Chapter V

Asynchronous Learning Tools: What is Really Needed, Wanted and Used?

James E. Novitzki
Johns Hopkins University, USA

The concept of distance learning, where the instructor and student remain geographically separated, has been used for almost 150 years, since Sir Isaac Pitman came up with the idea of delivering instruction through the use of correspondence courses (Phillips-Vicky, 1998). Despite this history, the move toward more open learning has been not much more than a trend, and it is unlikely that a teaching professional from 100 years ago would feel uncomfortable in the classroom of today (Papert,1992).

Yet, distance learning and asynchronous learning (ASL) in particular are areas of rapid growth. Morse, Glover, and Travis (1997) conducted a survey of 205 schools in 1994-1995. Of the respondents only 26% were involved in distance learning. Three years later Phillips-Vicky (1998) reported that 180 accredited graduate schools and more than 150 undergraduate colleges and universities were supporting distance learning programs, and most schools surveyed would have some form of distance learning programs available in the next one to two years.

Distance learning is still not a mainstream educational method, and few institutions have the knowledge and experience to successfully offer full programs in this format. Even the University of Phoenix, which advertises on-line degrees, has only 7,000 on-line students out of a total student body of more than 53,000 (University of Phoenix, 1999). Considering the large numbers of Web-based distance learning products being marketed and the combinations of features offered, it is a monumental task for a school to make an educated decision on which, if any, of these products can meet their requirements.

This chapter has several objectives. First, it discusses significant issues for consideration by any institution planning to develop a Web-based distance learning program and identifies the attributes necessary for effective ASL. Second, it identifies some current development tools and what they provide the instructor to develop and administer a course in an asynchronous format using the World Wide Web. Third, it discusses how some of these

Web-based tools were employed in a graduate business program, and how students responded to and used them. Fourth, it ends with general observations about the use of the tools from both faculty and student standpoints and recommendations for institutions planning on moving into ASL distance education using Web-based tools.

BACKGROUND

The use of ASL started in the 1980s when some faculty and students began to teach and learn asynchronously using e-mail (McMullen, Goldbaum, Wolffe, & Sattler, 1998). As the Internet and browser technology have improved, more graphic interfaces have been added which simplifies navigating through lectures and lessons. The use of the Internet means that anyone with a computer and Internet access can be enrolled in a course without the need to purchase or obtain special hardware or software from the school. The limitations of these systems are those inherent in using technology solely as a means of presenting education, including security issues about who is actually doing the work. Speed of transmission, which determines just how much information the student can effectively receive, is also a critical concern. Since most students connect via a modem, and some are as slow as 14.4, it is obvious that little in the way of extensive graphics, full-motion video or audio can currently be provided. As compression techniques are improved, they enhance the ability of low speed modems to present these media. As a result, many tools now are providing options for streaming video and/or audio. These implementations are constantly being updated and their capabilities can differ significantly from version to version of the software.

Years of research have identified the capabilities needed for an effective distance education program and how they apply to the asynchronous learning environment. This research has been the basis for the development of most of the tools that are now available. Most of these products allow students to use a Web browser to take the course, but many use proprietary software for the course development and administration. They vary widely on the investment in time, money, and computer assets for development, implementation and maintenance. Some place restrictions on what and how materials can be presented and the types of interaction provided. While this chapter does not have the space to give a detailed description of all features and characteristics of the various tools, enough description and supporting information is provided to form a framework for comparison.

Student use and response towards these tools is important. If the students do not or can not receive education while using the tool, any distance education program will fail. How do students use these tools when they take these classes? Do the students typically use the tools as envisioned? Do they use the various aides available, and is their effort similar to what was expected by course designers and educational experts? Is there a difference in what students want and expect as they move through an asynchronous course? These are critical issues, and initial findings indicate that there are significant differences that faculty members must be aware of.

Issues about ability of students to complete the courses, differences in learning experience between on-line and traditional classes, and the effect of features of various tools used can be major issues, but in initial stages these do not seem to be significant issues. Much of the information presented supports prior research and gives faculty and administrators insight about the initial steps in developing ASL programs.

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