



# ROLE OF NEW MEDIA IN PRIMARY EDUCATION: CHALLENGES AND LEARNING OPPORTUNITIES

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## Introduction:

Integration of the Internet in the education sector has drastically changed the manner in which knowledge is delivered, acquired, and absorbed, particularly at the level of primary education. Digital technology has, over recent years, revolutionized the traditional classroom practice from the use of textbooks to rich-media, highly interactive learning environments. With digital tools and web-based resources making it more accessible and usable, the Internet is at the Center of shaping educational content, pedagogy, teaching-learning communication, and learner involvement as a whole (Selwyn, 2016). This has enabled primary school learners to acquire learning materials from numerous sources, a majority of which are not in their physical classrooms.

Internet-based environments through learning apps, school websites, and online classrooms have created new avenues of personalized, self-directed, and adaptive learning. The online platform empowers the children to learn subjects through interactive images, games, and quizzes and hence enables the learning process to be fun and fruitful (Livingstone, 2012). The COVID-19 pandemic also hastened the trend, compelling schools worldwide to switch over to online education, and hence creating the potential and imperatives of Internet-based learning.

Yet, the speedy and massive expansion of online learning has not been smooth. Unequal access to stable internet connection, digital tools, and technical assistance has brought into focus and, in certain contexts, magnified the digital divide—most vividly through poor and rural students. Other issues like poor teacher digital literacy, absence of training in online teaching, data privacy and cybersecurity concerns, and the ill effects of long-term screen time on children have also come into focus as issues of concern (UNESCO, 2020). A few developing nations also continue to encounter infrastructural and socio-economic issues limiting the effective deployment of Internet-based education systems (World Bank, 2021).

Such opportunities and challenges require critically examining the way the Internet is affecting the early years of a child's education. This study is intended to investigate the various roles of the Internet in primary education with an emphasis towards four main goals: (1) to examine the role of the Internet in education, (2) to determine some common challenges of online learning, (3) to investigate learning experience offered by online learning environments, and (4) to investigate the effectiveness of online learning in student participation and learning achievement. With a regard to these considerations, the study is intended to develop an unbiased and well-supported understanding of online education at the primary level, directing future policies and practices towards more equitable and effective learning environments.



**Objectives:**

1. To study the role of internet education
2. To identify the current challenges in digital education
3. To identify the learning opportunities in digital platforms
4. To examine the effectiveness of online education

**Literature Review**

**1. Algorithmic Ranking Within the Academic Literature Search**

The withering impact of algorithm-mediated search use that implements finding academic literature, as found by Jordan and Tsai (2024), is examined. They state that the ranking in order of relevance is everywhere, but the hidden algorithm on how relevance is determined poses a risk to institutionalize academic inequalities. The factor of citation counts, which is dominant in ranking, recreates current inequity in terms of geography, gender, language, and discipline. This study is an expansion of previous research (Beel & Gipp, 2009; Rovira et al., 2018, 2019, 2021) by demonstrating that rankings based on citations may sidelined less-cited but valuable studies. Jordan and Tsai demand critical awareness of algorithms by scholars in order to control biasedness in literature reviews, tempting to rely on one-sided searching systems.

**2. Video Gaming, Digital Abilities and Fairness in Early Education**

Writing on digital competence with viewers of video gaming in the age range between 7 and 10 years, Scholes et al. (2024) explore issues as far as gender and socioeconomic status (SES) as well as self-efficacy. The results did not match expectations because lower SES students experienced more enjoyment of gaming and technology than higher-SES students, but boys consistently scored higher on self-rated digital skills as compared to girls regardless of their SES group. The results resonate with the earlier findings on a digital divide but also point out that cultural background may as well negate the assumed SES benefits due to interest patterns. The authors promote pedagogies using games that recognize gender differences in participation and do not suppose equal access and equal skills.

**3. Family Mediation of the Usage of Preschool Digital Media**

Parental mediation theory, Scott (2021) expands by distinguishing two previously unknown active mediation modes of home digital engagement of preschoolers, namely, extending (exploiting the interest of a child in media to initiate new activities) and relating (linking digital/non-digital experiences to media fauna). As opposed to previous infrastructure, which focuses on restrictive mediation, positive and instructive mediation is mentioned as essential to the formation of early digital literacies in the ethnographic study held by Scott. Such a wider understanding acknowledges the fact that not just parents are involved in scaffolding of the competencies of young children.

**4. Ethical and Social Issues of Facial Recognition Technology (FRT) in Schools**

Andrejevic and Selwyn (2020) are critical in the interrogation of the advent of facial recognition systems in educational institutions. As the authors have argued, there are counterpoints to the proposed, claimed benefits of better security and automated attendance, and these are authoritarian drift, acclamation of surveillance,



inequalities in recognition accuracy, among racial minorities in particular. Dwelling on parallels with the general societal discussions of the idea of biometric surveillance, they raise concerns about whether FRT can ever be used in schools without trampling the rights of students and without the threat of mission creep and misused data.

