# Chapter II

**Theoretical back drop**

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2.1 Introduction

This chapter deals with meaning of blended learning and various models of blended learning, elements of blended learning, kinds of blending, instructional implementation and suitability of programme flow and core spoke model, the role of blogs in building cost effective blended learning modules and conclusion.

2.2 Back drop

The learner mass is increasing day by day, the existing institutions are unable to accommodate the growing mass fully. The role of alternative channels of delivery also needs to be matched with the increased demand. The challenge confronting our educational system is how to transform the curriculum and teaching-learning process to provide students with the skills to function effectively in this dynamic, information rich and continuously changing environment. In this pressure cooker situation of expanding learner mass, pressure to utilize technology, building knowledge society, inability of existing educational institutions to accommodate and search for innovative channel of educational delivery have made e-learning the choicest with its robust content, tremendous growth and the edge of catering to a huge number of learners with less per capita expenditure. But many e-learners are expressing that they are craving for some live face to face interaction with peer and instructor and therefore blended learning is considered to be the promising one.

2.3 Blended Learning

As per the words of Graham, C.R. (2005) blended learning is a blending of different learning methods, techniques and resources and applying them in an interactively meaningful learning environment. Learners should have easy access to
different learning resources in order to apply the knowledge and skills they learn under the supervision and support of the teacher inside and outside the classroom. This approach will combine face-to-face instruction with computer-mediated instruction. It also applies science or IT activities with the assistance of innovative educational technologies using computer, cellular or I-phones, Sky TV channels and other electronic media. Purnima Valiathan (2002) has defined as “The term blended learning is used to describe a solution that combines several different delivery methods, such as collaboration software, Web-based courses, EPSS, and knowledge management practices. Blended learning also is used to describe learning that mixes various event-based activities, including face-to-face classrooms, live e-learning and self-paced instruction.”

Blended learning combines face to face learning with on-line learning to provide the most efficient and effective instructional experience by combining delivery modalities, for example a teacher with more class room enrollment may choose the computer mediated or online elements of instruction, another teacher who is concerned about slow learners may choose face to face interaction where motivation can be infused through gesture voice and communication. The other teacher who would like to have the best of both methods can combine both of these modes by starting with a class room discussion, having some activities, web based course ware, text based job, conference calls, and so on, which may impart a holistic learning experience to the learner.

So, according to Mohanasundaram & Sivasankar (2010) blended learning may be considered as “The right mix of various media to maximize learning experience with minimum utility of resources to ensure optimum realization of educational objectives, by making the perfect blend of informational technology and instructional technology.”
2.4 One-Up with blended learning

Among the electronic instructional strategies blended learning is fast picking up thanks to the following benefits.

It addresses different learning styles and multiple methods of information delivery to reinforce the lesson.

It offers improved pedagogy as it increases the level of active learning strategies, peer to peer learning strategies and learner centered strategies.

Boundless information in the World Wide Web can be accessed instantly; social interaction is relatively more in blended learning than in e-learning.

For self motivated adult learners, it offers the benefits of self regulatory learning and ease of revision.

2.5 Elements of Blended learning

As per the learners demand and expected learning out comes the blended learning experience is designed by the experts. Bersin and associates (2004) have identified the following elements related to blended learning.

1. Instructor led lecture / training
2. Webinars
3. Web based course ware
4. Simulations
5. CD - ROM based course ware
6. Rapid e-learning course ware
7. Internet delivered videos
8. Electronic performance support system
9. Offline videos
10. Video conference
11. Collaboration system (chat room, discussion board.)
12. Conference calls
13. Job aids
14. Work books
15. Books
16. On the job exercise

It is only a broad classification. Depending upon the merit of the case, the scaffolding of activities with desired outcomes can be finalized.

2.6 Making the right mix

The success of blend largely depends on the right mix of the elements it possesses. A good blend should provide optimum role of live interaction. It should also provide a wide choice to learners as per their self regulatory perception. It is essential to provide a good support and training model and should keep the cultural components also in mind. A blend which makes the right balance between innovations and mass utility as well as the right bridge for digital divide will be an effective blended learning model.

