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Synchronous Vis-a-Vis Asynchronous Learning: A Blended Approach

[1]Sibananda Sana, [2]Chandan Adhikary and [3]K.N. Chattopadhyay
[1]Department of Chemistry, Government Training College, Hooghly
[2]Department of Chemistry, Institute of Education (P.G.) For Women, Chandernagore, Hooghly
[3]Department of Education, The University of Burdwan, Golapbag, Burdwan, West Bengal, India

Abstract

Synchronous and asynchronous learning involves two distinct pathways or modes of learning. In the conventional situation synchronous learning represents traditional classroom learning, while asynchronous learning evolved through social requirements as distance learning. But in the progressive technology oriented digitalized era, the concept of synchronous and asynchronous learning are drastically changed and linked with e-learning. The learning through blended approach occurs by the judicious amalgamation of multimedia mediated online and offline instructions as well as the traditional face to face instructions. The conventional face to face instructions are always through synchronous mode in a live class room, while multimedia mediated instructions may be synchronous if it is live and online while asynchronous if it is not live. In this analytical article we are to explore the significance of both synchronous and asynchronous learning mode and a thoughtful integration of the both modes leading to a complete sufficient learning in the light of blended approach.

Key Words: Synchronous learning, Asynchronous learning, Communication tools, multimedia mediated blended learning approach.

Introduction

Every individual has uniqueness in his/her technique and space of learning. With the advent of technology and emergence of different learning theories, educationists have realized that some learners prefer certain techniques of learning. These techniques, referred as learning preferences or learning styles or modes. Among the four approaches of learning viz. i) knowledge oriented, ii) learner-oriented, iii) assessment-oriented, and iv) community-oriented, the second one emphasize on the pace of learner's learning more in addition to content, activity and materials (M. M. Shahabadi and M. Uplane, 2014). Today's learning community is expected to more conscious and continually improves skills and acquire new one in the lifelong learning. To meet the learners' diverse requirements the learning environment is another point to pay attention in the modern globalized and digitalized era. This phenomenon of personalizing the environment of learning emphasize on effective individual characteristics and situational needs during any learning process.

Currently a noticeable percentage of education changed from formal face to face traditional mode to the informal open distance mode. Due to recent improvements in the communication technology the distance learning mode become more and more electronically. The recently developed Information Communication Technology (ICT) lead to a paradigm shift in educational system by bringing an alternative teaching and learning method where learning can takes place "anytime and anywhere" in the online mode. This kind of progression in technological application inside the educational arena has created many opportunities and benefits for both individual learners and organizations. In an internet assisted, multimedia mediated multi-platform, traditional instructors can archive their teaching learning materials from the internet resources and learners can also do their personal learning using the web. The learning through distance electronic mode can be classified in two main groups and commonly compared asynchronous learning and synchronous learning. The e-learning initiatives still now mostly confined to asynchronous teaching-learning process. However, recently developments in the communication technology and uplifting in the internet speed have led to the growing popularity of synchronous learning (Hrastinski, S., 2008).

Blended learning approach is a combination of formal and informal educational program that provides learning through digital media both online or offline and traditional live classroom learning -that means it is a hybrid of asynchronous i.e. offline learning through digital media and synchronous i.e. online learning. Learning through blended approach is effectively where there is an thoughtful integration of different delivery modes, teaching models and learning techniques as a result of adopting a planned and organized approach to the utilization of suitable educational technology combined with the best features of conventional face to face class room interaction (Krause, K. 2007).

Synchronous learning

Synchronous learning means a mode of educational communication where, learning or instruction in which the learner receives lessons from the instructor at the same time period but not essentially in person or in the same place. The conventional classroom situation is the most basic form of synchronous learning, but now the live online e-learning have become available alternative. So, the conventional form of teaching and learning method is synchronous and characteristically entails the employment of a classroom where teacher and learners effectively interact within the same time period and place. The e-learning is often made via a teleconference or video conference over a high speed web network, where teacher and learners can interact within the same time but not same place. In the modern digital era the examples of synchronous learning are one-on-one tutorials and even online seminars, often called webinars.