### **5. Digital Education Policy Sociotechnical Imaginaries**

On one hand, Ferrante et al. (2024) think of the policies of digital education of six countries Argentina, Mexico, South Africa, Botswana, Germany, and Sweden in the terms of sociotechnical imaginaries. According to them, policies define digital technologies either as equalizing tools, or adapting to nationally distinct inequality, although this vision is conditioned by past experiences and international interdependence. Although numerous policies revolve around the topics of access (devices, connectivity), the authors emphasise the importance of also considering multilayered digital inequality issues that deal with skills, use practices, and resultant outcomes affecting participation.

#### **Challenges:**

New media has proven to be one of the most resourceful instruments in the transformation of the ecosystem of primary education over the past years. Online tools, online resources and digital platforms began to introduce an entirely new way in teaching and learning with new flexibility and engagement, which is not always supported by traditional learning tools. But together with these advantages comes a number of problems that accompany the implementation of new media in primary schooling. Disproportionate access to technology, the digital divide among teachers and students, a concern about screen time and content quality are among the major barriers. Moreover, the efficient implementation of digital tools through the adjustment of curriculum is a challenging undertaking both on the part of educators and on the part of their institutions. The current paper dwells upon these tribulations and tries to unveil all restrictions and possible drawbacks of new media.

#### **Learning Opportunities:**

The high rate of the new media has altered the method of providing education especially at the primary level. Electronic devices, online communication, educational applications and internet-based classes have made learning into a thrilling experience among young learners. The new innovations facilitate improved participation, individual learning experience, and exposure to the broad diversity of educational resources other than the conventional classroom. There are various learning styles that are supported using the new media, creativity is also promoted, and early digital literacy skills are acquired using the new media, which are needed in turning out to the modern world. Furthermore, it allows teachers to be more flexible and student-oriented, which would increase teaching effectiveness and improve the outcomes of students. In this paper, I will find out how the new media is establishing new and expressive learning experiences in primary education so as to ensure the students are ready to face a technology-driven future.

### **Methodology:**

In this research paper Role of New Media in Primary Education: Challenges and Learning Opportunities, the methodology that is used is content analysis. Content analysis refers to a qualitative research method employed to methodically study communications like texts, media or documents with the purpose of identifying the patterns, themes or meanings. This is because it enables one to derive a contextual meaning to a body of content thus it becomes appropriate in comprehending the changing role of the new media in education. This approach allows delivering a systematic interpretation of the ways, in which the use of digital platforms in primary education is transforming the concept of primary education both in a positive way and in the form of its restrictions.

### **1. Internet and its Role in Education**

There are a few reports that indicate how the Internet is influencing educational practices, in particular at early and primary stages.

According to Scott (2022), the digital experience of the young children begins with family support at home. The prospective study proposes that the Internet, the applications and the interactive platforms are the crucial opportunities of the early cognitive and literacy development in children, even beyond education at school.

Scholes et al. (2024) also illustrate the importance of digital tools such as video games in acquiring digital skills in the elementary school by using the correct teaching methods.

### **2. Issues in Digital Learning**

Encouraging online learning is one of the areas that have been shown to be a very positive initiative that has a lot of obstacles based on the literature review.

Ferrante et al. (2023) remark that socio-digital inequalities persist around the world, particularly in such regions as Latin America, Africa, and Europe. Access and the use of Internet-based education continue to be influenced by the digital divide, which is caused by historical, economical, and infrastructure problems.

Scott (2022) notes the discrepancy between adults learning about digital involvement and paying little attention to home-based teaching approaches. This implies that uncontrolled digital use by children can be restricted without the parents and caregivers realizing it.

Andrejevic & Selwyn (2020) bring up ethical concerns regarding the use of technological devices such as facial recognition in schools and privacy problems. They note that implanting digital technologies in education is associated with socio-political risks.

### **3. Educational Opportunity on digital platforms**

Technology also presents a good opportunity to enhance learning.

The authors demonstrate that video gaming, when connected to academic outcomes, increases digital confidence in students and contributes to participation (Scholes et al., 2024). Their lower-income students reacted better to digital tools than anticipated; this is an indication of possible inclusive instruction strategies.



Scott (2022) presents the concepts of extending and relating as the novel forms of positive guidance. This indicates the role that families can play in helping to facilitate learning through the context of relating media to the rest of the life.

Liang & Li (2023) mention the significant influence of the new media as a technique to change an attitude and deliver alternative narratives. It can create the potential of critical thinking and general digital literacy, as well as even in minimalist areas.

#### 4. Efficiency of Online Learning

Studies reveal that there are possibilities and limits of effectiveness of educational efforts that are conducted via the Internet.

Jordan & Tsai (2024) examine the consequences of algorithmic biases in academic search tools on the access to information as well as reliability. This casts suspicion over digital learning and research quality, particularly with young or inexperienced learners going at it alone in cyberspace.

According to Ferrante et al. (2023), digital education policies usually overlook local specifics and suggest a single better way of doing things in a globalized educational policy, that is, the idea of the one-fit-all approach. This can undermine real-life learning in diverse learning environments.

