prevalent in everyday life, having been born entirely in the twenty-first century.

RESEARCH QUESTIONS

1. How do digital natives differ from digital immigrants in terms of device usage?
2. What platforms are most popular among different generations for social media?
3. Are younger generations more trusting of online transactions than older ones?
4. Does internet anxiety affect older generation more than younger generation?
5. How does the awareness and use of AI vary across generations?
6. What are the perceptions and practices around digital wellbeing?

OBJECTIVES

The main objectives of the study are: -

1. To explore generational difference in the adoption of technology.
2. To compares and contrast how generation difference integrate technology into their daily lives.
3. To investigate the difference in their preference, behaviours and attitudes towards technology.

This main objective is achieved through the minor objectives.

- To compare the **frequency and purpose** of digital device use among different generations.
- To assess **social media engagement** across generations.
- To evaluate generational differences in **e-commerce** (shopping, banking).
- To explore generational use of **online learning platforms**.
- To examine **attitudes toward privacy** and **digital security**.
- To measure **internet anxiety** and concerns.
- To understand the generational gap in **AI adoption** (e.g., ChatGPT, smart assistants).
- To assess **digital wellbeing** and awareness of screen time management.

METHODOLOGY

a) **Survey method** is adopted: Interview with individuals from each generation.

The study is conducted on a sample of five individuals from each generation using survey method. The required data were collected using the indicators of selected variables using interview method. The data is analysed using qualitative method.

b) **Variables used**

The selected variables are *Frequency of digital device use, Social media engagement, Online shopping, Banking, Learning Purpose, Attitude towards Privacy, Internet anxiety, using Artificial intelligence, Digital wellbeing.*

	Variable	Indicators
1	Frequency of device use	Hours/day, number of devices used
2	Social media engagement	Platforms used, hours/day, content posted
3	Online shopping	Frequency, comfort level, types of products
4	Online banking	Use of mobile banking, trust level, tasks performed
5	Learning purpose	Use of online courses, platforms (e.g., Coursera, Khan academy, YouTube)
6	Attitude toward privacy	Concern about data, use of privacy settings
7	Internet anxiety	Fear of scams, information overload
8	Use of AI	Use of tools like ChatGPT, Alexa, AI-generated content
9	Digital wellbeing	Screen time tracking, digital detox practices

c) **Statistical analysis:** The data is analysed using qualitative method.

RESULTS

1. **Digital Natives** (Prensky, 2001) are typically members of **Gen Z, Gen alpha and younger Millennials**, who have grown up with more access to digital technology. They are naturally comfortable with technology and exhibit **higher usage rates, multi-platform engagement, and greater openness** to emerging tech like AI.
2. In contrast, **Digital Immigrants** (older Millennials) may experience more **internet anxiety**, exhibit **privacy concerns**, and show **lower digital engagement** due to their introduction to technology later in life.
3. **Frequency of digital device use** and **AI adoption** are more among digital natives.
4. **Social Media Engagement:** generation Z and generation alpha use platforms for social interaction and entertainment,
5. **Learning Purpose:** All generations may use online resources, but younger generation seek flexible learning, while older adults may engage in more printed materials.
6. **Online banking, shopping, and learning** are more likely to be adopted who are believe they are simple to use.

7. **Use of AI:** Different opinions on the complexity of AI may be the reason of generational disparities in its applications.
8. **Privacy attitudes and Internet anxiety** can negatively affect among older generations.
9. Younger generations may be more aware but also more **vulnerable to digital burnout** due to constant connectivity.
10. Awareness of **digital wellbeing** practices is lower in older generation. In contrast, a growing effort among digital natives about managing screen time and ensuring mental and emotional balance.

Through this study, the investigator explores generational difference in the adoption of technology. The study also compares and contrast how generation difference integrate technology into their daily lives. Digital natives use digital devices more frequently than older generations. Digital natives engage more actively on social media and also more positive attitudes towards using AI tools. While the older generation report higher internet anxiety and privacy concerns. The study also investigates the difference in their preference, behaviours and attitudes towards technology. By analysing variables such as **frequency of use, social engagement, online shopping and banking, learning purpose, privacy, anxiety, AI use and digital wellbeing**, the study offers a holistic view of how digital natives differ from generation millennials in their interaction with technology. These frameworks provide a basis for interpreting empirical findings and developing interventions to bridge generational digital gaps.

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