In an online live class room situation many of the learning actions and scopes are comparable to those found in a conventional class room. This online learning environment in the live class room gives the scope to interact in meaningfully face-to-face situation and is most commonly termed as synchronous learning (Simonson, M. et. al. and Harris, J. et. al. 2009). In synchronous learning mode lectures, discussions and lesson presentations occur at a definite

position in time with the anticipation that all learners will be present to participate. Learning in synchronous mode hold up teaching and learning process and put forward learners and teacher facilitators with numerous means of interacting, sharing, and the capability to work in partnership and raise questions in real-time through modern technologies. Examples of synchronous online educational technologies comprise video-conferencing, web-casts, interactive learning models, teleconferences, chatting etc (Er et. al., 2009).

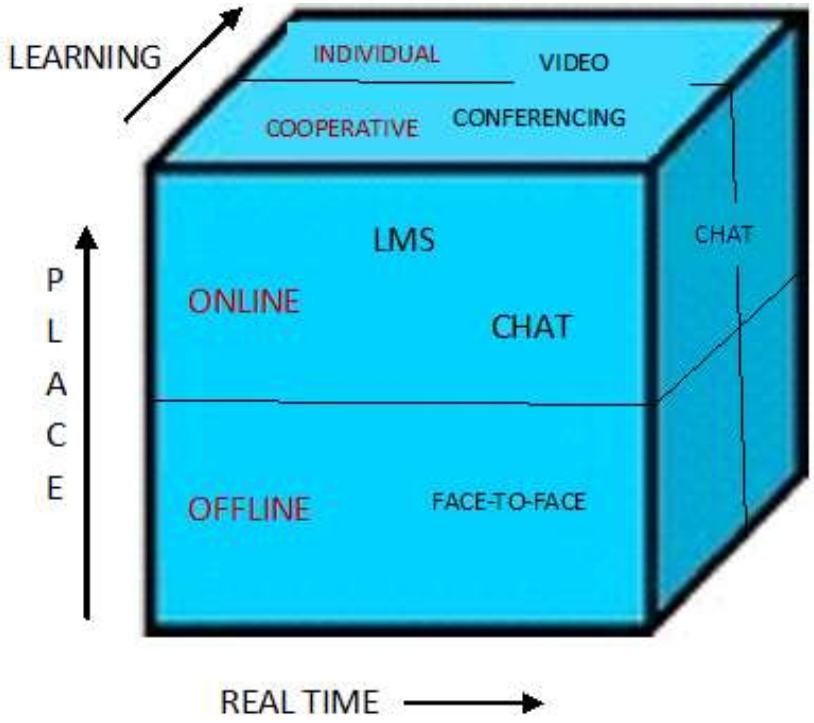

Figure 1: Graphic illustration of Synchronous learning

Asynchronous learning

Asynchronous learning is a learner-centered teaching-learning process where online resources are utilized to help sharing information outside the restraints of time and space among a group of networked people *(Mayadas, F., 1997).* The constructivist learning theory is the foundation of asynchronous learning, a learner-centered teaching-learning process that lay emphasis on the significance of peer-to-peer interactions *(Wu, D., et. al., 2008).* This approach put together self study and asynchronous interactions to transact and assist learning in conventional on-campus education, open distance education, and professional training. This joint synergistic network of learning group and the electronic web network in which they communicate and interact can be denoted as an asynchronous learning mutual dependent network.

Learners have got immense opportunity to actively perform in their own learning in an asynchronous learning environment and spontaneously interact with their fellow learners or

peers, provide peer response, and ruminate on the position of their learning objectives and purposes (Er et al., 2009; and Simonson et al., 2012). Different learning environments require different learning activities and expectations that necessitate learners to construct, synthesize, explain, and apply the content knowledge or skills in the daily life (Harris, Mishra, & Koehler, 2009; Simonson et al., 2012). Modern educational technologies to support asynchronous learning permit maximum time for learner cogitation, collaboration, and learner-to-learner interactions through blogging, voice thread, discussion group, peer discussion etc (Bonk & Zhang, 2006; Skylar, 2009 and Meloni, 2010).

