



The Digital Learning Duel: Government vs Private Platforms Shaping the Future of Digital Learning Ecosystem (DigiLE)

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ABSTRACT

Technology has reformed education with the advent of Digital Learning Ecosystem (DigiLE). Information and communication technology has enabled global access to education. Digital media is a cornerstone in learning, providing platforms for both public and private educators. It has become a valuable tool for sharing learning resources and fostering interaction among educators and learners. With its widespread reach, digital media empowers learners with the ability to access these resources from anywhere. This study examines the interplay between public and private digital media in the framework of DigiLE, highlighting its significance. This research explores government strategies to enhance accessibility and standardization in Digital Learning Ecosystem (DigiLE). It leverages theoretical frameworks to analyze the probability for alliance between public and private educational platforms. Besides, it presents the influence of emerging regulations and laws in the learning experience across different platforms. This study aims to inform policy development that fosters collaboration between diverse platforms for DigiLE initiatives. It aims to initiate further research in this domain, ultimately seeking the confirmation that all individuals have impartial access to quality education, irrespective of geographical location or platform preferences.

Keywords: Digital Media Platforms, Private, Government, Digital Learning Ecosystem (DigiLE).

INTRODUCTION

Digital media platforms play a decisive role in modern education, particularly in learning environments. Private platforms dominate the digital landscape, while government-backed initiatives offer alternatives tailored to educational needs. Varied research has shown that various organizations, viz. libraries, private companies, and government foundations, are also interacting with digital resources to nurture their public relation more strongly and effectively (Jain, 2013; Joo, Choi, & Baek, 2018; Rachman & Putri, 2018). This paper conducts a comparative analysis of these platforms, exploring their respective strengths and weaknesses in facilitating effective learning experiences. Through an examination of access, equity, privacy, security, user engagement, and pedagogical effectiveness, this research aims to provide insights into the optimal utilization of digital media for open and distance learning.

DIGITAL MEDIA

Digital media includes all content that is recorded, transmitted, and consumed in a digital format. This contains text, images, audio, video, and interactive content that is accessed through digital devices such as computers, smartphones, tablets, and the internet. According to Lister et al. (2009), digital media has transformed communication, information consumption, and technological interaction. It includes various formats such as text, images, videos, and interactive content accessible through digital devices. The rapid growth of digital media has influenced education, entertainment, business, and social interactions. Theories such as Media Richness Theory (Daft & Lengel, 1986) suggest that digital media offers multiple communication cues (text, audio, video), making interactions more effective. Moreover, Castells (2011) confers how digital media has contributed to a "network society," where individuals connect globally in real time. Education has pointedly benefited from digital media, enabling e-learning, multimedia-based teaching, and interactive learning experiences. Research by Buckingham (2003) emphasizes the part of digital media in media literacy, helping students grow critical thinking and digital skills. Studies suggest that gamification and interactive content improve student engagement and retention in digital learning environments (Gee, 2005). Thus, Digital media has transformed communication, education, and society, creating new opportunities and challenges. While it enhances accessibility and engagement, misinformation, privacy concerns, and digital inequality require further exploration.

Digital Learning Ecosystem (DigiLE)

A Digital Learning Ecosystem refers to the interconnected network of digital tools, platforms, resources, and technologies that support learning in various environments. It integrates content, communication, collaboration, and assessment to enhance the teaching and learning experience. According to Siemens (2005), the Digital Learning Ecosystem (DLE) is an integrated and interconnected network of digital tools, platforms, resources, and technologies aimed at facilitating teaching and learning. Siemens (2005) introduced Connectivism, a learning theory emphasizing that knowledge is distributed across networks and learned

through digital interaction. Digital resources such as e-books, multimedia, podcasts, and online courses enhance accessibility (Weller, 2020).

A major advantage of a Digital Learning Ecosystem is personalized learning, where AI and analytics create adaptive learning pathways tailored to individual needs, improving student outcomes (Popenici & Kerr, 2017). Collaboration and communication are also enhanced through tools like Microsoft Teams and Zoom, enabling seamless remote learning, real-time discussions, and group projects (Hrastinski, 2008). The scalability and accessibility of online platforms make education globally available, providing supplemental learning opportunities for diverse learners (Means et al., 2013). Additionally, enhanced engagement is achieved through gamification and multimedia, which increase motivation and create interactive learning experiences (Dicheva et al., 2015). The Digital Learning Ecosystem has transformed education by integrating technology, fostering personalized learning, and improving accessibility. Through digital tools like Learning Management Systems (LMS) and AI-driven analytics, students receive adapted learning experiences that adapt to their needs. Personalized learning allows students to progress at their own pace with tailored content and real-time feedback. Additionally, digital platforms enhance accessibility, enabling learners from diverse backgrounds and remote locations to access quality education. The Digital Learning Ecosystem is reshaping traditional education and preparing students for the digital era by constructing learning more interactive, flexible, and inclusive.

