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Digital Initiative of Government of India in Higher Education: Exploration of E-PG Pathshala in Law Discipline

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Digital education is becoming increasingly important in today's world, as it has the potential to provide a more comprehensive and engaging learning experience whereas Indian government has taken several steps to promote digital education including the National Digital Education Mission (NDEM), The Digital India Programme (DIP) and many more, the most prominent among all are National Mission of Education through ICT (NME-ICT). Furthermore, the government is encouraging the use of digital technologies in the education sector through initiatives such as the National Education Policy 2020. The objective of the article is to illustrate efforts made by the Indian government in regard to open educational initiatives in higher education, notably E-PG Pathshala Law subject papers and associated modules. A usage study was carried out among LLM and PhD research researchers to determine its usefulness and reliability. The study reveals that both post graduate and doctoral research scholars use the site equally, and they prefer the e-text format for writing their dissertations and theses. The majority of students stated that the electronic content available on their subject area meets their needs.

Keywords: *Digital Education, e-Learning, E-PG Pathshala, Open Educational Resources (OER)*

1 INTRODUCTION

Digital education in India is rapidly evolving and is becoming an important part of the country's higher education systems. The Government of India is investing heavily in digital education, launching several initiatives such as the Digital India Initiative, National Mission of Education through ICT, the National Digital Learning Mission and many more. Sing et.al (2022)²the broad objectives

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is connecting all learners in urban and rural India with high-speed broadband networks and provide access to digital resources, services, and information by leveraging technology to improve the quality of education in India and to empower teachers and students through online training, assessments, and other digital tools. In addition to these initiatives, the Government of India has also launched several other initiatives such as the Digitize India Platform, the PradhanMantriKaushalVikasYojana, and the PradhanMantriGramin Digital SakshartaAbhiyan Overall, digital education in India is rapidly evolving and is set to become a major driver of educational reform in the country. E-PG Pathshala is one of such initiative for higher education in India initiated under Project NME-ICT, Ministry of Education, and Government of India. The main objects are to provide an innovative and effective way of learning for postgraduate students. Mishra et al.(2019)³E-PG Pathshala is a great way to make higher education more accessible, flexible, and affordable. It helps students to learn in an interesting and interactive way, while staying up to date with the latest developments in their fields. This platform improves the quality of higher education in India and to make it more accessible to all.

2 INDIAN GOVERNMENT INITIATIVES FOR OPEN EDUCATION IN HIGHER EDUCATION

Some of the Indian government initiatives for open education in Higher education are:

2.1. **National Mission for Education through Information & Communication Technology (NMEICT)**: This was launched in 2009 by the Ministry of Human Resource Development (MHRD) to provide access to high quality educational resources through various ICT initiatives. It aimed to promote and enrich open educational resources (OER) in higher education, provide access to virtual laboratories, build capacity in ICT tools, and work on digital content development. Some of the prominent are:

- **National Digital Library (NDL)**: This was launched in 2016 by MHRD to provide digital learning resources to students, researchers, and teachers. It provides access to over 100 million books, journals, videos, and other digital resources.
- **SWAYAM**: This was launched in 2017 by MHRD to provide access to a wide range of courses to students across the country. It provides access to over 2,000 courses in various fields such as engineering, humanities, sciences, etc
- **SwayamPrabha**: This was launched in 2017 by MHRD to provide access to 32 educational channels which broadcast lectures from IITs, NITs, and other institutes. It offers over 3,000 hours of content in various disciplines

