ARTIFICIAL INTELLIGENCE AND DIGITAL DOMINANCE: SHAPING THE FUTURE WORLD ORDER



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First Edition: July, 2026.

ISBN: 978-93-5987-439-5

Price: Rs. 750.00/-

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Printed at
SHANLAX PUBLICATIONS
61, 66 T.P.K. Main Road
Vasantha Nagar
Madurai - 625003
Tamil Nadu, India

Ph: 0452-4208765
Mobile: 7639303383
email:publisher@shanlaxpublications.com
web: www.shanlaxpublications.com

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DIGITAL DOMINANCE AND EDUCATION IN FUTURE: AI, CYBERSECURITY, AND GEOPOLITICS IN THE NEW WORLD ORDER

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Abstract

The emergence of Artificial Intelligence (AI), increasing cybersecurity concerns, and evolving geopolitical dynamics have transformed the global educational landscape. Educational institutions are increasingly adopting digital technologies to enhance teaching, learning, and administrative processes. However, the rapid expansion of digital systems has also exposed institutions to cybersecurity threats and unequal technological access influenced by geopolitical factors. This study examines the perceptions of students and faculty members regarding the impact of AI, cybersecurity, and geopolitics on the future of education. A descriptive survey was conducted among 150 respondents from higher educational institutions. Data were collected through a structured questionnaire and analyzed using percentage analysis, mean scores, and correlation analysis. The findings reveal strong support for AI integration in education, significant concerns regarding cybersecurity awareness, and recognition of the influence of geopolitical competition on technological advancement. The study concludes that educational institutions must prioritize AI literacy, cybersecurity preparedness, and global digital competencies to remain relevant in the emerging digital world order. The paper offers recommendations for policymakers, educators, and institutions seeking to navigate the opportunities and challenges associated with digital dominance.

Keywords: *Digital Dominance, Artificial Intelligence, Cybersecurity, Geopolitics, Higher Education, Digital Transformation*

Introduction

The twenty-first century has witnessed an unprecedented digital transformation that has reshaped economies, societies, and educational systems worldwide. The increasing integration of Artificial Intelligence (AI), big data analytics, cloud computing, and digital platforms has created new opportunities for innovation and learning. Educational institutions are no longer confined to traditional classroom environments; instead, they operate within a global digital ecosystem characterized by technological advancement, interconnectedness, and continuous change. AI has emerged as a powerful tool capable of personalizing learning experiences, automating administrative tasks, and enhancing student engagement. Adaptive learning systems, intelligent tutoring platforms, and AI-assisted assessment tools are increasingly becoming integral components of modern education. While these developments promise improved educational outcomes, they also raise concerns regarding ethics, data privacy, algorithmic bias, and the changing role of educators. Simultaneously, cybersecurity has become a critical issue for educational institutions. The growing dependence on digital infrastructure has exposed schools and universities to cyberattacks, data breaches, ransomware incidents, and privacy violations.

Educational organizations store vast amounts of sensitive information, making them attractive targets for cybercriminals. As a result, cybersecurity awareness and preparedness have become essential elements of educational governance. In addition to technological developments, geopolitical factors significantly influence the digital landscape. Nations increasingly compete for technological supremacy through investments in AI research, digital infrastructure, and innovation ecosystems. This competition affects access to technology, research collaboration, digital sovereignty, and educational development across regions. Against this backdrop, understanding the implications of digital dominance for education has become increasingly important. The present study explores how students and faculty perceive the impact of AI, cybersecurity, and geopolitical developments on the future of education. By examining these interconnected dimensions, the study contributes to ongoing discussions about preparing learners and institutions for a rapidly evolving digital world.

Review of Literature

Crompton and Burke (2023) examined the state of Artificial Intelligence (AI) in higher education and found that AI technologies are increasingly being used to support personalized learning, academic assessment, and student engagement. Their study highlighted that AI-driven systems improve learning efficiency and facilitate data-informed decision-making in educational institutions. However, the authors emphasized the need for institutions to develop policies that ensure responsible and ethical AI implementation.

Chan (2023) conducted a study involving university students and faculty members to investigate the implications of generative AI technologies in higher education. The findings revealed that AI tools can significantly enhance teaching and learning processes, but concerns regarding academic integrity, ethical usage, and policy regulation remain. The study proposed an AI Education Policy Framework to guide institutions in managing AI adoption effectively. **Su and Yang (2023)** explored the educational applications of ChatGPT and other generative AI technologies. The authors developed the IDEE framework, emphasizing the identification of learning outcomes, determination of appropriate automation levels, ethical considerations, and evaluation of effectiveness. Their findings suggest that generative AI can enhance creativity, personalized learning, and student support services when used responsibly. **Rahiman and Kodikal (2024)** investigated AI-empowered learning in higher education and found that AI technologies positively influence student engagement, accessibility, and learning outcomes. The study reported that AI-based learning systems provide flexible educational opportunities and improve learning experiences. However, successful implementation requires digital readiness among both students and educators. **Farrow (2023)** examined the concept of Explainable Artificial Intelligence (XAI) in education and argued that transparency and accountability are essential for successful AI adoption. The study highlighted that educators and learners must understand how AI systems make decisions to build trust and ensure ethical educational practices. **Alnajim and colleagues (2023)** explored cybersecurity education

and training approaches. Their study revealed that practical training methods, including simulations and immersive learning environments, significantly improve cybersecurity awareness and skills among learners. The authors recommended integrating cybersecurity education into academic curricula to strengthen institutional resilience against cyber threats. **Loftus and Narman (2023)** investigated the use of machine learning in cybersecurity education. The findings demonstrated that interactive learning environments and AI-supported cybersecurity laboratories improve students' understanding of cyber threats and defense mechanisms. The study emphasized the growing importance of cybersecurity competencies in digital education. **Mochizuki and Vickers (2024)** examined the relationship between AI, education, and geopolitics. Their research highlighted how countries increasingly use AI and educational technologies as instruments of national competitiveness and global influence. The study concluded that geopolitical competition plays a significant role in shaping educational innovation, policy development, and access to emerging technologies.