GOVERNMENT DigiLE PLATFORMS:

SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds)-

It is a program initiated by the Indian government and created with the three guiding ethics of education policy—quality, fairness, and access—in mind. This is implemented by a platform that assists in hosting of all the courses, taught in classrooms from Class 9 till post-graduation to be retrieved by anyone, everywhere at any time (Swayam Central, n.d.). To reach the three fundamental principles of Education, the central government initiated a MOOC program, namely Study Webs of Active-Learning for Young Aspiring Minds-SWAYAM (Singh, Lal & Thakur, Ravindra & Nagaraju, 2019). On July 9, 2017, the Government of India formally launched Swayam, an online learning platform. Launched in New Delhi, India, the event marked the start of a major project to democratize education and increase students' access to high-quality learning resources throughout the nation. The program intends to take the finest Academic resources for all learners at no cost. As one of the pillars of the 'Digital India' Initiative, SWAYAM seeks to bridge the digital gap for learners who have hitherto remained intact by the digital revolution and have not been able to join the mainstream of the knowledge economy (Swayam Central, n.d.).

Swayam plays an important function as a social media network specifically designed for Open and Distance Learning as well as a digital platform. It is important because it makes it possible for students and teachers to work together, communicate, and create communities online. Swayam's features, which include chat rooms, discussion forums, and virtual study groups, enable members to engage in meaningful discourse and

exchange knowledge, overcoming geographical obstacles and promoting a feeling of community within the online learning community. Moreover, incorporating multimedia resources, interactive components, and real-time communication capabilities into the platform amplifies user engagement and encourages proactive involvement in the educational process. Through the effective use of social media within Open and Distance Learning, Swayam not only increases availability to education but also fosters a vibrant, cooperative learning environment that prepares students with the skills they need to do well in the digital age.

NPTEL (National Programme on Technology Enhanced Learning)-

NPTEL is a short form of “National Programme on Technology Enhanced Learning” which is an initiative by seven Indian Institutes of Technology (IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras, and Roorkee) and Indian Institute of Science (IISc) for creating course contents in engineering and science (M & Ragavan, 2011). In 2003, the National Programme on Technology Enhanced Learning (NPTEL) was introduced. This is a unified approach by the Indian Institute of Science (IISc) and seven Indian Institutes of Technology (IITs): IIT Bombay, IIT Delhi, IIT Guwahati, IIT Kanpur, IIT Kharagpur, IIT Madras, IIT Roorkee, and IISc Bangalore. In 2006, the NPTEL YouTube channel was created. It was developed as a platform to reach a larger audience with educational content generated under the NPTEL project and with its substantial growth since then, now the YouTube channel for NPTEL has become the most subscribed government educational channel with 1.3 billion views and 21+ lakh subscribers by offering free access to excellent tutorials, video lectures, and other learning materials in the realm of scientific and technical fields. The YouTube channel of NPTEL is a crucial platform for digital learning students, offering high-quality educational content such as video lectures, tutorials, and supplementary materials. Presented by faculty from IITs and IISc, the channel is accessible, flexible, and cost-effective. Its visual nature enhances comprehension and retention of complex concepts, making it an invaluable resource for self-directed learning.

e-PG Pathshala-

The MHRD, under its National Mission on Education through Information and Communication Technology (NMEICT), launched a gateway for all postgraduate courses on May 31, 2014, which is called e-PGPathshala. It was formally launched on January 30, 2016, in New Delhi, India, during the UGC's National Seminar on Post-Graduate Education. With a vast selection of postgraduate-level courses and study materials available to students nationwide, it is specially made to align with the needs of higher education. The values of digital learning—which prioritize adaptability, accessibility, and diversity in higher education—are embodied in e-PG Pathshala. The key component of a high-quality educational system is the material and its caliber. Because the platform offers top-notch, curriculum-based, interactive e-content in more than 70 subjects spanning the social sciences, natural and mathematical sciences, arts, linguistics and languages, fine arts, and humanities, it is created by subject matter experts employed by Indian universities including other research and development centers throughout the nation. There is a team of principal investigators, content writers, language editors, content reviewers, paper coordinators, and multimedia specialists for each subject. SWAYAM utilizes the content of e-PGPathshala to provide MOOC programs. All educational materials available on e-PGPathshala are accessible to learners free of charge. New courses, modules, and materials