- **Spoken Tutorial:** This was launched in 2009 by the Indian Institute of Technology (IIT) Bombay to provide access to free and open source software tutorials. It offers tutorials in various subjects such as programming languages, web design, etc.
 - **Virtual Labs:** This was launched in 2012 by the Ministry of Science and Technology to provide access to virtual experiments and simulations. It enables students to perform experiments without the need for physical laboratories.
 - **e-Yantra:** This was launched in 2012 by IIT Bombay to promote robotics education in engineering colleges. It provides access to robotics kits, tutorials, and training programs to students.
- 2.1 **National Knowledge Network (NKN):** This was launched in 2012 by the Department of Electronics and Information Technology (DEITY) to provide access to high-speed internet and digital resources to educational and research institutes. It enables the sharing of digital content and resources with all educational institutions in India.
 - 2.2 **UGC-MOOCs:** This was launched in 2012 by the University Grants Commission (UGC) to provide access to Massive Open Online Courses (MOOCs) to students across the country. It offers over 1,000 courses in various disciplines.
 - 2.3 **National Programme on Technology Enhanced Learning (NPTEL):** This was launched in 2003 by the seven IITs and IISc Bangalore to provide access to online courses and videos on various subjects. It offers over 1,600 courses and more than 10,000 hours of video lectures.
 - 2.4 **Eklavya:** This was launched in 2015 by the Ministry of Tribal Affairs to provide access to quality education to tribal students. It offers online courses, study material, and other resources to students.
 - 2.5 **National Digital Repository (NDR):** This was launched in 2017 by the MHRD to provide access to digital content and resources. It stores digital content such as books, videos, audio clips, etc. and provides access to them.
 - 2.6 **AICTE-Udgam:** This was launched in 2017 by the All India Council for Technical Education (AICTE) to provide access to digital content, tools, and resources to students, teachers, and other stakeholders. It offers access to various video lectures, tutorials, and other resources.
 - 2.7 **Unnat Bharat Abhiyan:** This was launched in 2015 by MHRD to promote innovation and technology-enabled solutions for rural development. It provides access to resources and training programs for students, teachers, and other stakeholders.
 - 2.8 **Digital India Scheme:** This was launched in 2015 by the Government of India to provide access to digital resources to citizens. It aims to

provide access to digital infrastructure, data, and services to citizens across the country.

3 E-PG PATHSHALA: A PORTAL FOR POST GRADUATE STUDENTS

E-PGPathshala is an online learning platform that provides free and accessible educational resources to students from all over the world. It offers video tutorials, interactive quizzes, and activities to help students learn and understand various subjects. It also provides a platform for teachers to share their knowledge and expertise with students. The platform is developed by UGC under NME-ICT Project for Post-graduate level students. The main objective of E-PG-Pathshala is to make quality education available to everyone regardless of their financial or geographical limitations. The platform offers interactive online curriculum based e-content platform catering more than 70 subjects across many disciplines including social sciences, arts, fine arts, humanities, natural & mathematical sciences, linguistics and languages, developed by subject experts working in different colleges and Universities. Around 1,71,72,798 visitors visited the platform till the end of Jan 2023. Figure 1 indicates that the platform caters 70 curriculum-based subject disciplines having more than 20000 e-texts, 19000 videos, 723 papers in all disciplines of social sciences, arts, fine arts and humanities, natural and Mathematical sciences.

Each Module has Four Quadrants Includes:*E-Text: Self-Learning: Self-Assessment*

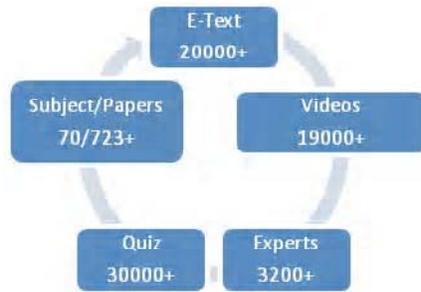
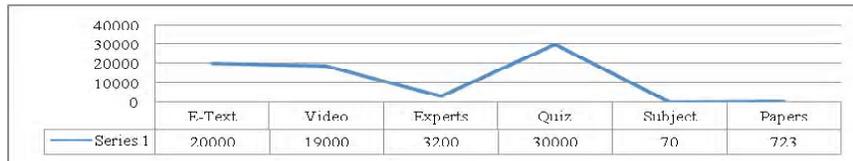


Figure 1: Overview details of content and experts in E-PG Pathshala as on 31-1-2023



3.1 OBJECTIVES OF E- PG PATHSHALA

- To provide quality education to students from all backgrounds, regardless of economic and social status and facilitate the development of a holistic approach to learning, including critical thinking and problem solving skills.
- To produce technology based courseware and to bring together the experienced teachers in the country to provide quality education for postgraduate students for imparting formal and informal education and development of specialized skills and standards.
- E-PG Pathshala's goal is to bridge the digital divide between students from different backgrounds and to make sure everyone has access to quality education.
- It aims to provide e-platform for students to access high-quality educational resources and connect with teachers and mentors across India to bridge the gap between quality education and accessibility.