Kinds of Blending

Huge amount of research work had gained momentum in this direction. Path breaking advantages and new paradigms of higher education are promised by these blends but the kind of blending that are taking place can be ultimately categorized into three. Laster et al (2005), Jolly T. Holden and Philip J Westfall (2010) have given the abstract categorization about the components of blended learning and media as following.
1) Blending Learning Environments 2) Blending Instructional Strategies 3) Blending Instructional Media. The elements suggested are ambiguous and need refinement, so the enhanced and customized elements suitable for Indian higher education have been given in figure 2.1. to illustrate the concept map of blended learning and to give the bird’s eye view of the elements of blended learning.

**Elements of Learning Environments**

The learning environment may be the traditional face to face learning environment or the distance learning environment. The distance learning environment may be either conventional correspondence mode or online distance mode (ODL). The ODL mode may also be either synchronous or asynchronous learning environment. Face to face environment offers same time same place convenience with teacher’s expertise and comes under synchronous learning environment, whereas virtual mode offers the same time different places convenience with geographical advantage and comes under synchronous learning environment. In case of conventional distance mode it offers different time different places convenience with the advantage of portability and comes under asynchronous environment. Designing the right blend of learning environment is the prime job of the instructional designer.
Fig. 2.1 Concept Map of Blended Learning
Elements of Instructional Strategies

Instructional strategies start with the educational philosophy adopted by the organization and followed by psycho-pedagogical approaches like constructivism, behaviorism, cognitivism or combination of these. From these the objectives are derived and appropriate contents are finalized once the contents are finalized suitable learning experiences are planned. The interactivity is ensured in all spheres of learning experiences and the realization of educational objectives is evaluated. The evaluation may also be the conventional mode or through the Electronic Performance Support System. Again the instructional designer is holding the thumb to blend the relevant and most suitable elements of instructional strategies.

Elements of Instructional Media

Instructional media has a big role to influence the success of any instructional strategy. Instructional media may either be the conventional media or the electronic media. Books, work-books, text, image, audio, video, CD ROM, e-book and on-line courseware are few important elements of instructional media. Instructional media must have richness that is the ability of the media to offer visual clarity, motion and resolution. Portability and ability to update are the essential properties of any good media. Depending upon need and nature of the content the instructional designer fixes the media elements.

When blending the learning environment care must be taken to ensure synchronicity when blending the instructional strategies interactivity must be ensured and when blending instructional media richness and dispersion must get the prominence.
2.7 Variants of Blended Learning

Blended learning combines face to face learning with on-line learning to provide the most efficient and effective instructional experience by combining delivery modalities. Blended learning integrates multiple media with the appropriate instructional strategies that can also include collaborative tools like wikis and discussion boards to facilitate transfer of learning as well as adaptive tools like blogs for dynamic content to increase interaction.

Along with the traditional lecture the course designer will use a combination of collaborative and individual activities with different media types depending on the content of the material. The blended learning models can be classified into

1. Structural models
2. Functional models

Structural classification is based on the presentation modalities where as Functional classification is based on the objectives or learning out comes that are expected from the learners. Bersin and others (2004) have suggested two structural models of blended learning.

(a) Program flow model and (b) Core –Spoke model.

These two are theoretical models in the primitive level.

Apart from these two structural models Concentric blend and Branching blend are the two other structural models. In concentric blend the live link is maintained between the activities, and in case of branching blend, there are chances for the learners to have different destinations. Functional classification has yielded the following models based on the objectives.
Enabling blend
Enhancing blend
Transforming blend
Knowledge driven blend
Skill driven blend
Attitude driven blend
Competency driven blend

2.8 Blended learning for instructional implementation

The structural models suggested by Bersin and associates are reviewed and customized by the researcher so that it can be used in the present context in the teaching learning process in school as well as in higher education.

2.8.1 Program flow model

In program flow model the activities are blended chronologically as per the nature of the topic and by the wisdom of the course designer. The figure 2.2 shows the general instructional sequence of the program flow model of blending for both non-technical and technical mode.

