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BLENDED MODE OF TEACHING AND LEARNING FOR TEACHERS COMMUNITY

Volume -1

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TECHNOLOGICAL INFRASTRUCTURE FRAMEWORK FOR THE IMPLEMENTATION OF BLENDED LEARNING, TO IMPROVE QUALITY OF EDUCATION

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Abstract

Education has seen many transformations. From ancient times to till date, the importance of education is always realized and the changing world changes dimensions of the education. Technology is always evolving around the innovation and creativity. Introduction of computer, information technology and internet brought many changes in the education field also. The learning was made very easy, flexible, simple and creative. Blended learning, a revolutionary concept, is a technology-mediated instruction, web-enhanced instruction, or mixed-mode instruction, is an approach to education that combines online educational materials and opportunities for interaction online with physical place-based classroom methods. "Blended learning" is sometimes used in the same breath as "personalized learning" and differentiated instruction. There are many platforms and infrastructural facilities for facilitating blended learning in education service. But there are practical challenges and difficulties in implementation of blended learning. There are many educational institutions which are unable to afford upgrading technologies. Government should focus on improving the technology aids and infrastructure for facilitating blended learning in the rural and urban schools and colleges. This article has the overview of blended learning, types of blended learning, technology infrastructure for blended learning and challenges for blended learning. By creating a system of support that puts people first, adult education providers will work responsively to ensure educators are equipped with the knowledge and resources.

Keywords: *Blended learning, Technology framework, Technology infrastructure, personalized learning, challenges of blended learning.*

Introduction

Blended learning, a revolutionary concept, is a technology-mediated instruction, web-enhanced instruction, or mixed-mode instruction, is an approach to education that combines online educational materials and opportunities for interaction online with physical place-based classroom methods. It is sometimes used in the same breath as "personalized learning" and differentiated instruction. It is needed to create high-quality, collaborative learning experiences where learners develop confidence and competence using technology for learning, for work and in their daily lives.

Blended Learning

Blended learning, also known as technology-mediated instruction, web-enhanced instruction, or mixed-mode instruction, is an approach to education that combines online educational materials and opportunities for interaction online with physical place-based classroom methods. Blended learning requires the physical presence of both teacher and student, with some elements of student control over time, place, path, or pace. While students still attend brick-and-mortar schools with a teacher present, face-to-face classroom practices are combined with computer-mediated activities regarding content and delivery.

Evolution of Blended Learning

Phase – I

Technology-based training emerged as an alternative to instructor-led training in the 1960s on mainframes and mini-computers. The major advantage that blended learning offers is scale, whereas one instructor can only teach so many people. One example is PLATO (Programmed Logic for Automatic Teaching Operations), a system developed by the University of Illinois and Control Data. PLATO in particular had a long history of innovations and offered coursework from elementary to the college level.[18] Mainframe-based training had a number of interface limitations that gave way to satellite-based live video in the 1970s. The advantage here was serving people who were not as computer literate. The major challenge was the expense required to make this work.

Phase – II

In the early 1990s, CD-ROMs emerged as a dominant form of providing technology-based learning as bandwidth through 56k modems wasn't able to support very high quality sound and video. The limitation to CD-ROMs was tracking completion of coursework, so learning management systems emerged as a way to facilitate progress tracking. The aviation industry used this heavily to track how well one did on courses, how much time was spent, and where someone left off. AICC, Aviation Industry Computer-Based Training Committee, was formed in 1988 and companies such as Boeing used CD-ROMs to provide training for personnel.

Phase – III

Modern blended learning is delivered online, although CD-ROMs could feasibly still be used if a learning management system meets an institution's standards. Some examples of channels through which online blending learning can be delivered include webcasting (synchronous and asynchronous) and online video (live and recorded). Solutions such as Khan Academy have been used in classrooms to serve as platforms for blended learning.

Types of Blended Learning

1. Station Rotation Blended Learning

Station-Rotation blended learning is a model (that) allows students to rotate through stations on a fixed schedule, where at least one of the stations is an online learning station. This model is most common in elementary schools because teachers are already familiar with rotating in centers and stations.

2. Lab Rotation Blended Learning

'The Lab Rotation' model of blended learning, similar to "Station Rotation,' works by "allowing students to rotate through stations on a fixed schedule in a dedicated computer lab allowing for flexible scheduling arrangements with teachers enabling schools to make use of existing computer labs."

3. Remote Blended Learning (also referred to as Enriched Virtual)

In Enriched Virtual blended learning, the student's focus is on completing online coursework while only meeting with the teacher intermittently/as-needed. This approach differs from the Flipped Classroom model in the balance of online to face-to-face instructional time.

