

Digital Learning Interface: Gateway to Teach and Learn

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Abstract

Globalization has brought changes in almost all spheres of people's daily life. During the last decade, digital learning has emerged as a highly effective tool of teaching and learning, there is a growing demand that it be included in teacher education. If digital learning is integrated into the curriculum and assessment by skilled teachers, it can create new potential opportunities for students and teachers to acquire knowledge, skills, and learning. But, with all of these advantages, there comes a problem. Being a teacher in the digital era can be quite overwhelming. There are so many new innovative tools that many teachers feel they can't keep up with them, or they feel that they are not given the support on how to effectively integrate them into their classrooms. Simply adopting digital learning does not lead to a high-quality outcome if teachers remain static. Educators have long recognized that teachers' beliefs about digital learning play an essential role in their teaching. This paper aims to gain insights into how teaching and learning go forward in a world of the digital era.

Keywords: Digital learning Interface, Teaching, Learning

Introduction

In the age of globalization, the Indian education system is facing great challenges from conventional ways of teaching-learning. In India, the most classrooms are teacher-centric. The teacher is supposed to be the center, the fount, of all knowledge (Vidya); the students are perceived as relatively empty vessels, into which knowledge and skills are to be deposited as efficiently as possible. It also raises great demands for the transformation of traditional ways of teaching-learning towards innovative and creative ways of learning. The development of science and technology, especially the application of information and communication technologies (ICT) in the new era has greatly influenced teaching and learning in education. Educational transformation and reform have become an urgent issue across the

globe to meet the demands of new educational objectives in the knowledge-based economy (Barone & Hagner, 2001).

The Digital Learning interface brings fundamental changes to the way teaching-learning occurs in schools and higher education. Conventional teaching is not able to educate adequate citizens to live in the 21st century (Amin, 2016). Today, teachers are required to be facilitators and helping learners to make judgments about the quality and validity of new sources and knowledge, be open-minded and critical independent professionals, be active cooperators, collaborators, and mediators between learners and what they need to know, and providers to scaffold understanding (Weinberger, Fischer, & Mandl, 2002).

Having realized its potential for improving the educational practice NCERT has started the National ICT Award for school teachers. This award is given annually to the school teachers for innovative use of technology in learning

Digital Learning Interface

In common parlance, the word “Digital learning Interface” has broad and varied meanings. It offers new ways for teachers and students to engage in the teaching-learning process. In a digital learning interface, the delivery hardware can range from desktop computers or laptops to tablets or smartphones, but the instructional goal is to support individual learning or organizational performance goals. In digital learning, courses are delivered via digital devices using words in the form of printed text or spoken and pictures such as animation, or video. It allows the individual learner to access training at any time or any location on their own. Since the use of ICT in education, there has been an ongoing debate as to the different resources of teaching and learning.

The Government of India through its national ICT policy in education along with many other initiatives under digital India is moving ahead to transform the educational practices, creating resources, providing infrastructure, and training the teachers and teacher educators. The following popular digital learning interfaces are available for effective pedagogical practices.

- SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds), is a program initiated by the Government

of India. This effort aims to take the best teaching-learning resources to all, including the most disadvantaged. All courses are available free of cost for learning. In case the learner requires a verified certificate, a small fee will be applicable.

- E-Basta: In line with the government's Digital India initiative, C -DAC has created a framework to make school books accessible in digital form as e-books to be read and used on tablets and laptops.
- E-Pathshala, Government's Digital India initiative, has been developed by NCERT. The main idea is to bring various publishers and schools together on one platform for disseminating all educational e-resources including “textbooks, audio, video, periodicals, and a variety of other print and non-print materials through website and app. Students, teachers, educators, and parents can access e-books through multiple technology platforms.
- NPTEL (The National Programme on Technology Enhanced Learning), a project sponsored by the Ministry of Human Resource Development was first conceived in 1999 to pave the way for introducing multimedia and web technology to enhance the learning of basic science, math, and engineering concepts.
- National Digital Library of India is designed to hold the content of any language and provides interface support for leading vernacular languages. It is being arranged to provide support for all academic levels including teachers, researchers, and learners. All popular

forms of access devices and differently-abled learners.

