



# INSTANT MESSAGING **NIM** Online! **RU?**

By Robert Farmer

*If students come to us with PDAs and cell phones . . . and spend hours on Instant Messenger, we should use what they know as the starting place for their educational experience.*  
—Newton Smith, “Teaching as Coaching: Helping Students Learn in a Technological World,”  
*EDUCAUSE Review* (2002)

**T**oday’s students entering higher education have grown up with technologies like video games, cell phones, microcomputers, and the Internet. In fact many, if not most, college students are younger than the first microcomputer. Students are more technology-literate and Internet-savvy than ever, and they use technology in ways that weren’t even imagined a decade ago. Their fluency with technology is not even a question. The bigger issue may instead be their demand for the integration of technology into their learning. This is especially important as more and more institutions, programs, and courses move to an online or blended environment.

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A vital technology for this generation is instant messaging—or “IM,” for short. IM is one of the simplest forms of synchronous online communications available. It allows two, and sometimes more, computer users to communicate across a network connection. For the most part, the communication is text-based, although many IM networks currently provide facilities to allow for audio and even video. IM is thus an ideal technology for today’s students—students who have, as Jason Frand has noted, an “information-age mindset.”<sup>1</sup> Frand identified ten attributes that reflect the values and behaviors of this mindset. The following four can be seen as directly relating to the use of IM by this younger generation: (1) computers aren’t considered to be technology; (2) the Internet is better than television; (3) multitasking is a way of life; and (4) staying connected is essential.

This younger generation views computers to be technology no more than their parents would the telephone. And with IM, the telephone is no longer necessary for an individual to stay connected. As the growth in IM usage continues, it will compete with other forms of communications, such as the telephone and e-mail, to become the primary means of communication within business, education, and everyday life. According to a 2001 Pew Internet & American Life Project study, *Teenage Life Online*, this is already true for most teenagers. And a 2004 Pew study, *How Americans Use Instant Messaging*, notes that 62 percent of Internet users ages eighteen to twenty-seven have used IM.<sup>2</sup> This trend will only continue as the IM-ers move through their educational experience and into their careers.

Television is no match for the Internet. The interactivity and the endless amount of information on the Internet are deemed far superior to the passive, one-

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way media of TV. The Online Publishers Association reports more than 50 percent of people ages eighteen to twenty-four picked the Internet as their top media choice (28.5% picked TV). The Internet was chosen as the most important source of news (45%), with TV close behind (39%). As an information source, the Internet ranked as high as 96 percent when people were looking for information about specific products, whereas TV was given its highest marks for financial information (10%) and entertainment information (10%).<sup>3</sup>

One needs only to watch teenagers today to get an understanding of multitasking. While working on their homework, members of this younger generation are likely to have their computer on and be connected to IM with one or more chat conversations active, have an MP3 player with earplugs attached to their head, be eating a snack, and oh yes, have the cell phone nearby (set to vibrate, since they wouldn’t hear the ring over the volume of the MP3 player). According to the Pew study *How Americans Use Instant Messaging*, the majority of IM-ers say they do other things while participating in IM sessions.

This is all part of being constantly connected. A recent technology-usage survey showed that 56 percent of American teenagers (ages thirteen to seventeen) have a cell phone. With laptops, PDAs, text-messaging via cell phones, and wireless networks, the ability to stay connected all the time is approaching—perhaps not at light speed, but it is approaching. Reporting on the “instant-message generation,” the Pew study *Teenage Life Online* notes that 13 million U.S. teenagers use IM, that 74 percent of online teens use IM, and that 69 percent of online teens use IM at least several times a week. In the article “Are You Web Aware? Instant Messaging,” the Media Awareness Network noted that among

younger Canadians (grades 7–10), almost half (49%) use IM every day.<sup>4</sup>

IM has become firmly entrenched in the lives of the younger generation. As a result, IM usage is expanding into both higher education and the workplace.

### IM Basics

Most IM network systems are based on software, referred to as the “IM client,” which is downloaded and installed on a computer. This IM client resides in the background and allows the user to manage a contacts list and to visually see the presence of others. It is this presence-awareness that reinforces the idea of constant connectivity, for as a user connects to the IM network, his or her status within the IM client of others is updated, and all people who have that user in their contact lists immediately know that the individual has just come online. IM clients allow users to stay connected continuously and to set their status, such as “busy,” “away,” and “on the phone.” Some systems provide automatic status updates, setting the user to “idle” if the user is connected but has not initiated any activity within a set timeframe. Communications occur when one user initiates a conversation within a chat window. Some IM networks can be accessed via a Web-based client—for example, e-messenger (<http://www.e-messenger.net/>).

