Blended learning: A faster and effective way for student’s progress

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Abstract

Amidst the rapid social, economical and technological changes, schools in this new educational paradigm are facing challenges to meet the demands of the well informed society and 21st century learners of today. Education which is one of the areas that are experiencing phenomenal changes as a result of this advancement and use of information technology. Blended learning has gained popularity now a day and is used in many Indian universities and educational institutions. It combines the traditional classroom learning where a teacher teaches the student face-to-face and the self-contained online learning. Success of blended learning depends on various aspects like quality of the course materials, mindset and ability of the students to learn in such interactive environments, ease of the tools and learning environment. Blended learning is considered as a solution to the limitations in both traditional learning and e-learning. This paper discusses the opportunities provided by blended learning, in comparison with both traditional and e-learning, and the dimensions that must be considered in order to create the best blend.

Keywords: blended learning, traditional learning, ingredients to blend

Introduction

For the last few decades, technology has revolutionized every aspect of human life. Students of 21st century generation represent the first generation to grow up with new technologies and are considered as the Z-generation digital natives. Computer games, email, Internet, cell phones and instant messaging are integral parts of their lives. They spend most of their time using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age. Today’s average college graduates spend less than 5,000 hours of their lives reading, but over 10,000 hours playing video games (not to mention 20,000 hours watching TV) (Prensky, 2001).

E-learning & traditional teaching methods

Comparison of e-learning and traditional methods have been described as under:

- E-learning can be faster and more intense when designed appropriately as Epic (1999) noted: “where you are using interactive, self-paced materials, then the time for learners to complete the programme will be at least 50 percent less than traditional classroom learning”.
- It develops IT skills as indicated by the National Education Centre (2000) “Internet based learning empowers people, because learning online demands that students have at the very least a basic understanding of IT skills and computer literacy”.
- It provides more educational opportunities as Hennik, (2003) stated “e-learning has access to a large audience of possible learners”, so will the number of people with relevant IT skills increase.
• It Potentially minimize forgetting and thus increasing the probability of retrieval Thalheimer (2003) [17]
• It provides meaningful repetitions to aid learners in releasing information they had forgotten and shrink the length of the retention interval by interspersing the original retention interval with addition learning event

Blended Learning
Blended learning is not a new concept, but that it exists in many different forms and is prevalent in most classroom practices. In spite of the various advantages of blended learning, it has several disadvantages. Blended learning may not be universally appropriate. "It is particularly suited to cognitive learning, to presenting new information, stable course content, learning that requires practice and review, for those with reflective or theorist learning styles, where situations need to be simulated, and where the media requirements are fairly simple. It is much less suited to psychomotor learning, affective learning, those with activist or pragmatist learning styles, for richer media (audio/video voice or video recording), and where voice and body language is important." (Epic, 1999) [5]
Blended learning is technology dependent, which can exacerbate divisions between the technologically rich and poor. As indicated by Hennik (2003) [9] “in terms of internet and broadband provision, and hardware specification.” In addition, Al-Dawaliji Manager (Saudi Educational Software Producing Company) said that his company had stopped producing online educational materials for schools because of the Network connection problems that prevented schools from accessing the material. Thus, their product range is only available on CD-ROMs and DVDs.

Apart from technological issues, other obstacles include reduced levels of satisfaction in higher education students (Sikora and Carroll, 2002) [15]. Higher attrition rates, difficulty in adjusting to the structure of online courses, time management and motivation (Marino, 2000) [11]. Furthermore, the reduction of non-verbal social cues in computer mediated communication, such as the absence of facial expressions and voice inflections can generate misunderstandings that can adversely affect learning.

McMillan and Chavis (1986) [12] defined sense of community as “a feeling that members have of belonging, a feeling that members matter to one another and to the group and a shared faith that members’ need will be met through their commitment to be together.”

Hara and Kling (2001) [8] conducted a study of online courses, finding that feelings of isolation were an important stress factor for online students, but not the main problem as frequently mentioned in the professional literature.

Rather, students reported confusion, anxiety and frustration due to the perceived lack of prompt or clear feedback from the instructor and from ambiguous instructions on the course website and in e-mail messages from the instructor. These indicate that the problems exhibited by some online courses may be less related to the course delivery mechanism and more related to failure in anticipating how technology can be used to support course design, facilitate learning and nurture a sense of community.

Since both traditional learning and e-learning have strengths and weaknesses, there is a general agreement that traditional learning can be used to enhance e-learning (Fallon and Brown, 2003; e-learnity, 2000; Festa, 2000) [6, 7] with many researchers believing there is a place for traditional learning in classrooms with e-learning. Therefore, blended learning has emerged.

Although blended learning is not a new concept, the ingredients of the blend are new. In the past, these have been limited to physical classroom formats (lectures, labs, etc), books or handouts. However, today these can be supplemented by opportunities provided by IT. Blended learning represents a real opportunity to create learning experiences that can provide the right learning at the right time, in the right place and at the right level, for each and every individual, not just at work, but in schools, and universities. It can also be truly universal, crossing global boundaries and bringing groups of learners together through different cultures and time zones. In this context blended learning could become one of the most significant developments of the 21st century.

Although the term ‘blended learning’ has gained popularity in recent years as a description of particular forms of teaching with technology, it remains ill defined. Within this section, some of the most popular definitions will be identified. Collis and Moonen (2001) [1] defined blended learning as "a hybrid of traditional face-to-face and online learning so that instruction occurs both in the classroom and online, and where the online component becomes a natural extension of traditional classroom learning. Blended learning is thus a flexible approach to course design that supports the blending of different times and places for learning, offering some of the conveniences of fully online courses without the complete loss of face-to-face contact."