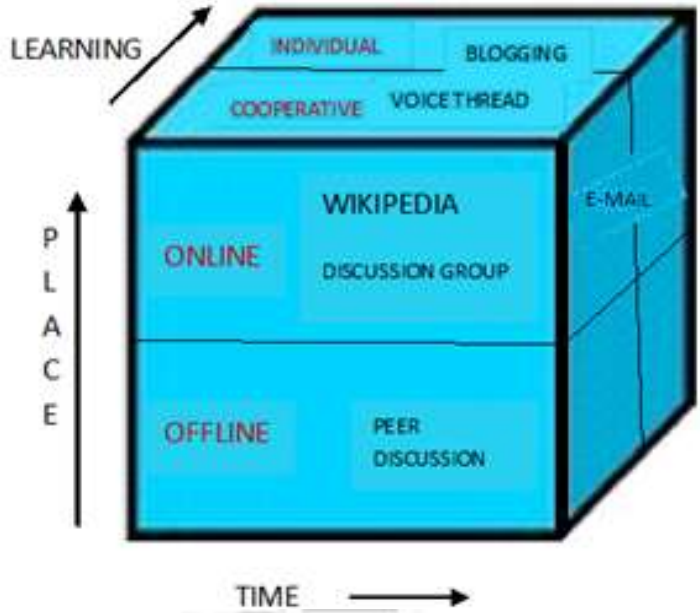

Figure 2: Graphic illustration of Asynchronous learning

Blended Learning

Blended learning approach can be expressed as an education program or course (formal or informal) that merges online digital media with conventional classroom strategies. In this approach both teacher facilitator and learner needs to be present physically, with some aspect of learner control over time, position, path, or pace (Kitchenham, A. 2011). The blended learning models are of main five kinds which are as follows:

a) ***Face-to-Face Driver Model***: This model is nearest to a typical conventional classroom configuration, compared to the remainder blended learning models. In this model, the online instruction is introduced and decided to be implemented on a case-by-case situation, i.e. - only certain learners in a particular class will take part in any form of blended learning. This model is very much helpful to learners who are struggling or running beyond their level by giving opportunities to progress at their own personalized pace using different educational technology.

b) ***Rotation Model****:* In this model actually blending of technology with conventional learning, occurs by rotating learners between different stations on a fixed timetable – either working with the online resources or interacting face-to-face with the teacher. When in a course or discipline where learners rotate on a preset timetable or at teacher's discretion between

modalities and at least one of which is online are called station rotation. Some modalities of this model follow conventional mode and might comprise activities such as small group or full class instruction, group discussion or projects, individual coaching, and pencil-paper tasks. All the activities contained in a class room. When students were rotated between a computer laboratory and class room for other activities such as full class instruction, group discussion, projects etc. then the model is termed as Lab Rotation. In Flipped Classroom learners were provided content materials, instruction and assignments through online learning mode from different place and then attend the chalk and talk class room situation for face to face interaction, teacher guided projects or practices. When students individualize the playlist i.e. fix or choose the schedule of rotation among the different stations and modalities i.e. face to face instruction, group discussion, projects, online learning etc, then the Model is termed as Individual rotation.

c) ***Flex Model:*** Institutions who are supporting a huge amount of non-traditional or in danger backward learners generally prefer the flex model of blended learning. With this approach, material is primarily provided online. Although teaching facilitators are in the class room to give on-site help as necessitated, learning is mainly self-guided, as learners freely learn and practice new ideas in a multimedia based digital environment.

d) ***Self-Blend Model:*** This model provides learners the opportunity to receive lessons outside the already offered courses. While these learners will go to a conventional classroom situation, they also choose to supplement their study through online courses offered distantly. Accordingly for this model to be efficiently successful, learners must be extremely self-motivated. Self-blend is perfect for the learner who desires to obtain additional higher placement courses, or who has interest in a subject area that is not covered in the traditional course directory. The model is also recognized as A La Carte Model.

e) ***Online Driver Model:*** At the opposite side of blended learning strategy from face-to-face driver we have online driver model, where learners work distantly and material is generally provided via an online web network. Although taking lessons through face-to-face conventional interaction are optional, learners can usually chat with teachers online if they have questions. This model is also recognized as Enriched Virtual Model. This model of blended learning is ideal for learners who need more flexibility and independence in their daily schedules (Staker, H. and Michael Horn, B. 2012).

The mode of blended learning may of two types: Synchronous interaction and Asynchronous interaction. Synchronous, means ‘at the same time’, it leads to interacting with teacher facilitators and peers through the internet network in real time using multimedia based educational technologies as for example virtual classrooms and / or chat rooms. Then again, Asynchronous means ‘not at the same time’; it allows learners to work together with their peers and teachers at their convenient time, as for example interacting by means of email, chat, blog etc.