4. Flex Blended Learning

The 'Flex' is included in types of Blended Learning and its model is one in which "a course or subject in which online learning is the backbone of student learning, even if it directs students to offline activities at times. Students move on an individually customized, fluid schedule among learning modalities.

5. The 'Flipped Classroom' Blended Learning

Perhaps the most widely known version of blended learning, a 'Flipped Classroom' is one where students are introduced to content at home, and practice working through it at school supported by a teacher and/or peers. In this way, traditional roles for each space are 'flipped.'

6. Individual Rotation Blended Learning

The Individual Rotation model allows students to rotate through stations, but on individual schedules set by a teacher or software algorithm. Unlike other rotation models, students do not necessarily rotate to every station; they rotate only to the activities scheduled on their playlists."

7. Project-Based Blended Learning

Blended Project-Based Learning is a model in which the student uses both online learning—either in the form of courses or self-directed access—and face-to-face instruction and collaboration to design, iterate, and publish project-based learning assignments, products, and related artifacts.

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8. Self-Directed Blended Learning

In Self-Directed blended learning, students use a combination of online and face-to-face learning to guide their own personalized inquiry, achieve formal learning goals, connect with mentors physically and digitally, etc. As the learning is self-directed, the roles of 'online learning' and physical teachers change, and there are no formal online courses to complete.

9. Inside-Out Blended Learning

In Inside-Out blended learning, experiences are planned to 'finish' or 'end up' beyond the physical classroom, but still require and benefit from the unique advantages of both physical and digital spaces. In both the Outside-In and Inside-Out models, the nature of the 'online learning' is less critical than the focus on platforms, spaces, people, and opportunity beyond the school walls.

10. Outside-In Blended Learning

In Outside-In blended learning, experiences are planned to 'start' in the non-academic physical and digital environments students use on a daily basis, but finish inside a classroom. This could mean traditional letter grades and assessment forms, or less traditional teaching and learning that simply uses the classroom as a 'closed-circuit' publishing 'platform'—a safe space to share, be creative, collaborate, and give and receive feedback that grows student work.

Technology and Blended Learning

Teachers can deepen student learning by making the most of classroom technology. Blended learning continues to grow as an approach to meeting learner needs, especially as schools put more computers and other devices into student hands. The growth of blended learning is generally paced at the comfort of teachers as they expand their use of digital tools for teaching and learning—at present learning to teach with digital tools seems to be the greater focus than exploring how to deepen students' learning. Learning how to teach through blended learning makes perfect sense when the teacher is the learner, seeking to expand their toolbox of instructional practices. But opportunities exist to further transform practices by placing learning into students' hands.

Technology Infrastructure for Blended Learning

Infrastructure	Explanation
1. Learning Management Systems	A learning management system, or LMS, is often the technological cornerstone of a blended learning environment. An LMS is an integrated software application to deliver content and resources online, to provide interaction or collaborative work spaces, and to manage complete student, course and programmer administrative functions, including registration, assessment and analytics.

	There are several large commercial vendors of LMSs, including Blackboard (www. blackboard.com) and Desire2Learn (https://www. d2l.com), as well as popular, fully functional open-source alternatives, such as Moodle (https://moodle.org) and Canvas (https://www. canvaslms.com).
2. Web Conferencing	Web conferencing can be used in blended learning as an online counterpart to classroom-based tutorials, seminars or any synchronous (real-time) learning activity, such as collaborative, project- based work. Its most typical applications are for one-to-many slideshow-based presentations (webcasts) and many-to-many group meetings (webinars), but it can also include one-to-one private tutorial or innovative assessment sessions. Web conferencing tools are usually highly multi modal, with simultaneous video, voice, text chat, whiteboard annotations and screen sharing, making them rich and dynamic — but also complex — learning environments the more powerful web conferencing tools, such as Adobe Connect(https://www.adobe.com/product/adobeconnect. html), Blackboard (www.blackboard.com/online-collaborative-learning/blackboard-collaborative.html) Collaborate and Zoom (https://zoom.us), are typically offered as hosted web services.
3. Digital Textbooks	Digital textbooks are available both through commercial publishers and through open-source initiatives. While commercial e-texts will typically be promoted as being of higher quality or better aligned with regional or national standards, the higher cost warrants a careful comparison between commercial and open-source alternatives; open-source texts are often of equal or even higher quality and offer additional advantages. Open-source texts can be shared freely and, unlike many commercial texts, never expire, allowing students to retain them as permanent references.
4. Blogs and Wikis	A blog is an online diary that can be shared across the class or with the general public, allowing individual learners to write reflectively about their own learning and to receive feedback from their peers. Beyond reflective writing, common blog-based learning activities include reviewing and critiquing online articles or resources, journaling about experiences in project- or field-based studies (acting, in essence, as a form of e-portfolio), or citizen journalism.

