

Introduction

Changes in our educational systems have necessitated the incorporation of many new technologies. In particular, online teaching methods have improved and increased to accommodate a number of factors for students, faculty, and institutions. Many perceive distance education as falling into two means of delivery: synchronous and asynchronous.

In this paper we provide an overview of two product group offerings that represent these education delivery types.

- **WebEx** – synchronous solution
- **Blackboard** – asynchronous solution

General Aspects - *Purpose of the systems*

WebEx solutions are geared towards a broad audience, not just those from the field of education. They provide a method in which presenters show material live through a shared screen concept, where attendees can view and potentially participate in a presentation that often is given from the presenter's computer desktop screen.

Blackboard products, however, are geared towards commonly-held distance education concepts, with specially-crafted components that support faculty and student-specific needs without being dependent upon real-time interaction. These products incorporate customizable screen components that can be adjusted to suit the needs of a course.

Technological View - *General system requirements*

WebEx is delivered as needed as a service and only requires those who access its functionality to use a fairly current version of a Web browser and install and/or enable some additional Web components (Cisco WebEx, 2009, para. 3). Better computer hardware, networking, and communications bandwidth affect how quickly the information is exchanged and improve the experience.

Blackboard also uses a Web browser as its access tool, but its system recommendations are more detailed owing to its configurable nature (Blackboard, 2009, para. 1):

Hardware/Platform	Apple Macintosh (Recommended)	Microsoft Windows (Recommended)
Operating System	MacOS X 10.2 Jaguar	2000 or XP
Processor Speed/Type	800 MHz PowerPC G4 processor or better	800 MHz Intel Pentium III processor or better
CPU Memory	256 MB of RAM	256 MB of RAM
Free Hard Disk Space	500 MB or greater	500 MB or greater
Video Card	Virtual memory turned on, allocated to at least 128 MB	64 MB VRAM with True Color (24-bit)

Technological View – *The participant options*

Links to a scheduled WebEx sessions are sent by presenters to participants. While each presenter controls a certain degree of attendee participation in the session, participants can communicate with each other and the presenter via chat or up to four video screens. In addition, attendees can request control from the presenter and then become the host so they can take charge of what is on the shared screen.

Students usually access Blackboard through an educational institution's Web portal.

Based on how a course is designed, students can access online content, communicate with peers and faculty through various means, perform functions that are linked to external applications, take tests, and monitor their grades. The experience of taking a course hosted by Blackboard is dependent upon, not just the course content, but how the online component is configured and supported.

Technological View – *The instructor options*

WebEx is designed more as a presentation solution to meet the needs of many audiences than as an educational tool. When an instructor uses it, however, WebEx takes on the role of an online lecture and training utility. There are a few controls within the application that give presenters some ownership of a presentation. Additionally, breakout sessions can be conducted during a meeting, with the presenter checking in with each group as needed. WebEx sessions can also be recorded, stored, and accessed later.

If an instructor is involved in the design of his or her course through Blackboard, they can engage many product options that enrich the educator-pupil experience. Using Blackboard as their storage facility, instructors can build and reuse components for their courses and those of other instructors. Additional functionality can also reduce administrative duties by tracking student tasks and functions required in the taking of a course.

Pedagogical View – *Pedagogical concepts*

Use of WebEx is widespread in the corporate world for both presentation and training.

Using it for synchronous teaching purposes would not be difficult since it emulates many concepts that exist in a traditional face-to-face lecture course and is more dependent upon presenters/instructors. While for some, this learning method is not practical, “occasional online meetings can help to keep people on track and provide a valuable opportunity for synchronous discussions” (Delich, Kelly, & McIntosh, 2008, p. 7).

Blackboard by comparison is quite different. While it too is dependent upon instructors, it requires their input on many new levels in order to develop a course for online delivery, use new techniques in order to exchange ideas with students, and coordinate supporting activities. One of its newer features, connectivity to Facebook, helps reinforce the need for courses to be “strongly social and community based” (Duffy, 2008, p. 128).

Pedagogical View – *Possibilities for interaction*

Interaction through WebEx is somewhat controlled by its synchronous nature. When a session is underway, individuals can chat and video conference with each other and the presenter. The ability for a presenter to create breakout sessions helps improve interactivity tremendously though, putting attendees into a more connected environment.

Blackboard puts control of these interaction situations into the hands of the instructor.

Based on the course design, Blackboard can contain numerous ways in which communication and collaboration can occur. Forums, blogs, chats, etc. can be set up to make a course more interactive for students and instructors. The only limitations appear to be access to alternative products and technologies.

Pedagogical View – *Role of instructor*

The design of WebEx is to enable everyone to be a presenter, not necessarily an educator. With the exception of a few techniques, it does not provide much support for instructors and puts the pressure of teaching squarely on their shoulders.

The instructor that uses Blackboard can be engaged in many ways, not just as lecturers and content provider. Depending on the institution and the role of an instructor, they can be course designers and developers, communications directors, and project managers.

Key Strengths and the Key Limitations of the Systems

WebEx	Blackboard
Easy to learn and set up, straightforward in its approach	More options and flexibility, time consuming to configure
Designed for presenters and audiences	Designed for educators and students
Relatively inexpensive	Costly

Conclusion

We need to constantly “look for fundamental principles in the use of technology in education that will operate across different technologies and will still apply as technology changes” (Bates & Poole, 2003, p.56).

While it is important to keep pushing the technological envelope in order to help both students and instructors, it should not be done without appropriately considering the basic needs of education.

References

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