In this model, in overview session the instructor can give overview either as traditional class room interaction if it is non-technical blend or through webinar if it is a technical blend. In self-paced learning activity the learner can pick books in non-technical blend, where as in technical blend one can go for e-books, electronic performance support system (EPSS). Query session may contain face to face element in non-technical, where as e mail and messenger in technical mode. And demonstration will have live demo in non technical where as simulation and web meeting in technical mode.
Fig 2.2 Program Flow Model
Whereas collaborative session will contain role playing and chat for respective modes. Finally feed back closing session may have traditional class room in case of non-technical mode webinar or mail in case of technical mode

2.8.2 Core-Spoke Model

In Core-Spoke model the activities are blended in a non-chronological order that is a central activity or activities surrounded by supporting activities as shown in fig. 2.3 which can be used at any time during the course. In this model the activities are finalized by the course designer’s vision and the nature of the topic. But the learner is at his liberty to select the sequence of activities he would like to go about.

![Fig 2.3 Core - Spoke Model Program Flow Model](image-url)
In this model the activities CD-ROM based course ware, off-line videos, books and e-books are off-line activities. Remaining activities can be considered as on-line activities, which may be either instructor led or peer alone activities.

**Suitability of Program flow Model**

This model blends the activities in the chronological order and the flow is in progressive building of cognitive structure and activities. The blend can be of either traditional or technical mode. By virtue of its scaffolding of cognitive structure in a sequential order the model is best suitable for Reflectors and Theorist type of learners. As per B.S.Warrier (2006), Peter Honey and Alan Munford have categorized that Reflector learners learn better when they are given an opportunity to review what has happened and think about what they have learned. Likewise Theorists are the type of learners who are structured in situations with clear purpose who do things by knowing the principles or concepts. So this model is suitable for pedagogical learning activities at school level.

**Suitability of Core-Spoke Model**

This model follows the non-chronological order where the learner is at his liberty with spokes activities. But in most of the cases it is suggested to have the class room activity as the core either in face to face or in virtual mode. So this model will be suitable for Activists and Pragmatists type of learners. According to B.S.Warrier (2006), Peter Honey and Alan Munford have categorized that activists who are less likely to listen to lectures and explanation and learn better when given new experiences, problems and opportunities. Like wise pragmatist learners are those who obviously like the topic to put into action and look forward to try new techniques to save time or something else. So this model will be apt for pedagogical learning activities at higher education level.
2.9 Challenges ahead

Blended learning strategy also has its own hurdles to be resolved. But considering the fruits of blended learning the following challenges are easy to cross.

- Negative attitude towards new technology among the instructors and learners.
- Cost of many on line components being high.
- Lack of knowledge about modalities among teachers and learners.
- Enriching e-content resources.
- Improvement of band width needed for the fast access of internet.
- Enhancing the server capacity for congestion free learning.
- Developing adequate technological and human resources.
  - Developing adequate contingency plan in case of technical problem.

2.10 Economical Blogs

Any individual who has some idea about learning environment, instructional strategies, instructional media, ICT skills and big dreams about learner’s welfare can design successful blended learning models through no cost web logs and low cost instructional media. The following attempt throws some light on how a blog can be used as an economical platform for building successful inexpensive blended learning models. The individual need not be a technical savvy to own a blog and therefore a blog is economical and non technical to use.

2.11 Blog – The Buzz Word

In recent past the term blog has become the buzz word. Any on line journal in the form of a web page owned by individual or organization that is readable, writable, editable and sharable is known as blog. Blog is an abbreviated version of Web log, which
Blog is a term used to describe websites that maintain an ongoing chronicle of information. A blog is a frequently updated, personal Web site, featuring diary-type commentary and links to articles or other websites.

There were around a thousand blogs in mid-2000. As of mid-2002, estimates put the number of blogs at around a half-million; users are creating a new blog every 40 seconds, or more than 60,000 a month (Steven Levy, 2002). However, as per blog search engine Technorati report on the year 2007 there were more than one hundred and twelve million blogs. In recent years, the blog phenomenon has continued its expansion, and the population of bloggers has become increasingly diverse. Growing numbers of professionals have started blogging and use them to reflect upon their work, to follow developments in the field, and to publish ideas.