This is the most usable definition nowadays. Driscoll identifies four different `concepts’ in 2002 which are as under:

1. Combination or mix of web-based technology to accomplish an education goal.
2. Combination of pedagogical approaches (e.g. constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology.
3. Combination of any form of instructional technology with face-to-face instructor-led training.
4. Combination of instruction technology with actual job tasks. Driscoll summarized by saying, "the point is that blended learning means different things to different people, which illustrates its widely untapped potential”. The concept of “blending” grew out of experiences with e-learning.

As indicated by Driscoll (2002) “the importance of the blended learning arises from the failure of purely online learning to meet the training needs of organizations.” Another conceptualization is provided by Valiaithan (2002) [19], he described blended learning as “a solution that combines several different delivery methods, such as collaboration software, Web-based courses, EPSS, and knowledge management practices. Blended learning is also used to describe learning that mixes various event-based activities, including face-to-face classrooms live e-learning and self-paced learning.”

He described blends in terms of different approaches to learning:

1. Skill-driven learning, which combines self-paced learning with instructor or facilitator support to develop specific knowledge and skills.
Ingredients of the blend

In blended learning several ingredients can be mixed together. The decision as to which ingredients to use may be influenced by factors such as:

- **Audience**: “the biggest danger in any 'e' or blended solution project is becoming focused on technology /creativity, and not the audience” (Throne, 2003). Therefore the characteristics of the target learner must be understood in order to design the most effective delivery options in achieving the learning objective. As Singh & Reed (2001) [16] note this needs to consider:
  
a) **Base knowledge** – how uniform is the knowledge that they are bringing to the learning program?
  
b) **Preferred learning styles** – whilst individual learning styles may vary, groups of learners may share learning styles preferences; for example designers are visual thinkers.
  
c) **Location** – is the audience centralized or distributed?
  
d) **Motivation** – what is the level of effort, inconvenience or cost the learners are willing to incur in order to obtain the learning you are offering?
  
e) **Content**: Danchak (2004) [2] said “choosing what to present is as important as how it is presented”, not all content may be optimally presented using the same delivery mechanism therefore different parts of the material will require different modes of delivery. Course developers need to consider which parts of the program can be taught online, using which technology, and which assessment mode is most suitable. This might work best through co-operative endeavour.
  
f) **Learning outcomes**: In using any learning method, the learning outcomes have to be determined clearly showing how each of the employed learning method can support achieving each of the learning outcomes.
  
g) **Context**: Specify the unique circumstances and conditions that surround the educational process that need to be considered.
  
h) **Financial**: Analysis of both the content development and delivery costs could play a significant role in the deciding the delivery options.
  
i) **Infrastructure**: The available bandwidth network connections and PCs specifications will affect the choice of the technology used in the learning process. From this it can be seen that blended learning has evolved to encompass many dimensions with overlapping attributes. Since there are several combinations of the ingredients; the question is what are the “Right” ingredients all the above mentioned ingredients of the blend are related to following issues and concern.

For creating the most effective blended program? These relate to the following issues:

**Issues and concerns**

- **Institutional**: e.g. organizational, administrative, academic affairs, and student services.
- **Pedagogical**: the content that has to be delivered, learner needs, and learning objectives
- **Technological**: issues include creating a learning environment and the tools to deliver the learning program.
- **Interface design**: the user interface of each element.
- **Evaluation**: the usability of a blended learning program.
- **Management**: such as the infrastructure and logistics in managing multiple delivery types.
- **Resource support**: with the practicality of organizing and making available different types of resources.
- **Ethical issues**: such as equal opportunity, cultural diversity and nationality should be addressed. If students are known to have preferred learning styles, or to learn easier under different circumstances, is it ethical to deny them the opportunities to achieve optimum results?

Following are the suggestions of the possible ingredients of the blended learning:

- **a) Mixing online learning with face-to-face teaching**: This is the most popular meaning of blended learning. As Singh (2003) said "the original use of the phrase “blended learning” was often associated with simply linking traditional classroom training to e-learning activities."
  
- **b) Mixing Media**: Here several types of media are mixed such as video, TV, and animations to achieve the learning outcomes.
  
- **c) Mixed contexts**: As indicated by Oliver & Trigwell (2005), "Implicit in some of the definitions is the idea that what may need to be blended are the different physical contexts within learning takes place." This is what is currently happening in Al-Madrasa (Secondary and high school) in Riyadh, each subject has a special class or lab and students move around these rooms according to their time table.
  
- **d) Mixed Pedagogies**: Driscoll (2002) [3], suggested in the definitions of blended learning 'that the mix consists of 'pedagogical approaches' such as constructivism, behaviorism, and cognitivism. Actual blended learning would involve students learning through experiencing variation in aspects of what it is that they are studying (their object of study).
  
  
- **f) Blending self-paced and live, collaborative learning**: Collaboration learning involves groups working together to solving problems, in sharing and clarifying ideas (Kemery, 2002) [10] as well as periods of individual endeavour
  
- **g) Blending structured and unstructured learning.**
h) Blending Custom content with off-the –shelf content.
i) Blending learning practice and performance support.

Conclusion
Technological and pedagogic advancement have given rise to many ‘ingredients’, which can be included in the blend. A broad definition is therefore needed, which includes a determination of the ingredients of the blend, the media, the context (place and time), the pedagogies, the learning objectives and the teaching practices. Blended learning is thus a flexible approach to course design that supports the blending of different times and places for learning, offering some of the conveniences of fully online courses without the complete loss of face-to-face contact. Maximizing the benefits of traditional and e-learning methods, blended learning can be used to accommodate different learning styles and preferences. Therefore, organizations must use a blend of learning approaches to provide the right content, in the right format, to the right people at the right time.

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