Effectiveness is related not only to the accessibility but also to the patterns of development of learning platforms, the mentorship system, and the extent to which the digital content suits the needs of learners.

#### Challenges and learning opportunities:

Content Analysis: Challenges and Learning Opportunities of New Media in Primary Education

##### 1. Challenges identified

Source	Challenge	Explanation
Jordan & Tsai (2024)	Algorithm Bias and Digital Literacy	Ranking algorithms in academic databases lack transparency, potentially reinforcing gender, regional, and citation biases. This affects how educators and students discover learning materials, highlighting a need for digital literacy training.



Scholes et al. (2024)	Digital Competence Gaps by Gender and SES	Boys reported higher digital self-efficacy than girls; students from lower socioeconomic backgrounds showed more enjoyment but often had less access.
Scott (2022)	Parental Mediation Gaps	Many families unknowingly support children’s media use but lack awareness of how to guide educational digital practices effectively.
Andrejevic & Selwyn (2020)	Surveillance and Privacy Concerns	Use of facial recognition in schools raises ethical concerns around surveillance and privacy, potentially creating unequal school environments.
Ferrante et al. (2023)	Policy Gaps and Inequalities	Digital education policies differ across regions, with infrastructure deficits and socio- technical divides in less developed areas.

**2. Learning opportunities identified**

Source	Opportunity	Explanation
Scholes et al. (2024)	Gaming for Digital Skill Development	Video games can enhance students’ digital competence and engagement, especially when aligned with educational goals.
Scott (2022)	Positive Family Mediation	Instructional mediation through family practices supports early digital literacy and learning through children's interests.
Ferrante et al. (2023)	Global Policy Innovations	Context-specific policies in Latin America and Africa attempt to bridge digital divides through public digital infrastructure.



Jordan & Tsai (2024)	Critical Media Literacy Development	Recognizing algorithmic biases fosters critical thinking and media literacy among students and teachers.
Andrejevic & Selwyn (2020)	Tech Integration Awareness	Biometric tech awareness in schools can prompt ethical discussions and digital citizenship education.

**Conclusion:**

The discussion of issues and learning opportunities in relation to the incorporation of new media in primary schooling unearths a complicated yet revolutionary situation. The results reinforce the fact that even though digital technologies can enhance teaching and learning by transforming it with revolutionary potential, ethical, social, and infrastructural issues are also inseparable. This duality just underscores the importance of a measured, correctly-informed use of the new media in education.

On the challenges front, the study finds that prejudices built into the algorithms applied to academic sites according to Jordan & Tsai (2024) may restrict access to a wide and high-grade selection, giving rise to inequalities in teaching and the results achieved by the students. Likewise, the digital competence gaps listed by the researchers led by Scholes et al. (2024) demonstrate that disparities in terms of gender and socioeconomic status still exist, with some students feeling inefficient or having no ability to develop his/her skill. Another area cited by Scott (2022) as vital is parental mediation which points to the fact that parents tend to facilitate their children media consumption, but may not actually have the knowledge or methods to navigate digital environments in an effective manner. The idea of ethical concerns proposed by Andrejevic & Selwyn (2020) and especially regarding the surveillance system such as facial acknowledgment, raises considerable controversies regarding privacy and psychological well-being of young academic learners. Moreover, Ferrante et al. (2023) highlight the policy gaps, at the global level, which contributes to the widening of the digital divide, demonstrating how infrastructure and resource disparities among communities can disperse communities as a whole.

Conversely, the possibilities presented by the considerate and smart incorporation of the new media are also considerable. It is discovered that gaming technologies, when treated in a purposeful manner, can support the achievement of digital competence, and push learning through the perspective of satisfying inherent curiosity and learning motivation schemes of students. According to Scott (2022), positive family mediation will be a powerful predictor of early digital literacy when caregivers will engage in and cooperate with digital learning activities. Policy innovations outlined by Ferrante et al. (2023) in Latin American and African regions can indicate that the local problematic approaches may be areas-specific and be used to build bridges; the results of such approaches are promising when infrastructure and publicity are supported. In addition, the mastery of the critical media literacy skills that Jordan & Tsai (2024) suggest would allow the educators and the students to



navigate, assess and challenge the digital data and algorithmic systems more critically. Teaching ethics regarding the technologies, such as biometric system, as postulated by Andrejevic & Selwyn (2020), will also create a generation of not only aware and responsible but also ready-to-be digital citizen learners.

To conclude, this study highlights that the question of the role of new media in primary education is not about access to technology but it is a more complex and multidimensional problem which touches upon the areas of equity, ethics, skills and culture. What lies ahead is the need to purposefully work together among policymakers, educators, parents, and technology developers to make certain that these digital tools act as enablers and not as impediments. It is important to fill the existing gaps in digital literacy, enhance family and school-based interventions, and integrate critical thinking in curriculums in order to realize the full potential of new media. Proactive address of these issues will help turn new media into a highly effective resource that will foster more in-depth, interesting and effective learning experiences of the future generation.

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