

## **Introduction**

Educational media are expanding our understanding of how we educate using current and future technology. Education tools or the products that bring the various media together are an important consideration in the use of media for learning. This paper addresses the strengths and limitations of both synchronous and asynchronous technology using Webex, a primarily synchronous distance education tool, and Intralearn, a primarily a-synchronous distance education tool as the basis for a discussion of the strengths and weaknesses of technology-based education tools.

## **General aspects**

Both Webex and Intralearn are feature-rich applications. Webex is real-time web conferencing technology and Webex education tools include online chat, integrated audio, real-time video, whiteboards, desktop sharing, and the option to record sessions that include any audio, video and demonstrations presented during the live session. The ability to record live sessions provides the added bonus of being able to save training sessions that can be remotely accessed later for a-synchronous training.

Intralearn is a learning management system that focuses on the management of learning in an asynchronous system with the option of interactive instruction. Intralearn allows instructor's to customize courses, has online chat with a threaded discussion option and has a first-rate exam creation feature.

The aforementioned features for both applications are not all encompassing, but rather serve as high-level descriptions of key functionality.

## **Technological View**

General system requirements for Webex include a one-time software download with the option to download up to three other applications that would make Webex access faster and accessible from external email applications. Webex also provides a multimedia assessment tool for instructors who will use external audio and video.

General system requirements for Intralearn include both PC system requirements and hardware and server requirements. Intralearn would also require the use of IT professionals where Webex does not.

### *Participant Options*

The options that Webex provides to the participants include online chat (both public and private), the ability to provide immediate electronic feedback and to indicate if the instructor is going too fast or too slow and the option to interact with the instructor's desktop. Participants in Webex sessions are also able to request breaks using emoticons or small pictures that convey an emotion and they can write, draw and emphasize using the whiteboard feature of Webex.

Intralearn participant options are determined to a great extent by the instructor and how each course or educational experience is designed. Once a student is participating in a course, they will have access to threaded discussions, course materials that may include audio and video components and items such as syllabi, announcements, glossaries, references, FAQs and hyperlinks to other material. Chat is also available when enabled by the instructor. Intralearn is primarily a-synchronous so students are able to move at their own pace.

### *Instructor Options*

Instructor options for Webex and Intralearn are very similar in that instructors can design their courses, test and evaluate students and provide feedback. Overall, the key difference between the products is installation.

### **Pedagogical View**

There are two essential learning concepts identified in Fahy (2004) that are particularly useful when discussing educational technology: attention and higher-order thinking skills (HOTS). Technology creates a typical bias that the presentation of learning objects must be flashy. And many organizations place an emphasis on bringing in new technology without evaluating how best to use that technology. “The question then is not are they [learning technologies] better or worse, but in what contexts and for what purposes are technologies best used” (Bates and Poole, 2003).

Webex and Intralearn offer so much functionality that instructors will need to take the time to evaluate the technology available and to limit attention getting to direct correlations between material and images or material and multimedia. Using technology to teach does not mean that courses should have so much activity that they distract instead of capturing and keeping each student’s attention. Enhancing the learning experience with video of a surgeon operating on an individual would be distracting while trying to read about the newest regulations regarding the sterilization of instruments, but audio describing the new regulations that accompanies a video of a clinician in the process of sterilizing instruments could be very effective. Effective use of technology will address HOTS by moving beyond the basics toward integrated learning experiences (Fahy, 2004).

### *Role of the Instructor*

Initially, I would have said that the role of the instructor is to develop entertaining curriculum using as much of the available media as possible. As I continue to read Moore and Kearsley (2005) and Bates and Poole (2003), I become more and more convinced that the role of the instructor is to facilitate learning using a model, such as the ACTIONS model (Bates, in Moore and Kearsley, 2005). Instructors should create learning objects that take advantage of a particular technology's strengths and mitigate the weaknesses in all forms of technology by being flexible enough to select those technologies that best support each student.

### **Key Strengths and Limitations**

Key Webex strengths are that instructors are able to schedule meetings/training sessions in advance or real-time, instructors can create interactive learning, download Webex directly to their desktops and use right away. An example of the latter is critical information dissemination, such as the latest bioterrorism training in a hospital environment.

Intralearn's key strength is the ability to manage the entire training experience from creating and customizing courses and managing student access to evaluating student performance and maintaining skill inventories. Another important strength, especially in a global economy, is Intralearn's ability to change to eight other languages in a few mouse clicks. Intralearn's primary limitation is that the product requires IT support.

A shared strength is the ability to incorporate learning objects as defined by Moore and Kearsley (2005) into the training experience. Podcasts, videos, opportunities to solve real world problems in a medium like Second Life, and even hyperlinks to important and relevant sites can improve comprehension and understanding (Fahy, 2004).

Both Webex and Intralearn share cost as a limitation even though costs are declining (Fahy, 2004). Companies and individuals who cannot afford the technology nor the hardware and software needed to optimally use either Webex or Intralearn cannot benefit from the functionality and features available with either product.

### **Conclusion**

Educational tools (technology) require a certain level of mastery and an understanding of the strengths and weaknesses of the technology to be used effectively and efficiently. Recognizing that no tool will do every job is an important consideration when identifying the strengths and limitations of synchronous and a-synchronous distance education tools (Moore and Kearsley, 2005). Determining student preparedness and motivation will also have an impact on the technology selected and how successful the learning experience can be. The best technology for the job will necessarily depend on each individual learning object and each instructor's willingness to carefully evaluate proposed technologies.

## References

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