3.2 OTHER E- PLATFORMS SUPPORTED BY E-PG PATHSHALA

- **e-Adhyayan (e-Books)**: A platform which provides 700+ e books for all e-PG Pathshala courses.
- **UGC MOOCs (Online Courses)**: To produce post graduate subjects content on SWAYAM with INFLIBNET as technical partner.
- **e-Pathya (Offline Access)**: A software driven course/content facilitates students pursuing PG level studies via distance as well as campus learning with offline access.

4 REVIEW OF LITERATURE

Some of the articles are reviewed between 2013 and 2023 while keeping in view the objectives of the study.

Sing (2015⁴) highlighted the significance of open access to legal research and education, as well as the significant role played by governments and publicly financed institutions in making their research findings and public legal material available on open platforms. To determine the awareness and usage of legal information in the public domain, a user analysis was conducted. The study reveals that fewer users of law libraries are aware of the existence of open access legal materials, and it suggests that librarians play a bigger part in information dissemination and raising awareness of digital knowledge. To give the fundamental knowledge on open platforms, a well-planned and information-rich library orientation programme is crucial. *Jeyapragash et.al. (2017)⁵⁵* Balasubramani, Jeyapragash et al. (2017) in their study analyse the pattern and growth of e-content modules of the e-PG Pathshala project. The study finds that the Social Sciences produced 5917 modules, while the Medical and Health Sciences contributed only 483 modules. The study concludes that the domains of technology, medicine, and health sciences should offer extra courses for

the benefit of engineering and medical students and learners. It is also proposed that the basic subject matter of the course be based on the curricula of significant Indian universities, which can help the student population get a quality education in India. *Sonkar and Srivastava (2017)*⁶ examine the use and satisfaction of the open courseware provided by PG students on E-PG Pathshala. The purpose of accessing online learning resources is discussed in the paper along with the information-seeking behaviours of PG students. The study suggested, educators, professors, faculty members, learners, and students have a duty to actively promote open educational resources to ensure that society as a whole uses them to their utmost potential. Teachers, academic staff, and researchers that work to produce free educational resources should be honoured and rewarded. *Bhushan and Kumar (2018)*⁷ present research on the post-establishment period of electronic libraries in India. They highlight the field of E-PG Pathshala, along with its traits, social impact and applicability for all informational requirements, with a comprehensive approach to nearly 70 disciplines. They also explain the value of E-PG Pathshala to students who might not be enrolled in famous universities like IIT, NIT, IIM, AIMS, IISC, etc. but yet want to learn from these institutions' knowledgeable professors. With the help of these initiatives, learning is now as easy as clicking to e-learning platforms or channel partner subscriptions for live conversations and learning new things and picking the brains of a group of expert professors and beneficial to postgraduate students, regardless of their financial status. *Pallavi et al. (2018)*⁸ This study compares the most recent syllabus for the University Grants Commission (UGC)-National Eligibility Test to learning objects (LO) in the library and information science (LIS) field that are available in the national learning object repository E-PG Pathshala (e-PGP) (NET). The survey indicates that the LIS topics offered in the UGC-NET syllabus are more than sufficiently covered. The e-PGP site covers 74% of the LIS discipline's topics. Findings from the study, which looked at every unit of the LIS modules in the UGC-NET e-PGP syllabus, indicate that the LOR e-PGP, which is designed for PG-level students studying LIS, has the most topics that are missing from units 4, 8, and 9. The study also identifies subject coverage gaps that content creators need to close if learning objects are to continue to be useful and sustainable in LIS education in the future. *Raza et al. (2022)*⁹ in their study, examine the significance of e-PG Pathshala among science and social science teachers and students of the Aligarh Muslim University. The study finds high percentages of students are aware about the curriculum based open courseware. The study further finds the satisfaction level of utilization of all available e-content among students for advanced research writing like dissertation and thesis. *Panda and Chakravarty (2023)*¹⁰ analyses the accessibility outcomes of two Indian OER projects: e-PG Pathshala (e-PGP) (OCW) and SWAYAM (SwM) (MOOC) using TAW accessibility checker, a targeted web page of the websites is checked

for faults, warnings, and does not undergo AAA WCAG 2.1 compliance level inspection. The statistical finding demonstrates that there were more difficulties overall in the case of SwM (i.e. 110) than e-PGP (i.e. 101). The Shapiro-Wilk test for data normality indicates non-normal data and the WCAG 2.1 POUR parameters for e-PGP and SwM were discovered to be strongly associated.