IM networks or systems can be categorized into three areas: (1) public (free) networks; (2) private or enterprise networks; and (3) integrated or embedded networks. The growth in IM has occurred primarily due to the free public networks, which include the following popular programs: MSN Messenger (<http://messenger.msn.com/>); Yahoo! Messenger (<http://messenger.yahoo.com/>); and AOL Instant Messenger, or AIM (<http://www.aim.com/>). These public IM networks do not interoperate between each other, meaning that users must have multiple IM clients and accounts if they wish to communicate with users of different networks. However, some IM client developers, such as Trillian (<http://www.ceruleanstudios.com/>) and Instant (<http://www.interactiveni.com/IMSite/imfreeware.htm>), provide interoperability between several IM networks, including the main players.

Private or enterprise networks work similarly to public IM networks but are limited to those individual clients within a specific network domain, be it a workgroup, a department, or an entire organization or enterprise. These networks often provide increased user authentication and encryption and therefore increased security. The major drawback to these systems is that they are no longer free and in some cases come with a hefty pricetag. Systems within this private domain include Effusia Business Messenger (<http://www.liquidcs.com/>) and InterComm by Five Across (<http://www.fiveacross.com/products/clientapps.shtml>). Enterprise systems include IBM Lotus Instant Messaging and Web Conferencing (<http://www.lotus.com/products/product3.nsf/wdocs/homepage>), Microsoft Office Live Communications Server (<http://www.microsoft.com/office/livecomm/prodinfo/default.mspx>), and Groove Virtual Office (<http://www.groove.net/>).

With integrated or embedded networks, the features and functionality of IM

are included within other, often larger, software applications. This is the case with most of the large enterprise-wide networking systems mentioned earlier and with many Web-based educational learning environments. This is true of virtual classroom systems such as Elluminate *Live!* (<http://www.illuminate.com/>) and Horizon Wimba (<http://www.horizonwimba.com/>), which both include an area for text messages to be sent among participants. It is also true of learning management systems such as the chat area of WebCT (<http://www.webct.com/>). Some people feel that IM and chat areas are not the same, in that IM is based on presence-awareness whereas one must enter a chat area or room to see who is

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there. However, once the user is in the chat area, many of the functionalities are the same. The integration or embedding of IM features and functionality into more and more productivity applications, both on the desktop and via Web-based interfaces, is likely.

While many productivity and enterprise systems are integrating the features of IM, the same is true from the other side. IM clients are continually increasing the features and functionality available to their users. As mentioned earlier, the ability to use audio and video connections within IM is becoming popular. Additional communication features may include the ability to send messages to mobile

devices such as PDAs or cell phones, to send messages via e-mail or to hold messages for users currently not online, and to send files between users. IM developers continually add features directed at the user's individualism, including a personal profile, look-and-feel (skins selection and color schemes), and a user's picture or icon. Most, if not all, IM networks allow the user to archive the transcript of the text conversation. Many private or enterprise systems also capture this transcript, sometimes in a centrally administered storage area.

Some IM clients have unique features. For example, InterComm by Five Across can be considered a private network, although

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users have the option to make the network publicly accessible within the proprietary domain of its own IM client. InterComm's methodology is slightly different from that of most other IM networks: it is group-based, and users are invited into and arranged by groups. IMs can be sent to an individual or an entire group; messages are held for offline group members and show in a window when the member logs in. It provides file-sharing via online storage, with alerts on file updates and version tracking. InterComm also supports RSS feeds and Web-site URL sharing via a tab-screen environment.

#### **IM Usage**

Much of the research into IM that is non-work-

related has been based on its use by the younger generation. This research has focused on socialization, including social presence and social interactions among users. In addition to socialization, non-work-related uses of IM include event planning and project collaboration.<sup>5</sup>

The younger generation is not the only group using IM. The Radicati Group expects the number of IMs sent daily to grow from 13.9 billion in 2005 to 46.5 billion in 2009. According to the 2004 Pew study *How Americans Use Instant Messaging*, more than fifty million Americans use IM, with 24 percent of them reporting that they use it more frequently than e-mail. In addition, although the majority of IM usage today is personal, many analysts' findings indicate that corporate users compose the fastest-growing segment of IM-ers. The Radicati Group estimates that by the end of 2005, there will be 362 million corporate IM users (of which only 42 million will be using enterprise-only IM systems), affecting 85 percent of all companies in North America. IDC researchers predict that business

users will make up nearly half of the 506 million IM users it expects to be online by 2006.<sup>6</sup>

Research into at-work use of IM shows that most users feel positive about it. They report that IM improves their productivity and teamwork, saves time on tasks, and provides relief from the daily grind. In early 2004, IBM stated that its employees were sending more than three million IMs a day—thus speeding up the decision-making process from days or weeks to minutes. IBM reported that IM had reduced telephone use by 4 percent, reduced the load on mail servers, increased responsiveness and collaboration, and improved employee productivity and teamwork. Similarly, Genelle Hung, senior analyst for the Radicati Group, noted: “Instant Messaging has tremendous potential across the enterprise, from improving employee communication and collaboration to providing better customer service at lower costs.”<sup>7</sup>

On the other hand, IM is also often seen as a distraction and as something that encourages gossip. And as the use of IM within businesses increases, technology managers are plagued by the fact that much of this use is on public IM networks. Such unmanaged entities open the organizational computer infrastructure to potential security and privacy risks.