are added regularly to adapt to the shifting demands of education and advancements in knowledge domains. It collaborates with universities, colleges, and educational institutions across India to expand its reach and diversify its course offerings. Overall, e-PG Pathshala serves as a dynamic and inclusive platform that empowers learners with access to high-quality postgraduate education through digital means, fostering lifelong learning and skill development in India (E-PGPathshala, n.d.).

PRIVATE DigiLE PLATFORMS

Adda247-

Adda247, one of the leading YouTube channels with 7.95M subscribers developed by Anil Nagar on September 11, 2011, is a reputable brand in the online education space, headquartered in Gurugram, Haryana, India. As a complement of the leading online platform, the YouTube channel provides a wide array of instructional materials designed especially for candidates getting ready for competitive exams and government job recruitment exams. As a digital learning resource, the Adda247 YouTube channel is very important, especially for Indian exam preparation. Adda247, a highly regarded educational resource, provides thorough study materials and professional advice for a range of competitive exams, such as banking, SSC, and railway recruitment tests. Its well-structured content, comprising live classes, recorded lectures, and practice sessions, caters to the diverse needs of aspirants, meeting their varied demands effectively. In addition, Adda247's emphasis on exam-specific techniques and frequent updates on syllabus modifications guarantee that students remain current and well-equipped for their tests. Adda247 is a highly reputable digital learning platform for test preparation, with a substantial user base and excellent reviews from subscribers, enabling candidates to successfully pursue their academic and professional objectives.

Testbook -

Testbook.com was founded in January 2014 by IIT graduates to help students crack the government and public sector exams, the core team consists of Ashutosh Kumar, Narendra Agarwal, Praveen Agarwal, and Arpit Oswal, IIT Bombay Alumni. (Know The History of Testbook - Journey of Fastest Rising EdTech!). Testbook is a well-known platform for exam preparation in India. They provide many of resources, including YouTube videos, to support students in getting ready for competitive tests i.e. SSC, Railway, by providing tutorials, crash courses, quizzes, and MCQs to assist aspirants in their exam journey. Testbook also has a channel called Testbook IAS-UPSC CSE & State Civil Services, which focuses on UPSC free coaching and provides preparation material for various civil services exams, including UPSC CSE, UPPSC PCS, MPSC, and more (bing.com). Being an online digital learning resource, the Testbook YouTube channel is quite important, especially for Indian exam preparation. The channel is among the most massive study guides with 3.34M subscribers for competitive exams because of its extensive study materials and professional advice. Its clear and focused approach for exam preparation, together with frequent updates and practice exams, guarantees successful learning outcomes. As a result, Testbook continues to maintain its position as the top digital learning platform for exam preparation by providing candidates with the understanding and abilities they need to do well in competitive exams.

Physics Wallah (PW)-

In 2016, Prayagraj, Alakh Pandey launched Physics Wallah, or "PW," as a YouTube program. When the channel first started, its core area was to teach the physics curriculum for the Joint Admission Examinations (JEE), which are a common admission exam in India ("The Unicorn Youtuber: Alakh Pandey". Business owner). Pandey and co-founder Prateek Maheshwari created the Physics Wallah app in 2020. "Here's how Physics Wallah solved the edtech riddle and is now aiming for growth." September 11, 2023, Business Today. (Acquired on March 3, 2024). In the same period, 9.73 million people subscribed to the Physics Wallah YouTube channel (Ruchika Kumari, February 22, 2023). The PW channel provides every student with content through interactive sessions, digital lectures, assessment series, lecture-wise notes, topic-wise assignments with the best questions, exercises, and much more. The channel takes free YouTube sessions and provides all these study materials for free. As the founder, Alakh Pandey, tries to give education to every child beyond his economic status (Physics Wallah, 2024). For science education in India, in particular, the Physics Wallah YouTube channel is an essential online distance learning resource. The channel, well-known for its excellent physics content, explains complex ideas understandably so students can grasp them. Its value in test preparation is further reinforced by its specialized advice for competitive exams like the JEE and NEET. Physics Wallah also effectively democratizes education by bridging accessibility gaps and providing a vital resource for students around the country. It does this by encouraging community interaction and offering flexible learning options.