	Wikis are collaborative writing spaces constructed around interlinked webpages. Using a custom markup language and management tools, learners (with the appropriate access) can create or edit any wiki page at any time, with all modifications stored in a restorable list of revisions, allowing for highly constructivist learning activities. Some common activities include brainstorming, group essays, or class books (including digital textbooks).
5. Social Bookmarking, Mashups and Digital Storytelling	Social bookmarking is the relatively straightforward activity of collecting, tagging and sharing online resources such as articles, news reports or images. Del.isio.us (https://del.icio.us), Digg (https://digg.com) and Scoop.It (https://www.scoop.it) are popular commercial bookmarking services, but RSS aggregators can also be included in this category. Mashups extend the idea of social bookmarking to allow learners to compile, combine and remix online resources and data in more structured ways to produce new interpretations or meaning. These new structured forms can include knowledge mapping, historical timelines or data visualization and can be powerful tools for developing learners' research skills. Digital storytelling can, in turn, be considered an extension or "completion" of the notion of mashups and can be a very rich and meaningful learning experience. Through digital storytelling, learners combine a range of media — text, images, video, audio, maps and data — to craft a unified narrative.
6. Simulations, Serious Games and Virtual Worlds	Simple simulations can often be incorporated into blended learning as open educational resources to help illustrate mathematical, technical or scientific concepts; Khan Academy (https://www.khanacademy.org) offers a number of such Simulations. As simulations become more complex, asking learners to consider trade-offs and multiple values, they begin to take on more of the nature of a serious or applied game. Some serious games, such as flight or medical simulations, immerse learners in three-dimensional settings and begin to take on the characteristics of virtual worlds. The full concept of a virtual world is reached when learners can begin to interact with other learners within the three-dimensional space.

	Other than simple simulations, which are commonly used in blended learning, and some serious games, these more immersive technologies can be very demanding in terms of equipment, resources and learner support.
7. E-portfolios	Electronic portfolios, or e-portfolios, are collections of writing, documents and other artefacts maintained individually by students to demonstrate their learning over a course or programme. Although they are typically considered in terms of assessment (e.g., as a "capstone" project) or as showcasing skills and achievements (for future employment), e-portfolios can also play an important developmental role, requiring learners to reflect on their work and evaluate it objectively.

Challenges in Acquisition of Technology Infrastructure

Imposing new burdens on educators

A true blended model, where some students are in the classroom and others are learning remotely at the same time, can sometimes require more of educators than what traditional-format teaching requires. With blended learning, there's more to handle "live" while teaching, as instructors must interact with both in-person and remote students. Educators find their attention divided more than they would with in-person instruction alone.

Requiring greater comfort with technology

Teaching well in a blended learning setting requires more technology use than is usually needed for in-person teaching. Some faculty have no trouble at all making these adjustments, but the technology-averse will need training and ongoing support.

Difficult without proper technology solutions

One of the challenges of blended learning is that doing it well requires the right combination of digital tools and services from a technology partner that understands the unique needs of higher education. D2L is here to serve you as you work toward these goals with our Brightspace platform and other tools.

Conclusion

Blended learning is a learning process that combines face-to-face learning with online learning to produce valid, effective and efficient learning. Blended learning, one of the teaching model, mixed traditional methods of teaching with an online courses for achieving specific learning goals. A blended learning approach provides access to diverse and flexible learning environments and nurtures enriched literacy and learning. Learners who experience blended learning will see the world as they know it reflected in the programs where they learn and will deploy critical thinking skills to participate in a society where we are required to create, collaborate and communicate in digitally mediated

networks. By creating a system of support that puts people first, adult education providers will work responsively to ensure educators are equipped with the knowledge and resources they need to create high-quality, collaborative learning experiences where learners develop confidence and competence using technology for learning, for work and in daily lives.

References

1. en.wikipedia.org/wiki/Blended_learning
2. www.teachthought.com/learning/12-types-of-blended-learning/
3. www.edutopia.org/article/tech-integration-blended-learning/
4. openbooks.col.org/blendedlearning/chapter/chapter-5-technologies-for-blended-learning/
5. www.d2l.com/blog/advantages-and-challenges-of-blended-learning/
6. https://ecampusontario.pressbooks.pub/blendedlearning/chapter/conclusion/