Within the educational environment, IM has made its way to several college/university library Web sites in the form of online reference desks. IM is also being looked at by student affairs professionals, who need to understand the impact this technology is having not only on their students but also on their institution’s employees. Admission counselors are becoming aware that their clients, entering freshmen, are likely to prefer to contact an institution of higher education with questions via IM rather than by phone. One example is Boston University, whose admissions

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**Table 1**

FEATURE	PERCENTAGE OF STUDENTS USING THE FEATURE	
Send note to individual (who is offline)	75.0%	
Send note to group (some of whom are offline)	87.5%	Over thirty group notes posted
Post files in shared storage	75.0%	Twelve files uploaded, including Word and Power-Point files
Propose a meeting	25.0%	
Post Web-site URL	87.5%	Twenty-eight URLs posted
RSS feeds	0%	

counselors use IM to field prospective students’ questions about admissions procedures, college life, and their application status.<sup>8</sup> Students are definitely bringing IM to school, with millions of them using it daily, primarily as a social tool. But with IM embedded into virtual classroom applications and Web-based learning management systems, IM is now becoming a learning tool as well as a social tool.

### IM as a Learning Tool

Over the past two years, I have experimented with IM in a number of IT courses. For example, as part of a senior IT course titled “Management of Information Technology,” I invited students to participate in a short IM experiment. All the students in this course were very computer-literate and Internet-savvy, yet their level of IM familiarity varied. This initial experiment utilized a private IM network and an IM client called IMici BM (Business Messenger). IMici BM, which is no longer available, was a hosted secure IM, meaning that it was accessed via the IM client from a Web server maintained by the IM developer. One reason for selecting this software was that it allowed for monitoring and logging of both the activity and the message

content. The experiment lasted three weeks. Ten students from the class accepted the invitation to participate, generating 405 IM sessions over this short period of time. An IM session could include one message or several messages being sent back and forth.

In a more recent experiment, eight students from a communications course participated, this time using InterComm. InterComm is a private IM network and IM client and was used as a hosted secure service, although it is also available in a workgroup version for local server installation. The hosted version does not provide statistical usage data; therefore, the analysis was limited to student-reported activity and perception. Students participated heavily during the three-week experiment, utilizing the tool to interact and collaborate on a major presentation. Within the first two weeks, the average usage was one to two hours a day per student; in the last week, that average jumped to two to three hours each day, with some students utilizing it more than three hours a day. The majority of students reported interacting with more than half of the remaining students in the course, typically four to five times a week. Not all students used IM to communicate with the professor; e-mail within the university’s learning management system was the primary communication tool for contacting the professor. In addition to IM chat, which all the participating students used, InterComm provides some additional features and functionalities, as summarized in Table 1. Along with the synchronicity of chat, students reported liking the fact that files could be stored in one spot and were always accessible to everyone.

Educational and learning collaboration could and should be the next emerging use of IM. To some extent this is happening, but mostly in high schools and lower grade levels.<sup>9</sup>

### IM Issues

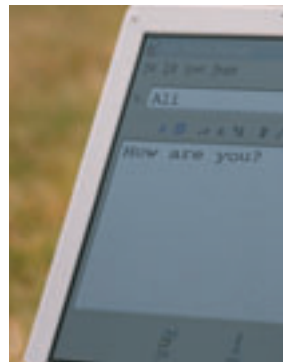
IM comes with some identifiable issues and/or disadvantages.<sup>10</sup> Perhaps foremost among these issues are concerns about security and privacy risks, which are mostly associated with public IM networks. These risks are a major concern, since most business usage of IM is through public IM networks. The main security issue stems from the fact that IM is a computer-to-computer communication, and any attachments follow the same path; therefore, neither an organization's firewall nor its corporate virus software scans these attachments. On the privacy side, although all IM networks require login names and passwords, these are stored on the host servers owned by the IM developer and are not managed or controlled locally. In addition, since the content of IM conversations is transmit-

ted over the Internet, it may be susceptible to digital eavesdropping. More important, both parties can archive the IM conversation, and within private and enterprise IM networks, this is normally done globally for all conversations. Confidentiality is not ensured.

