BLENDED LEARNING

Pedagogy and teaching tools for integration of new knowledge

Dr R K Pandit
Professor & Head
Department of Architecture
Madhav Institute of Technology & Science,
Gwalior

Thoughtful Cooling 9th to 11th January
2015
Pedagogy is the art or science of teaching. The word comes from the ancient Greek paidagogos, the slave who took little boys to and from school as part of paideia.

The word "paidia" refers to children, which is why some like to make the distinction between pedagogy (teaching children) and andragogy (teaching adults).

The Latin-derived word for pedagogy, education, is much more widely used, and often the two are used interchangeably.
Blended learning describes a process or practice; hybrid pedagogy is a methodological approach that helps define a series of varied processes and practices. Blended learning is tactical, whereas hybrid pedagogy is strategic.

When people talk about “blended learning,” they are usually referring to the place where learning happens, a combination of the classroom and online.

The word “hybrid” has deeper resonances, suggesting not just that the place of learning is changed but that a hybrid pedagogy fundamentally rethinks our conception of place.

Blended learning is a formal education program in which a student learns at least in part through delivery of content and instruction via digital and online media with some element of student control over time, place, path, or pace.
While still attending a “brick-and-mortar” school structure, face-to-face classroom methods are combined with computer-mediated activities. A lack of consensus on a definition of blended learning has led to difficulties in research about its effectiveness in the classroom.

**Hybrid pedagogy** does not just describe an easy mixing of on-ground and online learning, but is about bringing the sorts of learning that happen in a physical place and the sorts of learning that happen in a virtual place into a more engaged and dynamic conversation.
“Blended learning” appears to have been in use since the popular advent of the Internet and the World Wide Web in the late 1990s.

However, like many other Internet buzzwords around this time (e.g., new economy, e-learning), its precise connotations have changed and subsequently converged and stabilized.

From 2006 to the present, blended learning has been understood as a combination of face-to-face and technology-mediated instructional forms and practices.

At the same time, the phrases “face-to-face” and “technological mediation” themselves may generally benefit from further definition and contextualization.

As a result, this paper traces out the etymology of the evolving meaning of the term “blended learning,” and it also maps out analytically the significance of the opposed terms that have come to be seen as “blended” in it.
What is blended learning?

It is the use of two or more distinct methods of training.

This may include combinations such as:

• Blending classroom instruction with Online instruction
• Blending online instruction with access to faculty member
• Blending simulations with structured courses
• Blending on-the-job training with informal sessions
• Blending managerial coaching with e-learning activities.
Objectives of Blended learning

1. To combine or mix modes of web-based technology (e.g., live virtual classroom, self-paced instruction, collaborative learning, streaming video, audio, and text) to accomplish an educational goal.

2. To combine various pedagogical approaches (e.g., constructivism, behaviourism, cognitivism) to produce an optimal learning outcome with or without instructional technology.

3. To combine any form of instructional technology (e.g., videotape, CD-ROM, web-based training, film) with face-to-face instructor-led training.

4. To mix or combine instructional technology with actual job tasks in order to create a harmonious effect of learning and working.
Taxonomy of Blended Learning Forms

One particularly detailed model of blended learning has been recently formulated for the primary and secondary school sectors in a report for the Innosite Institute (Staker and Horn 2012).

The report breaks down the continuum of possible combinations of these blended learning forms into four discrete combinations or models.

At least two of these combinations are of direct relevance to higher education, while the others show the kinds of combinations that are educationally feasible, but probably best suited for K-12 settings.

These models move from relatively classroom-intensive combinations to ones that are more dependent on online mediation:
Taxonomy of Blended Learning Forms

1. “The rotation model,” in which online engagement is combined or rather, embedded, within a range of face-to-face forms of instruction in a cyclical manner.

2. “The flex model,” in which multiple students are engaged primarily online, but under the supervision of a teacher who is physically present.

3. “The self-blending model,” in which students choose different courses to take independently, but do so in a setting where a supervising teacher and other students are co-present.