Blogs are gaining increasing popularity day by day and are being bestowed with newer tools. One of the most significant things that happened with the growth of the blog community is that blogs have become a conversational interphase. Many editors use their blog to discuss things that had been said by another editor, using links to enable readers to follow threads. Arbitrary numbers of people could participate in such conversations, provided they owned a blog. Blogs are becoming easy and mighty weapons of common men who are in the field of information and communication, particularly for librarians, lawyers, and education specialists as well as Knowledge management specialists, information technology consultants and researchers. Blogs are also increasingly used as the medium to engage in conversations about the problems they are trying to solve in their work.
2.12 Goodies of Blogs

Blogs offer many potential benefits to offer the users, especially in the field of instructional technology. Fig.2.4 depicts the general benefits that make blogs the preferred choice for millions. All these goodies are having a prominent role to play in teaching learning process especially in blended learning models.

Fig.2.4 Goodies of Blogs
**Personal Editorship**

The content of the site is under the responsibility of a single person. A blog that one edits also serves as a chronological record of his thoughts, references and other notes that could otherwise have been lost or disorganized. When the need arises, one can either look up the blog's contents using a search engine or visit it chronologically. Links between different posts that were put in by the author help to trace threads of thought and becomes an excellent tool for personal knowledge publishing.

**Information Routing**

The reader and editor of a blog belong to the diverse community or organization but they can share ideas, information and inspiration at the intersection of their interest by means of related links and can maintain a hyperlinked relationship that could be established and maintained only in the system of blogs to develop like minded community.

**Social Networking**

Over a period of time, blog editors come to know about their regular readers well; these personal ties may be invaluable in giving them opportunities that they would not get otherwise. Networking among blog editors is most evident in expanding the social network. First, hyperlinked conversations are going to spread everywhere and second, blogrolling lists go further to extend the network.

**Free and Public Access**

The blog’s contents are freely accessible via the World Wide Web without restriction such as payment or membership so that it attracts regular viewer ship. Some
times an unplanned visitor may become a regular reader when free access does not affect his pocket.

**Archival**

Older posts may disappear from the front page, but they are archived and may be accessed elsewhere on the blog. Each post is assigned a permanent hyperlink or permalink which makes it possible to refer older material.

**Pod / Vod Casting**

A blog editor can easily upload an audio lesson or clipping effortlessly. Likewise one can upload a video clipping to offer better visual experience to the readers.

**2.13 Synergy between Blends and Blogs**

Synchronicity, Interactivity and Dispersion are the three important phenomena that spell success in blended learning models. Blending learning environment, blending instructional strategies and blending instructional media are intrinsic components of blended learning. All these requisites of a good blend can be fulfilled by blogs with out any big spending by the editor of the blog.

- An instructional designer can upload a related text as word document or as PDF through a free universal converter.
- He can upload a power point presentation in a similar fashion and can give suitable hyperlinks for e-books.
- Audio materials can be prepared and uploaded through free audio recording software like Audacity.
• Video clippings can be uploaded through tools like You tube and corresponding links can be given in the blog.

• On line test can be constructed and uploaded through test constructing free wares like Class Marker. The performance can be assessed and report generated by the freeware itself.

Building modules of blended learning through blogs are going to blow up the population of Edublog and Edubloggers which is ultimately going to swell the blogosphere and the collaborative community. Thus Blends and Blogs are having a synergistic blessing over the learning community. The individual teachers interested in offering alternative and supplementary mode of educational delivery can own a blog and they can experiment with their innovation provided the learning community can have access to internet inside or outside the institution.

2.14 Conclusion

“Blended learning is the right mix of various media to maximize learning experience with minimum utility of resources to ensure optimum realization of educational objectives, by making the perfect blend of informational technology and instructional technology.” Among these two models discussed, program flow model is suitable for Pedagogical learning activities at school level and Core-spoke model will be apt for pedagogical learning activities at higher education level. In this global village digital technologies are becoming the integral part of day-to-day life and in near future blended learning will be synonymous with learning.
As per David Ausubel ‘No knowledge is new knowledge, it is only the extension of old knowledge’. Any instructional strategy can not be a new strategy; it can only be an extension of old strategy. Thus this idea of designing effective blended learning models through economical blogs is a promising one through which an effective alternative system of delivery that will offer qualitative improvements such as greater individualization of learning, easier access to information and better use of simulation techniques can be achieved. The very basic idea of this study is to encourage the teachers to try this strategy with low cost and no cost resources available to them. Blends and Blogs can be the right change agents to give a face lift to our higher education and the change will be a welcoming change.