8-16-2024

Empowering Youth in the Digital Age: A Multidimensional Analysis of Age, Gender, and Digital Maturity

Aqib Siddiqui
IE Business School, IE University, aqib.siddiqui@student.ie.edu

Konstantina Valogianni
IE University, konstantina.valogianni@ie.edu

Nancy Pouloudi
Athens University of Economics and Business, pouloudi@aueb.gr

Empowering Youth in the Digital Age: A Multidimensional Analysis of Age, Gender, and Digital Maturity[1]

TREO Talk Paper

Aqib Siddiqui
IE Business School
aqib.siddiqui@ie.edu

Konstantina Valogianni
IE Business School
konstantina.valogianni@ie.edu

Nancy Pouloudi
Athens University of Economics and Business
pouloudi@aueb.gr

Abstract

In the contemporary digital landscape, encouraging healthy Information and Communication Technology (ICT) device usage among children and adolescents has emerged as a pressing necessity. Digital maturity, a multidimensional construct encompassing a range of competencies, enables young individuals to navigate the digital realm effectively and responsibly. This study investigates the intricate interplay between age, gender, and the relative importance of various digital maturity dimensions, and further aims to investigate if socio-economic status influences the development of these digital competencies. Employing a comprehensive survey instrument, the analysis leverages a powerful technique from the domain of Explainable AI, to quantify the influence of each digital maturity dimension on overall digital maturity scores. The findings reveal distinct patterns in the salience of different dimensions across age groups and genders. For younger children (aged 11-14), aspects such as Respect Towards Others, Risk Awareness, and Digital Literacy emerge as critical factors shaping their digital maturity. Conversely, older adolescents (aged 15-18) appear to value dimensions like Individual Growth, Digital Citizenship, and Support Seeking Behavior more than others. Notably, the study uncovers the influence of gender stereotypes and societal norms on the relative importance of certain dimensions. While Digital Literacy and Individual Growth demonstrate consistent relevance across genders, dimensions like Regulation of Aggressive Impulses, Support Seeking Behavior, and Autonomy Within Digital Contexts exhibit distinct variations in their impact on digital maturity between males and females within each age group.

These findings emphasize the need to critically examine the socio-cultural contexts in which digital maturity develops, challenging simplistic assumptions and highlighting the complex interplay between individual characteristics and environmental factors. Building upon this foundation, the research aims to further explore the role of socio-economic status in shaping digital maturity dimensions, investigating whether disparities in access, opportunities, and socialization processes contribute to the observed variations. The results have significant implications for educational initiatives, technology design, and policy formulation. By recognizing the diverse developmental trajectories and the influence of socio-economic status in shaping children's engagement with technology, tailored interventions and digital platforms can be designed to address the specific needs and priorities of different demographic segments. Furthermore, this study contributes to the discourse in Information Systems research by providing empirical evidence of the dynamic nature of digital competencies, challenging traditional models that treat technology as a neutral artifact and encouraging a holistic, contextualized approach to understanding technology adoption and use. Ultimately, this research highlights the importance of fostering an inclusive and equitable digital environment, where all children and adolescents, regardless of age, gender, or socio-economic status, have the opportunity to develop the essential competencies required to thrive in the digital age.