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Technologically-Driven Education: Uncovering the Two Sides Through Article Analysis

Joshua Vidal[1]

[1]Editor-in-Chief, Electronic Paper for Science and Technology Education, Philippines

*Corresponding author: jvidal.school@gmail.com

Abstract: In this commentary paper, we undertake an article analysis approach to examine the profound shift in education towards a technologically-driven curriculum. We explore the positives and negatives of this transformative phenomenon, while placing particular emphasis on the prescient warnings articulated by Goldin and Katz in "The Race Between Education and Technology." Additionally, we delve into the thought-provoking insights presented by Vidal in "Digital Education: The Approach of a Modern Teacher," specifically highlighting the unanticipated challenges faced by the Philippine education sector during the pandemic-induced shift to blended learning. We aim to shed light on the implications of the education sector's complacent approach towards future-thinking and its impact on instructional competence.

Keywords: Advanced Education, Digital Education, Modern Education, Resilience Education, Technologically-driven

INTRODUCTION

The contemporary landscape of education is witnessing a rapid integration of technology into the curriculum, revolutionizing teaching and learning practices. However, as we embrace this transformation, it is essential to critically evaluate its ramifications. This commentary paper adopts a qualitative phenomenological approach to explore the positives and negatives associated with the education sector's shift towards a technologically-driven curriculum. By referencing the cautionary words of (Goldin & Katz, 2007), we underscore the need for a comprehensive examination of the challenges posed by this transition. Moreover, we draw attention to (Vidal, 2022), and (Vidal, 2023) analyses of the unpreparedness of the Philippine education sector during the pandemic, which sparked debates surrounding educational competency in the face of the uncertainties.

2. The Race Between Education and Technology

In their seminal work, (Goldin & Katz, 2007) highlight the crucial interplay between education and technology and its impact on economic growth. We look into their warning regarding the potential divergence between the pace of technological progress and the ability of educational systems to adapt. Through a qualitative lens, we explore how the integration of technology into education can either foster enhanced learning experiences or exacerbate educational inequalities. We analyze the implications of this race between education and technology, focusing on how educational institutions can effectively navigate this evolving landscape.

3. Digital Education: The Approach of a Modern Teacher

(Vidal, 2022) paper sheds light on the challenges faced by the Philippine education sector during the pandemic-induced transition to blended learning. (Vidal, 2023) emphasized the observations regarding the unanticipated nature of the shift and the resulting inundation of educators with new methodologies and tools. By employing a qualitative phenomenological approach, we investigate the criticisms and discussions surrounding the perceived lack of educational competency arising from the complacent approach towards future-thinking in the country's education sector. Through this exploration, we strive to understand the multifaceted impact of such complacency on instructional practices and student outcomes.

4. Exploring the Positives and Negatives of a Technologically-Driven Curriculum

Drawing on the insights provided by (Goldin & Katz, 2007) and (Vidal, 2022) observations, we examine the positives and negatives associated with the integration of technology into education. Through qualitative phenomenological analysis, we aim to uncover the experiences, perspectives, and perceptions of educators, students, and stakeholders involved in this transformative shift. We delve into the potential benefits such as improved accessibility, personalized learning, and enhanced engagement. Simultaneously, we critically evaluate the potential drawbacks, including concerns about equity, privacy, and the need for digital literacy.

4.1 Improved Accessibility.

According to (Haleem et al., 2022) the integration of technology in education has opened up opportunities for learners who were previously marginalized or restricted by physical barriers. Technological tools facilitate distance learning, providing access to education for students in remote areas, individuals with disabilities, or those who face other constraints. This increased accessibility has the potential to promote inclusivity and bridge educational gaps. Furthermore, online resources and digital libraries enable students to access a vast array of information, enhancing their learning experiences.

4.2 Personalized Learning.

(Shemshack & Spector, 2020) highlighted that learning platforms and intelligent tutoring systems can provide personalized feedback, recommendations, and content delivery, enhancing the learning journey for each student. Through customization, students can engage with educational material at their own pace, fostering a deeper understanding and motivation to learn. This personalized approach acknowledges the diverse needs and preferences of learners, creating a more inclusive and effective learning environment.