4. “The enriched-virtual model,” in which online, virtual experiences are seen as being enriched only periodically through arrangements of physical co-presence.
1. **Traditional Schools**

   a. **Online Lab Model**, in which instruction is delivered by online teachers through a digital learning platform but within a brick-and-mortar lab environment. The lab is often supervised by paraprofessionals with little content expertise.

   b. **Self-Blend Model**, where students take one or multiple online courses to supplement their traditional schooling. The online courses are taken outside of the school facility, and the student’s core instruction is still conducted in the traditional brick-and-mortar setting.

2. **Blended Schools**

   a. **Rotation Model**, exemplified by a fixed schedule rotating students between online learning and traditional classroom learning. The face-to-face teacher typically is accountable for both the online and in-classroom work.

   b. **Flex Model**, in which most of the instruction is delivered by an online platform with face-to-face teachers available for on-site support. Teachers provide tutoring sessions and small group sessions. This model is often used for dropout and credit-recovery students.
3. Virtual Schools

a. Online Driver Model, where students receive all of their primary instruction online (through an online platform and from an online teacher) with occasional face-to-face check-ins.

b. On/Off-Site Rotations, a type of online-driven model in which students come on-site on a scheduled part-time basis. Connections Learning has further identified a subset of models currently being used by schools, districts, and other educational programs around the country.

c. All of these programs fall within the Connections Learning
Fusion Model of blended learning:

1. Fusion Lab Programs, which are full-time programs at a site attached to a school, including on-site teachers or paraprofessionals, online instructors, subject-area specialists, computer labs, and wrap-around support.

2. These lab programs often target at-risk or struggling students.

3. Fusion Supplemental Programs, which serve students in a blended setting for one to several courses, while they take the rest of their curriculum in a traditional face-to-face environment.

4. These supplemental programs may be within a traditional school building or in...
Three critical features to an effective blended learning program are:

1. Effective Online Instruction and Dynamic Student Grouping

2. The Flexible Use of Space and Schedule

3. Data-Empowered Leadership
Blended learning in relation to other education practices
Blended learning models
Rotation model

Thoughtful Cooling 9th to 11th January
2015
All learning's are hybrid.

In classroom-based pedagogy, it is important to engage the digital selves of our students. And, in online pedagogy, it is equally important to engage their physical selves.

With digital pedagogy and online education, our challenge is not to merely replace (or offer substitutes for) face-to-face instruction, but to find new and innovative ways to engage students in the practice of learning.

Blended learning brings together the best of technology-based online learning and face-to-face instruction.
Each of these binaries is currently being challenged by the evolution of educational technology.

Our goal is to think critically about both sides of each binary and not to neatly privilege either toward the goal of a more thorough deconstruction of our pedagogies.

Hybridity is about the moment of play, in which the two sides of the binaries begin to dance around and through one another before landing in some new configuration.

Thus Hybrid Pedagogy is not just about what will become of us in the wake of technological and cultural transformation, but also and perhaps more predominantly about the process of becoming itself.
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.

Mainframe-based training had a number of interface limitations that gave way to satellite-based live video in the 1970s.
Classification of Blended Learning:

1. **Face to face driver** - where the teacher drives the instruction and augments with digital tools.

2. **Rotation** - students cycle through a schedule of independent online study and face-to-face classroom time.

3. **Flex** - Most of the curriculum is delivered via a digital platform and teachers are available for face-to-face consultation and support.

4. **Labs** - All of the curriculum is delivered via a digital platform but in a consistent physical location. Students usually take traditional classes in this model as well.

5. **Self-Blend** - Students choose to augment their traditional learning with online course work.

6. **Online Driver** - All curriculum and teaching is delivered via a digital platform and face-to-face meetings are scheduled or made available if necessary.
Pedagogy & Technology Integration

The problem of integrating technology into teaching and learning process has become a perennial one.

Common excuses for the limited use of technology to support instruction include shortage of computers, lack of computer skill and computer intimidation.

While these could affect the success of technology integration, it should be acknowledged that the degree of success teachers have in using technology for instruction could depend in part on their ability to explore the relationship between pedagogy and technology.