5 RESEARCH PROBLEM

Digital education initiatives are designed to make learning more accessible and effective by using technology to enhance the educational experience. This article is based on the research problem:

- Digital educational platform provide a more interactive learning experience, allowing students to collaborate in real-time with teachers and peers.
- Digital education initiatives are designed to make learning more accessible to those who may not be able to access quality education due to remote locations or with limited access to resources.

6 OBJECTIVE OF STUDY

The study aims to investigate Lawsubject in theinteractive open e-content initiative for postgraduate students developed by subject experts from Indian Universities in particular law modules.

- To analyse the coverage and quality of the e-content of E-PG Pathshala on law subject.
- To assess the effectiveness of E-PG Pathshala in providing legal content to the students.
- To study the feedback of the users on the law e-content modules
- To make recommendations for improving the content and structure of legal topics in E-PG Pathshala.

7 METHODOLOGY

- **Data Collection:** The data is collected through two methods; first direct access to law subject papers and related modules is taken from webpage of E-PG Pathshala.(<https://epgp.inflibnet.ac.in>) Second, for evaluating user's perspective, a structured questionnaire-based survey method is used. For gathering of data Google form and personal interview were conducted among LL.M (80 questionnaire) and Ph.D(18 questionnaire) scholars of National Law University Delhi. Total of 60 per cent response received back for LL.M and 55.56 per cent from doctoral scholars. The data collected are scrutinized, classified, tabulated and presented with the help of percentage.

- **Limitation of the Study:** E-PG Pathshala contains vast academic data pertaining to 20000 e-texts, 19000+ videos, contributed by more than 3200 experts along with 30000+ quizzes on more than 70 subjects. The study is limited up to evaluation of usage of contents coverage on law papers and related modules.

8 DATA ANALYSIS AND INTERPRETATION

8.1 Distribution of E-Text Modules on Law

Table 1 manifests comparison of e-text of papers on subject domain of law and their respective modules. The table reveals that the paper no. 16 has highest no of modules among other subjects' modules followed by paper no 10. It is also observed that the paper no 14 has lowest modules

Paper	PAPER SUBJECT	Modules	Percentage
P-01	Advanced Jurisprudence	28	6.06
P-02	Judicial Process and administration	21	4.55
P-03	Advanced constitutional law	32	6.93
P-04	Access to justice	20	4.33
P-05	Competition law	23	4.98
P-06	Corporate law	20	4.33
P-07	Criminal justice administration	21	4.55
P-08	Environmental law	22	4.76
P-09	Information and communication technology	23	4.98
P-10	Intellectual property law	41	8.87
P-11	International human rights law	18	3.90
P-12	International trade law	23	4.98
P-13	Substantive criminal law	29	6.28
P-14	Research methodology	17	3.68
P-15	Comparative constitutional law	21	4.55
P-16	Moot court competition, seminar and special lectures	103	22.29

Table1: Comparative Analysis of e-text on Respective Subject Modules

Chart 1 depicts the comparison of e-content of papers and subsequent modules in e-text quadrant covering under Law subject for the period of study in E-PG Pathashala. The chart clearly shows the surging of Paper moot court competition, seminar and special Lectures with highest number of modules(103) as compared to remaining modules. The figure clearly shows there is a high gap in percentage of highest number of modules and lowest number of module in respective paper. It is also observed from the chart that e-content availability on other Modules is almost similar, whereas research methodology has submitted lowest 17 modules among others.

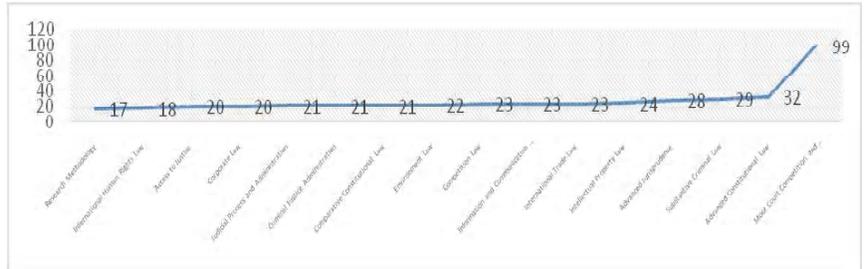


Figure 1: The Bar Diagram Showing Paper and Respective Modules Productivity

8.2 E- PG PATHSHALA: A STUDENT'S SURVEY

E PG Pataskala is mostly useful for post graduate and doctoral research students. A survey on the basis of students/ scholars enrolled with the National Law University Delhi was conducted to collect the responses on the usage of E-PG Patshala for evaluating its utility and credibility of the resources available.

