Video conferencing is a synchronous and interactive form of communication that occurs when two or more people engage in face-to-face audio and visual exchanges using cameras, microphones, monitors, and document software (Digital Bridges, 2006). The use of video through the Internet is becoming part of our daily lives. Rainey (2005) reports that over 16%, or 20 million, Americans have viewed a person or place using a webcam. The growth in the use of video has occurred for three reasons: a moderate webcam costs approximately $30-50, they are plugged in and played with the use a USB port, and the increasing access to broadband (46% of American homes now have broadband access [Rainey, 2006]) makes it easy to display and access images from webcams.
Moore and Kearsley (2005) note three main types of video conferencing:

1. Small room conferences that were designed primarily for groups of no more than about 12 participants at any site.

2. Classroom conferences use compressed video to enable large groups to see and be seen on classroom monitors.

3. Desktop conferences use personal computers linked by computer video-conferencing software. (p. 85)

The first two types of conferencing have a history in distance learning and a documented effectiveness in both adult and K-12 education (Cavanaugh, 2001). For example, preservice teachers are observed while working in classrooms by university supervisors who view their work (Johnson, Maring, Doty, & Fickle, 2006). As broadband access and emerging forms of online education continues to increase, we are beginning to see more and more teachers utilizing desktop video conferencing, which becomes the focus of this chapter. However, many of the principles we discuss also apply to small room and classroom conferencing.

Video conferencing can occur using a variety of software and Internet-based tools, and depending on the particular tool, might integrate other features such as a whiteboard area, application sharing (showing your computer screen to another user), polling, file sharing, a graphing calculator, and text messaging. Typically, a host can record a video conference session, also making the software popular for recording tutorials that students can later access through a URL. Whiteboard areas are a common feature associated with video conferencing. Typically they contain interactive space where participants can simultaneously type text, solve math equations, pull up Web browsers, share applications, or load multimedia, such as a Powerpoint slideshow. Popular video conferencing software includes such products as Breeze, Elluminate, Netmeeting, and Polycom.

Note the speaker on camera is pictured in the upper left corner. A list of participants is below her, along with a text chat window for those who do not have microphones. Also included in this video conference is a file share “pod” in the lower right corner. This is where the speaker has uploaded documents that participants can click on and download to their computer. The whiteboard space in this particular conference has a slideshow loaded onto it.