Technology integration is complex and is made up of processes of interconnected activities.
Scope of Instructional Technology

Technology in education is commonly defined as a technical device or tool used to enhance instruction.

It is important that teachers use a variety of teaching methods, and students must be taught to use the newly acquired knowledge and skill as well as to critically evaluate and modify such knowledge.

In other words, teachers should be able to engage students in an exploratory learning experience which is designed to stimulate thinking.

According to Bruner (1966), the essence of teaching and learning is to help learners acquire knowledge and use the knowledge they have acquired to create other knowledge.
In a broad sense, technology integration can be described as a process of using existing tools, equipment and materials, including the use of electronic media, for the purpose of enhancing learning.

• Managing and coordinating available instructional aids and resources in order to facilitate learning.

• Selection of suitable technology based on the learning needs of students as well as the ability of teachers to adapt such technology to fit specific learning activities.

• Teachers’ ability to select suitable technology while planning instruction.

• Use of appropriate technology to present and evaluate instruction as well as use relevant technology for follow-up learning activities.

Such a broad definition of technology in education will help teachers develop a rational approach toward technology integration.
Problems of Technology Integration

The study of Leh (2005) reveals that teachers admitted “they did not resist technology per se but agreed that they could not fully integrate it into their own practices because of the organizational, administrative, pedagogical, or personal constraints”.

Leh claims that the teachers acknowledge, “technology was more of a problem with multiple facets rather than a solution”.

Defining instructional technology in broad spectrum helps educators, especially inexperienced teachers, understand the pedagogical issues to be considered when using technology to enhance the process of teaching and learning.

In teaching and learning, technology should be applied as a process rather than as a single, isolated and discrete activity.
Relationship between Technology in Education and Pedagogy

Problem related to technology integration is that most educators have not addressed the pedagogical principles that will guide their use of technology for teaching and learning.

The intricate relationship between technology and pedagogy has not been adequately explored.

Explore the process of technology integration and search for ways that it can be effectively accomplished, rationale to examine their appropriateness and compatible with their lesson plan and learning outcomes.

The process of exploring the relationship between technology in education and pedagogy will encourage critical thinking on the part of teachers as they practice technology integration.

Thinking critically involves our recognizing the assumption underlying our beliefs and behaviours.

It can give justifications for our ideas and actions. Most important, perhaps, it means we try to judge the rationality of these justifications.
It is important that we recognize that a relationship exists between technology in education and pedagogical decision-making.

According to Anderson and Borthwick (2002) research evidence shows that “participants whose technology instruction was integrated in their methods course reported more frequent use of technology for both teacher productivity and student projects during both on-campus courses and their actual classroom teaching”.

There is no blueprint for technology integration, however, it is suggested that effort be made to link technology for instruction to all levels of pedagogical processes and activities as discussed further next................................
Further

What is desired to do
Identifying learning objectives in a technology-based instruction.

Select and/or adapt instructional technology to match the objectives based on the needs.

Presenting instruction using technology as part of the instructional process.

Choose the methods that are relevant to the objectives, the technology selected, learning styles, modes and pace of learning.

Evaluate technology-based instruction by appropriate evaluation techniques that are relevant to the objectives, methods of instruction, and to technologies that have been used.
Designing follow-up activities using technology to follow-up materials that are relevant to the objectives of the instruction and technologies that are accessible to the users as well as easy to use.

Developing course enrichment materials using technology to provide opportunity for users to explore issues related to the course materials and to provide them with the opportunity to select and analyze course enrichment materials using technology in ways that broaden their problem-solving skills.

Locating sources for additional instructional materials using technology of internet and multimedia networks to develop additional learning materials and expand instructional resources aimed at broadening the knowledge and the skill gained.
Design dynamic classroom technology to provide a learning environment that is colorful, engaging, exciting, interactive and energetic as a way of encouraging users to venture into the world of technology and to discover knowledge for themselves.

Poor implementation of technology integration is likely to affect the desired outcome...and the .......NEXT.....
Questions???? and Discussions on the Deliberations of Last Two Days
Thank You

Contact Details: drpanditrk@mitsgwalior.in