8.3 USER POPULATION

A questionnaire for evaluating user's perspective towards accessing E-PG Pathshala is circulated among students at post graduate level (LL.M) and doctoral level Ph.D). 60% of the post graduate students enrolled with LL.M. and 55.56% of doctoral research scholars have responded for submission of their responses.

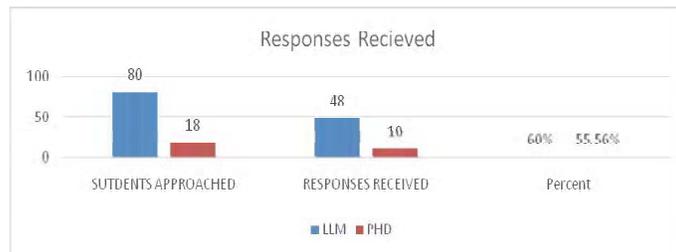


Figure 2: User Responses

8.4 FREQUENCY OF USE OF E- PG PATHSHALA

Figure 3 presents the frequency of using E-PG Pathshala. Majority of the respondents are in the opinion that they use the platform on weekly basis (27.08% LL.M and 40% Ph.D) followed by monthly access (25% LL.M and 30% Ph.D) relatively high percent of LL.M mentioned they use the platform occasionally (27.08% LL.M and 20% Ph.D). The ratios of daily users are lesser as compared to other options (22.84% LL.M and 10% Ph.D).

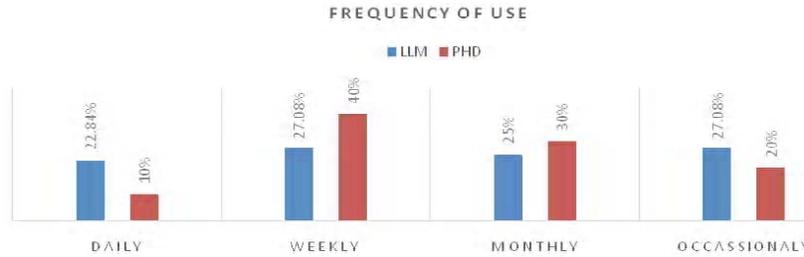


Figure 3: Frequency of Use of E-PG Pathshala

8.5 E-CONTENT USAGE PATTERN

Figure 4 gives the analysis of opinion on most preferred e-content available among Electronic Text (E-Text), E-Tutorials/Videos and self-assessment module in E-PG Pathshala. Majority of the users are of opinion towards access of e-text format (41.67%LL.M and 50% Ph.D) followed by all of them (33.34% LL.M and 20% Ph.D) relatively lesser responded towards access of e tutorial (16.66%LL.M and 20% Ph.D) and self-assessments (8.33% LL.M and 20% Ph.D)

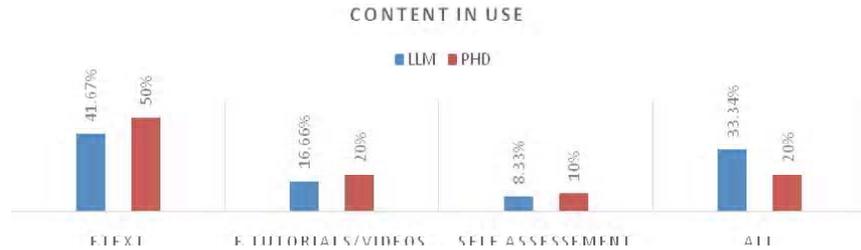


Figure 4: Contents in Use

8.6 PURPOSE OF USING E-PG PATHSHALA

Figure 5 depicts the purpose for using E-PG Pathshala web-platform in the order of priorities. Thesis and dissertation writing (41.66.34% LL.M and 40% Ph.D), Research paper writing (31% LL.M and 30% Ph.D), Preparatory notes (6.25% LL.M and 10% Ph.D) upgrading knowledge (20.48% LL.M and 20% Ph.D)