4.3 Enhanced Engagement and Interactivity.

(Swartzwelder et al., 2019) proved that integrating technology into the curriculum presents engaging and interactive learning opportunities. Multimedia elements, simulations, gamified learning experiences, and virtual reality applications capture students' attention and make the learning process more enjoyable. By incorporating interactive elements, technology encourages active participation, collaboration, and critical thinking skills development. Students gain a deeper understanding of complex concepts through hands-on experiences and experimentation.

4.2.1 Educational Inequalities.

Technology can bridge educational gaps but can also exacerbate existing inequalities. Access to technology and reliable internet connectivity create a digital divide, leaving economically disadvantaged students at a disadvantage (Czerniewicz & Rother, 2018). Addressing these inequities is essential for all students to benefit from a technologically-driven curriculum.

4.2.2 Privacy and Data Security Concerns.

The integration of technology in education necessitates the collection and storage of student data. This raises concerns about privacy and data security (Fleming, 2017). Educational institutions must establish robust safeguards to protect sensitive student information from unauthorized access or misuse. Additionally, ensuring compliance with relevant data protection regulations is essential to maintain trust in technology-driven educational practices.

4.2.3 Overreliance on Technology.

(Celebree, 2017) tells us that overreliance on technology in the classroom can hinder face-to-face interactions and social development. Striking a balance between technology use and traditional teaching methodologies is essential for a holistic educational experience.

4.2.4 Digital Literacy Challenges.

To successfully implement a technologically-driven curriculum, educators and students must possess adequate digital literacy skills. Insufficient training and professional development opportunities can hinder educators' integration of technology into teaching practices, while students may struggle to navigate digital platforms, limiting their engagement with the curriculum. Addressing digital literacy gaps is crucial for maximizing technology's potential in education.

(Johnson et al., 2016) reiterates that the technology integration in education offers benefits like accessibility, personalized learning, and engagement. However, it also raises concerns like educational inequalities, privacy, overreliance, and digital literacy challenges. Critically examining these aspects helps educators and policymakers make informed decisions and develop strategies to harness benefits while mitigating drawbacks.

5. Contribution of the Study

This commentary paper explores the integration of technology into education and its impact on teaching and learning practices using a qualitative phenomenological approach. It provides a comprehensive examination of the technological shift, warnings from (Goldin et al., 2007), and real-world context from the Philippine education sector. The study highlights the potential divergence between technological progress and educational adaptation, urging educators and policymakers to bridge this gap. The case study of (Vidal, 2022, p. 71-76) about Digital Education: The approach of a modern teacher highlights the challenges faced by the Philippine education sector during the pandemic-induced shift to blended learning. The study also explores the benefits and concerns associated with technology integration in education, highlighting improved accessibility, personalized learning, and enhanced engagement while addressing concerns like educational inequalities, privacy issues, overreliance on technology, and digital literacy challenges.

The comprehensive analysis equips educators, policymakers, and researchers with valuable insights to make informed decisions regarding the integration of technology in education. It offers a framework for conducting further investigations into digital literacy development, strategies for addressing educational inequalities, and approaches to strike a balance between technology and traditional teaching methodologies. This commentary paper contributes to the ongoing dialogue about the transformation of education through technology

integration, providing a well-rounded perspective that informs decision-making, encourages future research, and aids in navigating the dynamic landscape of modern education.

CONCLUSIONS

As a product of this innovation and narrative inquiry, educators will have the opportunity to advance by adopting a qualitative phenomenological approach, this commentary paper underscores the importance of examining the positives and negatives of the education sector's shift towards a technologically-driven curriculum. Through the cautionary lens of (Goldin & Katz, 2007) we emphasize the need to bridge the gap between technological advancements and educational adaptability. Furthermore, we shed light on the challenges faced by the Philippine education sector, as highlighted by (Vidal, 2023), and the discussions surrounding educational competence in the context of the complacent approach to future-thinking. This analysis provides valuable insights for educators, policymakers, and researchers seeking to navigate the complexities of a rapidly evolving educational landscape.

ORCID

Joshua Vidal https://orcid.org/0000-0003-3138-3668

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CONFLICT OF INTEREST

No conflict of interest associated with this study

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