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Synchronous tools and the emerging online learning model

An online learning model is now emerging in both educational institutes and the corporation that combines three distinct technology platforms. Each platform provides certain capabilities and, when used in concert, can raise the overall effectiveness of an online learning program. This paper briefly describes this emerging model and then focuses on the capabilities and benefits of the synchronous platform.

Three components of the online learning model:

1. Asynchronous or content delivery systems
2. Interactive real time or synchronous tools
3. Web logs for open discussion and journaling

The growth in the adoption of online learning can be attributed to a number of factors:

1. Proliferation of low-cost personal computers and the availability of high speed Internet connections
2. Availability of web or Internet based online learning systems that predominantly provide asynchronous or [off-line] access to course content
3. Willingness of students to enroll in and educators to deliver online classes
4. Realization that face-to-face learning can be, and in many ways, should be replaced by an online model

Research on the effectiveness of asynchronous online learning, which includes case studies, student/educator surveys, and behavioral analysis indicate a need for learning tools that can support synchronous communications (see **Distance Learning and Synchronous Interaction**, Joel Foreman, July 2003).

Consider the following scenarios: peer learning (student-to-student), when the course material deals with complex or highly conceptual concepts, when the need for the immediate exchange of information can only be achieved with a synchronous communication system (lectures, mathematics, music, language arts) or for communicating technical information or software features to a remote user.



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As an example: a study group comprising four or five students is tasked to thoroughly analyze, brainstorm, and debate a complex problem. They then must construct an outline of their findings and deliver a formal paper that presents these findings to the entire class. Most students and teachers, in this example, would find using an asynchronous platform, by itself, to be at best challenging if not completely useless.

One can conclude that even though asynchronous tools have been the cornerstone of online learning they can be very limiting in certain learning scenarios and that the temporal latency or complete lack of higher-level communication services e.g. real time video, two-way application and document sharing and full duplex (2-way) voice over IP offered by most asynchronous platforms would exclude the above mentioned assignment.

Instructors and teachers also benefit from the interactive capabilities available in synchronous tools by providing direct and timely interaction with students or with the entire class. In many cases, repetition or "taking a look from a new perspective" may be the only way to assure subject comprehension.

Course material delivered as a lecture has long been a standard in most schools of higher learning. However, the K-12 level of teaching is not familiar with this learning style. Students in these classes must have a virtual classroom environment that closely match's the real world model. Here too, real time tools provide the immediacy needed to effectively deliver course content and also in support of interactive student and teacher session.

Again, the purpose of this paper is not to dismiss the benefits provided by asynchronous learning models but, rather, to raise the awareness level within both the student body and educator/training community that cost-effective, easy to use, highly interactive, real-time communications systems are now available. This next section will now describe the 1stWorks real-time communications capabilities found in hotcomm DL.

Let's first examine the organizational requirements for online learning:

- Lecture style or auditorium based presentations
- Classroom style



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- Study group or focus group
- One-to-one sessions

Flexibility in configuring the platform is critical to its adaptability in various online models.

Next, let's look at how a synchronous solution differs from an asynchronous one on a feature basis:

- Text-based messaging in either a group session or in private sessions
- Support for a live in streaming video presentations
- Voice over IP to facilitate lecture based or classroom sessions
- Ad hoc content presentation where limitations on providing content in advance of the session is an obstacle to the teaching process.
- Two-way interactive application sharing that allows teacher and student, collaboration on applications or documents
- Session record capabilities allow easy playback and review a specific items in a session
- General-purpose collaboration tools such as white boards and annotation tools that allow interactive exchanges between any individual in the session
- Group access and co-browsing of web sites and web pages
- Session control features that allow moderators to deliver the let uninterrupted presentations during the lecture
- Information transfer capabilities in the formal file transfer or block text transfers that become part of the session history
- Ad hoc questions, and polled responses that provide feedback to the instructor

It is clear from this list of additional capabilities that synchronous tools, such as hotComm DL, can add great value to the online learning process by enabling student-to-student or teacher-to-student interactive communications.



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The applicability of these tools is not confined to education but also in the business sector where the exchange of information is similar to the traditional classroom.

Please feel free to try our trial product or contact Joe Ferrazano, Director of Marketing, 1stWorks Corporation joe@1stworks.com or by phone at 508-620-8850 for more information.