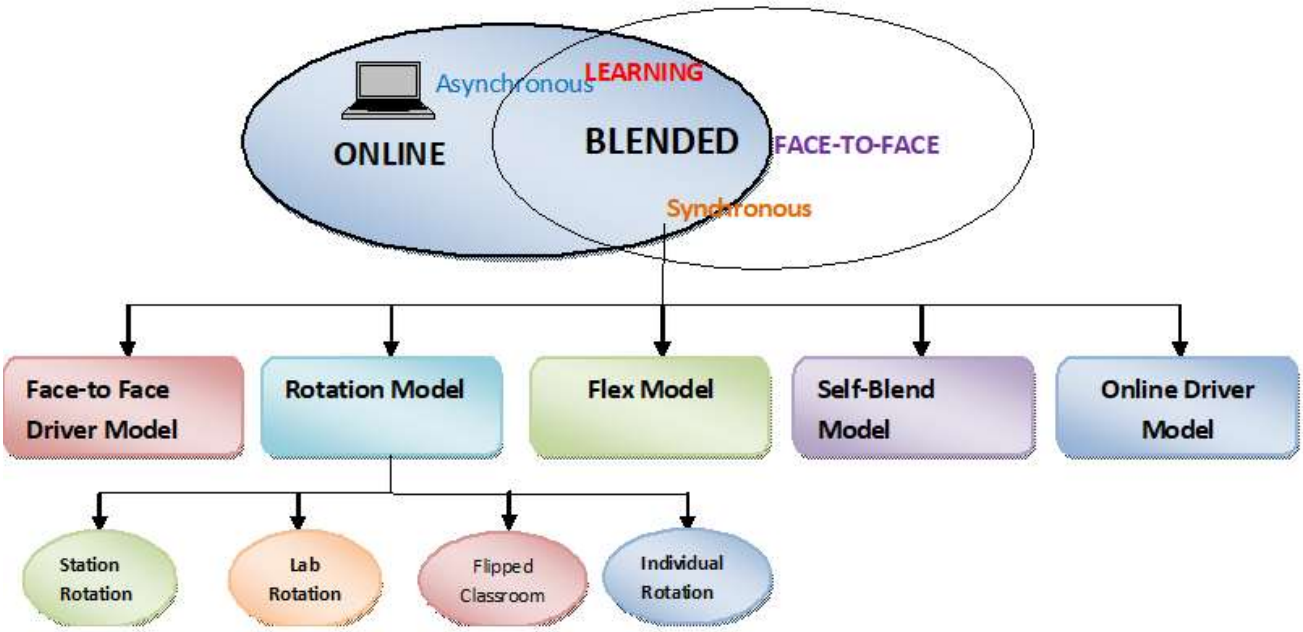

Figure 3: Schematic illustration of blended learning

Benefits of Synchronous and Asynchronous learning

When learners listen to a lecture together in a classroom, they are engaged in synchronous learning mode; all learners are participating in the learning scheme in the same group and at the same time period. In an online live classroom situation synchronous learning activities resemblance to the traditional teaching learning situations have the following benefits;

- Learners can raise questions in real-time.
- Learners experience a greater sense of community and correlation to their peers when they all learn together.
- Learners become motivated and eagerly engaged in their learning.
- Learners practice a stronger feeling of collaboration

Communication for learning through asynchronous mode is undoubtedly the more well-liked learning variety because most of the multimedia based teaching-learning tools are free but need a least hardware, and can be utilized at the learner's pace (Meloni, 2010). Similar to synchronous learning, the growing boost in information communication technology and online web connections has spread out the online learning opportunities available. A large amount of educational benefits can be viewed from the use of multimedia based asynchronous technologies in an online learning environment including:

- Learners can progress through the learning when they want, where they want, at the pace they want, in the order they want.
- Learners have more time to reproduce on what they learned.
- Shy learners may experience more comfortable interacting with their teacher facilitators or peers when they have time to write thought emails or in the blog or voice thread rather than feeling stressed to speak up in a live symposium.

- Learners can participate in the same activities regardless of time zone.