- NMEICT (The National Mission on Education through Information and Communication Technology), has been envisaged as a Centrally Sponsored Scheme to harness the potential of ICT, in the teaching-learning process for the benefit of all the learners in Higher Education Institutions at anytime, anywhere and any mode.
- NROER (The National Repository of Open Educational Resources) is a collaborative platform, which brings together everyone interested in school and teacher education. It offers digital and digitized resources (audio, video, interactive images, and documents) in different languages along with online activities.

DLI and Teaching-learning

While the introduction of e-Learning and other digital technologies in some higher education institutions of learning has yielded positive results, the birth of interactive learning has called into question the acceptance of such teaching tools and the new roles that teachers have to play (Lu J & Yao JE, 2014). Digital learning interface (DLI), use is rapidly permeating every aspect of contemporary university life. It provides new ways of engaging with each other, with information, and with the world; we have pointed to both promising and problematic implications of these affordances. Educational technology has the potential to improve teaching-learning practices in education; however, the integrated use of technology in education is a complex system. In the last decade, educational

technology has made only modest inroads into changing teaching in schools and universities (Moser, 2007).

A teacher equipped with digital technologies can nurture divergent thinking, innovation, critical analysis, and scientific temper among the students to transform them into life-long learners and innovators. Oskouei (2010) internet is useful to both students as well as teachers if it is as a tool of knowledge creation and dissemination.

Many studies have been conducted on digital learning and ICT. According to the findings of Jones and Shao (2011) students prefer the moderated use of Information and Communication Technologies (ICT) in their courses, viewing the use of course management systems, e-books, and online libraries positively; along with the use of new technologies such as blogs, wikis and 3D virtual worlds, the students positively respond to the incorporation of innovative technologies into the teaching and learning process provided that the technology used is well-conceived, purposeful and properly integrated into the teaching-learning process.

A review of online learning by Tallent-Runnels (2006) overwhelming evidence has shown that learning in an online environment can be as effective as that in traditional classrooms. Second, students' learning in the online environment is affected by the quality of online instruction. Clark and Mayer (2016) have reported growth from approximately 11 percent technology-

delivered instruction in 2001 to around 39 percent in 2011–2013 (ATD, 2014). Previous studies have pointed out that digital learning interfaces provide a platform to access digital resources for a person with special needs, such as those with visual or hearing impairments, learning or cognitive disabilities. It should be leveraged to help teachers shift from transferring information to facilitating learners to create knowledge and help them to shift from an acquisition mode of learning to one that engages in higher-order thinking, innovation, creativity, and collaboration.

E-learning is an important tool for learners. The 9.7% growth rate in the number of college and university students enrolled in at least one online class reported significantly exceeded the 1.5% growth rate in the overall higher education student population during the same period (Brady, et al, 2010). Rutherford (2010) examined that there is a positive relationship between academic uses of technology and the occurrences of active and collaborative learning and the frequency of student-faculty interactions. The educational performance of the students can be influenced positively or adversely by the use of technology such as the internet which is one of the most important factors in the 21st century (Mahamat, Rahim, and Oye, 2012).

The National Curriculum Framework for Teacher Education (NCFTE, 2009) considered among other things the Issues related to ICT in schooling as well as e-learning are in the center stage. The report states that ICT

despite its potential to make learning liberating, implementation is often not more than cosmetic. The curriculum recommends the inclusion of ICT as an important curricular resource, according to primacy to the role of the teacher, ensuring public ownership of digital resources, and promoting constructivist approaches that privilege anticipation and co-creation over mere access to it. A meta-analysis by Bernard et al. (2004) integrating research studies that compared learning from electronic distance education to learning from traditional classroom instruction yielded the achievement effect, indicating no practical differences in learning between face-to-face and electronic distance learning.

Conclusion

The Digital learning interface seems to have a profound impact on the process of learning in schools and higher education by offering new possibilities for teachers and learners. It can provide many advantages for teaching and learning innovations. In addition, although many schools and higher education institutions have invested a lot in hardware, the educational technology application in teaching and learning is still quite limited. Creating a support system that facilitates the creation, use, and management of DLI. It is the first stage in harnessing the full potential of DLI. There is a necessity to equip all teachers with the necessary DLI skills and knowledge on the appropriate pedagogical use of ICT in teaching and learning. Digital Learning Interface permits teachers to teach less and learners to learn more.