Statement of the Problem

The rapid growth of AI technologies, increasing cybersecurity threats, and global geopolitical competition are reshaping educational systems worldwide. While digital transformation offers numerous opportunities for enhancing learning and institutional effectiveness, it also introduces challenges related to privacy, security, ethical governance, and unequal access to technology. Educational institutions must understand stakeholder perceptions to effectively respond to these emerging challenges. Therefore, the present study investigates how students and faculty perceive the impact of digital dominance on the future of education.

Objectives of the Study

- To examine perceptions regarding AI integration in education.
- To assess awareness of cybersecurity challenges in educational institutions.
- To analyze perceptions of geopolitical influences on educational technology.
- To identify future skills required for success in the digital age.

Research Methodology

The study is based on primary data. The data is collected through a well structured questionnaire. It contains questions relating to demographics of students and faculty members, perceptions of AI in education, cybersecurity concerns, geopolitical influence on education and future skills required. A sample of 150 respondents from higher education in Pollachi Taluk has been selected by adopting convenience sampling method. Simple Percentage, Mean Score analysis have been used to analyze the data.

Findings

The findings of the study are divided into five sections namely, demographic profile, perceptions of AI in education, cybersecurity concerns, geopolitical influence on education and future skills required are showed in the following paragraphs.

(i) Demographic Profile of Respondents

Table 1: Demographic Profile

Variables	Frequency(N=150)	Percentage (%)
Category of Respondents		
Students	105	70.0
Faculty	45	30.0
Gender		
Male	76	50.7
Female	74	49.3

From the above table it is found that the majority of respondents were (70.0%) students, indicating that learner perspectives dominate the findings. Gender representation was relatively balanced.

(ii) Perceptions of AI in Education

Table 2: Perceptions of AI in Education

Statement	Mean Score
AI improves personalized learning	4.42
AI will become essential in education	4.35
AI enhances student engagement	4.18
AI reduces administrative workload	4.10
AI can replace some traditional teaching methods	3.72

From the above table it is found that the respondents strongly agreed that AI improves personalized learning and will become an essential component of future education. The relatively lower score regarding replacement of traditional teaching suggests continued value for human educators.

(iii) Cybersecurity Concerns

Table 3: Cybersecurity Concerns

Concern	Percentage (%)
Lack of cybersecurity awareness	84.0
Data privacy breaches	78.7
Phishing attacks	69.3
Identity theft	64.0
Ransomware attacks	58.7

From the above table it is found that cybersecurity awareness emerged as the greatest concern, indicating a need for educational institutions to strengthen digital security training and awareness programs.

(iv) Geopolitical Influence on Education

Table 4: Geopolitical Influence on Education

Statement	Mean Score
International collaboration is essential	4.40
Nations investing in AI gain advantages	4.31
Technology competition affects innovation	4.26
Geopolitical tensions affect access to technology	4.08

From the above table it is observed that respondents recognized the significant influence of geopolitical developments on educational innovation and technological access.

(v) Future Skills Required

Table 5: Future Skills

Skill	Percentage (%)
Critical Thinking	94.7
Digital Literacy	92.0
Problem Solving	90.7
AI Literacy	88.7
Cybersecurity Awareness	86.0

From the above table it is found that the critical thinking and digital literacy were identified as the most important competencies for future learners, reflecting the need for both technological and analytical capabilities.

Suggestions

- To integrate AI literacy and responsible AI use into educational curricula.
- To conduct regular cybersecurity awareness and training programs.
- To establish institutional cybersecurity policies and risk-management frameworks.
- To encourage international collaboration in digital education initiatives.
- To invest in digital infrastructure and equitable technology access.
- To promote critical thinking and problem-solving skills across disciplines.
- To develop ethical guidelines governing AI implementation in educational settings

Conclusion

Digital dominance has emerged as one of the defining characteristics of the contemporary world, influencing education through technological innovation, cybersecurity challenges, and geopolitical developments. The findings of this study indicate that students and faculty recognize the transformative potential of AI in enhancing personalized learning, improving engagement, and supporting educational effectiveness. At the same time, respondents expressed concerns regarding cybersecurity threats, data privacy, and the preparedness of institutions to address emerging digital risks. The study further demonstrates that geopolitical competition and international technological developments significantly influence educational innovation and access to

digital resources. Participants acknowledged that nations investing in AI and digital infrastructure are likely to gain educational and economic advantages in the future. Furthermore, critical thinking, digital literacy, AI literacy, and cybersecurity awareness were identified as essential competencies for learners navigating an increasingly digital society. To thrive in the new world order, educational institutions must adopt comprehensive strategies that balance innovation with responsibility. Investments in digital infrastructure, ethical AI governance, cybersecurity preparedness, and international collaboration are crucial for sustainable educational development. Ultimately, the future of education depends not only on technological advancement but also on the ability of institutions and learners to adapt responsibly to the opportunities and challenges of digital dominance.

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