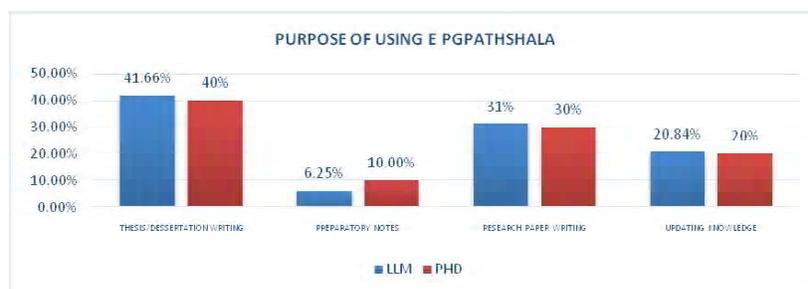


Figure 5: Purpose for Using E-PGPathshala

8.7 SATISFACTION LEVEL FOR USING E-PG PATHSHALA

Figure 6 gives users viewpoint towards satisfaction level of e-content of while using E-PG Pathshala portal. Majority of the users mentioned they are satisfied (50% LL.M and 60% Ph.D) while using the e-content, whereas (29.17% LL.M and 20% Ph.D) marked the portal excellent, (16.66% LL.M and 10% Ph.D) mentioned there is a need of improvement, it is observed that very fewer stated (4.16% LL.M and 10% Ph.D) that they are not satisfied with the e-content in law subject

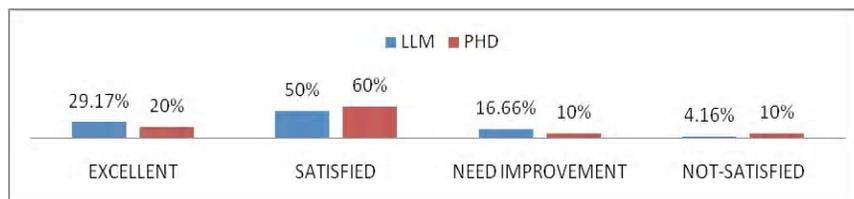


Figure 6: Satisfaction Level for Using E-PG Pathshala

9 FINDINGS

University Grants Commission has established e-PG Pathshala with a view to serve higher education institutions facilitating access of quality courseware contributed by the experts. On the basis of survey and responses received the following findings have been mapped.

- The platform has been well received by the students, and it appears to be meeting their needs for learning and gain knowledge and the survey received good response (60% LL.M and 55.56% Ph.D).
- The findings of the student survey conducted by E-PG Pathshala revealed that the majority of students found the platform to be very helpful in their learning and they prefer to use on weekly basis (27.8% LL.M and 40% Ph.D).
- The study also finds that the platform is user-friendly, and students have reported that the learning process was easy to understand and

engaging. The platform also offers a wide range of educational materials among e-text has been preferred the most (41.6% LL.M and 50% Ph.D)

- The feedback was also positive regarding the overall user experience, with most of the students finding the platform to be easy to navigate and the interface to be intuitive. This is encouraging, as it demonstrates the effectiveness of E-PG Pathshala as a learning platform especially for advanced research writings like theses and dissertations (4.16% LL.M and 10% Ph.D). It also suggests that the platform can continue to be improved and enhanced to meet the needs of its users.
- Most of the students reported that the courses were well organized and the content was easy to understand. Additionally, the students also expressed satisfaction (50% LL.M and 60% Ph.D) with the quality of the teaching materials.
- In Conclusion, the survey results indicate that the majority of users appreciate the platform and find it useful. The majority of users also reported that they are able to access the platform easily and find the courses helpful. However, the survey also revealed that there are still some areas where E-PG Pathshala can be improved. Specifically, many users reported that they would like more courses to be offered, as well as more updates and tutorials. Overall, the survey provides valuable insight into the current state of E-PG Pathshala and will help the platform to continue to be improved and more user-friendly.

10 CONCLUSION

Digital education is becoming increasingly important in India for a variety of reasons. Singh and Rai(2017)¹¹ mentioned global open access movement strives to democratisation of information and government of India initiatives towards open government data platforms opens up new digital regime. The present study finds that digital education portals enhance access to quality education for students in underserved and remote areas. With digital education platforms like E-PG Pathshala, students can access quality learning materials and take part in interactive learning activities from anywhere with an internet connection. Additionally, digital education portals reduce the cost of providing education and can make it easier for teachers to provide instruction. Finally, it can be drawn from the study that digital education improves the quality of instruction by providing teachers with access to up-to-date educational resources and tools. Digital education platforms can also be used to facilitate collaboration between teachers, provide access to real-time feedback, and provide personalized learning experiences. These initiatives are helping to promote digital education in India to ensure that students have access to quality education and the tools needed to succeed in the 21st century.

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