References

1. Brady, K. P., Holcomb, L. B., & Smith, B. V. (2010). The use of alternative social networking sites in higher educational settings: A case study of the e-Learning benefits of Ning in education. *Journal of Interactive Online Learning*, 9(2), 151–170.
2. Barone, C. A., & Hagner, P. R. (Eds.). (2001). *Technology-enhanced teaching and learning: Leading and supporting the transformation on our campus*. San Francisco, CA: Jossey-Bass.
3. Clark, R.E. (1994). Media will never influence learning. *Educational Technology Research and Development*, 42, 21–30. This is a classic paper; one of the first to clearly distinguish instructional media from instructional methods.
4. Clark, R. C. and Mayer, R. E. (2016). *E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning*, (4th ed., pp. 07–25).
5. E-Pathshala Retrieved from <http://mhrd.gov.in/ICT-Initiatives-e-Pathshala>
6. J, Amin (2016), Redefining the Role of Teachers in the Digital Era, *International Journal of Indian Psychology*, Volume 3, Issue 3, No. 6, DIP: 18.01.101/20160303
7. Jenkins, H., with K. Clinton, R. Purushotma, A. J. Robison, and M. Weigel. 2006. Confronting the challenges of participatory culture: Media education for the 21st century. Paper for the MacArthur Foundation. <http://www.digitalllearning.macfound.org> (accessed Feb. 26, 2017).
8. Jones, C., & Shao, B. (2011). The net generation and digital natives: Implications for higher education. *Higher Education Academy*, York. Retrieved from <http://oro.open.ac.uk/id/eprint/30014>
9. Lu J, Lu C, Yu CS, Yao JE 2014. Exploring factors associated with wireless internet via mobile technology acceptance in Mainland China. *Communications of the IIMA*, 3(1): 9.
10. Moser, F. Z. (2007). Faculty adoption of educational technology. Educational technology support plays a critical role in helping faculty add technology to their teaching. *EDUCAUSE Quarterly Magazine*, 30(1), 2007. Retrieved from <http://www.educause.edu/EDUCAUSE+Quarterly/EDUCAUSEQuarterlyMagazineVolum/FacultyAdoptionofEducationalTe/157436>
11. Metzger, M. J., A. J. Flanagin, and L. Zwarun. (2003). College student web use, perceptions of information credibility, and verification behavior. *Computers and Education* 41:271–290.
12. Mahamat Helou A., A.B.Rahim Z.Z.2, and Oye, N. D. (2012). “Students’ Perceptions on Social Networking Sites Influence on Academic Performance”, *International Journal of Social Networking and Virtual Communities (Int J Soc Net & Vircom)*. 1.7-15.
13. National Programme on Technology Enhanced Learning Retrieved from <http://nptel.ac.in/pdf/NPTEL%20Document.pdf>
14. National Digital Library of India Retrieved from <https://ndl.iitkgp.ac.in/>
15. National Mission on Education through ICT Retrieved from http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/MissionDocument.pdf
16. Oskouei, R. J., and Chaudhary, B. D. (2010). Internet Usage Pattern by Female Students: A case Study. *Information Technology: New Generations*, 7th International Conference held in Las Vegas from 12-14, April 2010, Las Vegas. Pp. 1247-1250.
17. Rutherford, C. (2010). “Using Online Social Media to Support Preservice Student Engagement”, *MERLOT Journal of Online Learning and Teaching*. 6(4).703-7011
18. SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) Retrieved from <https://swayam.gov.in/AboutVogt, M., and E. Mazur. 2005. The interactive learning toolkit. The Physics Teacher 43:398–398.>
19. Weinberger, A., Fischer, F., & Mandl, H. (2002). Fostering individual transfer and knowledge convergence in text-based computer-mediated communication. In G. Stahl (Ed.), *Computer support for*

collaborative learning: Foundations for a CSCL community. Proceedings of CSCL 2002. Mahwah, NJ: Lawrence Erlbaum.

20. Weigel, M., James, C. and Gardner, H. (2009). Learning: Peering Backward and Looking Forward in the Digital Era. International Journal of Learning and Media, Vol. 1, 1-18