Integrated Model of Synchronous and Asynchronous mode of learning

It is clear from the earlier research that the multimedia based educational technologies associated with synchronous and asynchronous mode of learning can improve the quality of learner-teacher interactions, promote increased learner involvement, and improve learning consequences (Hastie et al. 2010). There are strengths, challenges and limitations to both models. Some learners prefer a synchronous online live learning mode because they require face-to-face live instruction through chat rooms, teleconference or video conferencing etc. For other learners, an asynchronous online learning mode provides more time to consider all sides of an issue before offering their own educated input. Both learning styles have very unique benefits and boundaries to online learning. So as to minimize these weaknesses and strengthens the benefits both the learning styles should be judiciously and thoughtfully integrated and utilized to support learner needs within an online learning situation called blended learning.

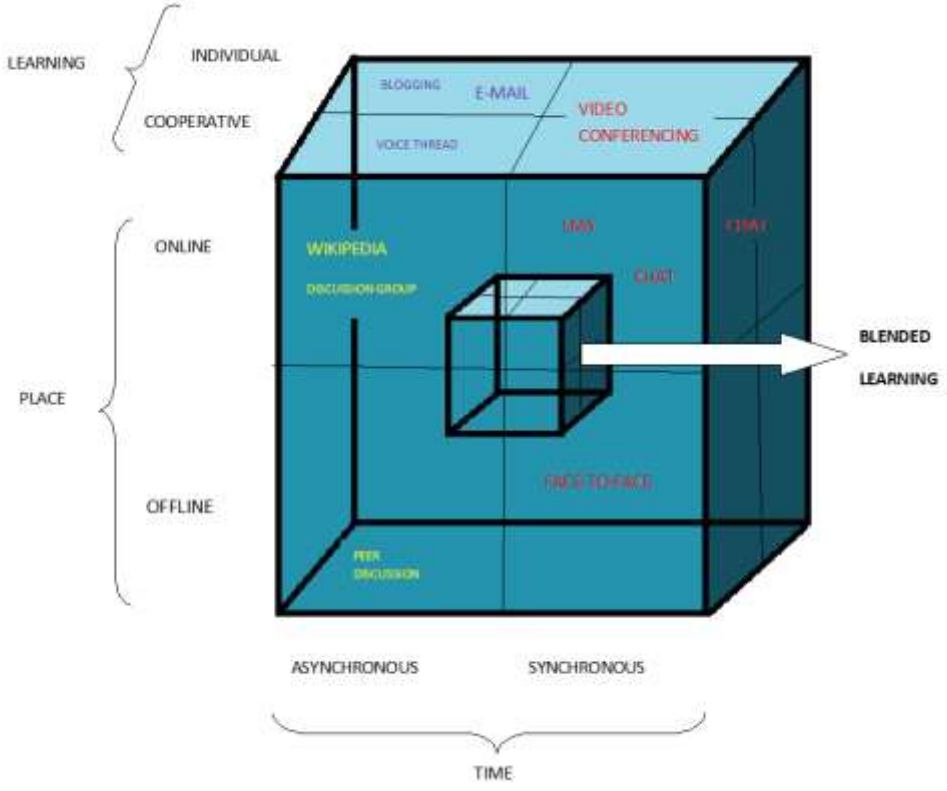

Figure 4: Schematic diagram of Integrated Model of Synchronous and Asynchronous learning

Conclusion

Today's Information Communication Technology (ICT) offers support for teaching and learning that allows access to excellent education in many subjects from anywhere and anytime on the internet. Synchronous internet communication facility allows improved accessibility to the learner and is the simplest and least expensive to offer. Asynchronous internet communication

facility provides high flexibility but its interactivity with the instructor and peer is poor in respect of time consumption but good in respect of backward or weak learners and should be supplemented by synchronous learning. The best way to employ these technologies in an efficient learning programme is their judicious and thoughtful integration through blending the conventional classroom instruction with synchronous online live delivery by simulated virtual teaching. These synchronous courses can be supported by the asynchronous multimedia mediated web-based resource materials, interactive tutorials, quizzes and assignments, projects that can be completed or submitted online. Creating such a blended learning programme with an effective set of asynchronous supporting materials that provides strong support and good flexibility for the learner is challenging, but it is the best way to perform the efficient academic achievements given access to the internet and its modern technologies.

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