RESEARCH CONCEPTION AND EXECUTION (Methodology)

This research study compares government and private media platforms for use in the digital learning ecosystem. It examines their features and goals to determine their strengths and weaknesses in key areas such as user involvement, privacy, security, accessibility, equality, and teaching effectiveness. By studying empirical data and existing literature, the research provides insights into the advantages and disadvantages of each platform type. Using qualitative data analysis methods, the findings will be summarized, and important conclusions will be drawn regarding the relative effectiveness of government and private platforms for educational purposes.

COMPARISON BETWEEN THE GOVERNMENT AND PRIVATE PLATFORMS

- **Ownership and funding:**

Private Platforms Managed and owned by businesses or associations on a private basis. Usually, subscription fees, course sales, or venture capital investments provide the funding. While government platforms are run and owned by academic institutions or government organizations, Budgets, grants, and subsidies from the government provide the majority of the funding. So, this could be a big challenge for government platforms to manage financial stability as it depends on various resources.

- **Access and Equity:**

Though private platforms provide their YouTube sessions for free, they still provide the related notes on their subscribed applications only. This could be the drawback of the private platforms, as learners from economically underprivileged backgrounds may not have as much access as others due to the platform's pricing structure. Depending on the platform's commercial aims, different equity measures may apply. Government platforms usually place a high priority on equity and accessibility to give all individuals, regardless of their financial situation, access to education. Initiatives that are financed by the government frequently offer financial aid or subsidies to underprivileged students.

- **Privacy and Data Security:**

Private platforms may be more flexible in operational decisions and commercial procedures, but they are still subject to industry standards and consumer protection legislation. The main challenge faced by these platforms is data leakage and hacking because they are open-source platforms, so their protection software is easy to crack. While the government platforms are highly protected with authorized firewalls, so there will be chances for data leakage. Also, public scrutiny, government laws, and transparency obligations apply to government platforms. must abide by stringent accountability, ethical, and governance norms.

- **User Engagement:**

Private platforms often invest in interactive features such as discussion forums, quizzes, gamification elements, and live sessions to enhance user engagement. These platforms may prioritize user experience and engagement to retain paying subscribers. While some government platforms may also incorporate interactive features, the level of investment in user engagement features may vary. Budget constraints and bureaucratic processes could limit the implementation of advanced engagement tools.

- **Pedagogical Approaches:**

Frequently at the vanguard of innovation, private platforms use cutting-edge educational techniques and technologies to improve student learning. It is typical to adjust to changes in technology and market demands quickly. However, the platforms do their best to provide updated knowledge to their students regularly. On the flip side, this could be one of the most significant challenges for the government platforms, as budgetary constraints and bureaucratic procedures may hinder innovation more than before. Thus, the platforms can't provide innovative learning support to their students because of a shortage of funds and support. When opposed to private platforms, the adoption of new technologies and instructional strategies could be delayed.

- **Learning Outcomes:**

Private platforms provide a broad selection of programs and courses to suit various sectors and areas of interest. Content might be created in-house or obtained from outside sources. While government platform programs and courses could be in line with curricular requirements and national educational aims, one such emphasis area could be workforce development and societal needs courses.

With their advantages and disadvantages, public and private platforms are both vital to the DigiLE. In the end, the decision between public and private platforms may be influenced by elements including quality, pricing, accessibility, and fit with institutional or personal goals.

RESULTS AND DISCUSSION

The results of the research demonstrate the various uses and features of public and private media platforms for DigiLE. Private platforms create serious issues about data privacy, security, and monetary interests in addition to providing ease, innovation, and widespread use. Government platforms, on the other side, put regulatory compliance, equity, and accessibility first, even at the price of user engagement and technological advancement. The decision between public and private platforms ultimately comes down to institutional interests, legal requirements, and instructional strategies.

CONCLUSION

This conceptual research study concludes by emphasizing how crucial it is to evaluate the goals and features of together public and private social media platforms critically to support open and distance learning. Private platforms have unmatched reach and innovation, but there are innate risks to the security and privacy of data when using them. Conversely, government agendas may fall behind in terms of user meeting and technology improvements, but they prioritize equity and accessibility. In the future, educational stakeholders will need to carefully analyze these factors to make well-informed decisions on the selection and application of platforms in open and remote learning contexts.

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