IM is also becoming the next target for the distribution of viruses and worms. And then there is *spim*—IM's own flavor of spam. The Radicati Group estimates that spim will grow from 1.2 billion messages in 2004 to 17.9 billion in 2008.<sup>11</sup> This growth could be fueled with more enterprise use and the possible inclusion of IM identities in organizational directories.

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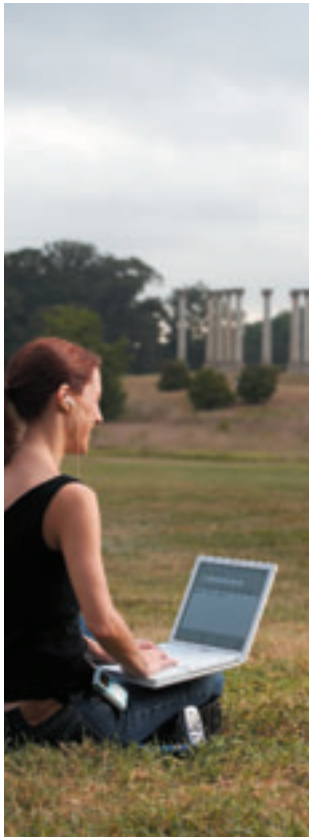


setting, IM raises some unique issues, including the potential for distraction, unauthorized use, the slang language created by IM users, slow adoption by faculty, and the ubiquitous nature of IM. As noted earlier, some people view IM as a distraction and time-waster. In fact, many high schools have banned or are considering banning the use of IM by students. In response to "Should We Ban Instant Messaging in School," a point/counterpoint article in *Learning & Leading with Technology*, Stephen Downes commented: "You know, it's funny—I read so much about teachers trying to find ways to get students' attention, and when they find a device—a *communication device*—that captures students' attention, they want to ban it."<sup>12</sup>

How to deal with the unauthorized use of public IM networks has been a concern for a number of years. A joint IDC and FaceTime Communications survey shows that most organizations that prohibit IM also fail to address critical network security and information security. In the survey, 36 percent of respondents reported that IM is prohibited by their organizations, but only 17 percent of those reported having a solution in place to block its use.<sup>13</sup> Public IM clients can easily be downloaded and used by any worker who has a computer on his or her desk—without the knowledge of the IT department unless IM blocking solutions have been implemented. One can monitor IM usage via an IM software auditor, of which there are several. Such software can intercept IM messages from AOL, MSN and Yahoo, among others, and record them. The fact that individuals (employees or students) know that their conversations are being recorded may not stop unauthorized use, but it puts a new light on what the conversation may include. Controlling and regulating IM—or at least access to public IM networks—is

not an easy task. A more appropriate organizational tactic would be to provide a solution that uses an IM network that is safe for corporate use—that is, an IM network that includes encryption, authentication, and organizational directory integration.

Another issue is the use of IM slang or Net-lingo, which is raising major concerns about the language and writing ability of the younger generation. IM slang is the phonetic representation, acronym, or another commonly accepted form of written words. Some of these slang terms were in use even before IM. From the hundreds of acronyms that are currently in use online, some



examples include the following:

- BTW:** By The Way
- AFK:** Away From Keyboard
- GMTA:** Great Minds Think Alike
- IC:** I See
- POS:** Parents are looking Over my Shoulder
- RU:** aRe yoU?

IM slang is spilling over into other forms of writing—not only online. Students are using these shortened words in e-mails, but more troubling is the fact that they are moving from these casual writing activities into more formal ones (projects and reports) without changing their writing and attention to punctua-

tion or grammar. Faculty and instructors need to clarify and remind students about writing expectations.

Clearly, students have embraced this technology. Ellen Cohn notes: “Academic institutions are well advised to address IM use with alacrity, as IM demographics show pervasive adoption of this technology among both prospective and current college students.” But faculty have not widely adopted this technology. A large number of faculty are ill-equipped to use IM and will likely need formal faculty development training.<sup>14</sup> Furthermore, the ubiquitous nature of IM and its growth within educational environments may encourage the expectation of the “ubiquitous” instructor, possibly resulting in additional time demands on and increasing workloads for faculty.

### Conclusion

IM is a relatively simple form of communication. It is also—by its very nature—a collaborative communications tool. This collaborative nature is what makes IM ideal for educational and learning environments. With IM playing such a large role in the communication, interactivity, and socialization skills of today’s younger generation, higher education leaders and faculty must seriously consider its application and inclusion within students’ learning activities. The use of such collaborative communications tools within courses and course activities creates a more engaging learning environment for students, most of whom have already adopted the readily available IM tool and are using it prolifically. IM has powerful applications and incredible potential within educational and learning environments. It is making inroads in both business and everyday life and is knocking at the door of higher education. Let’s open the door. IM Online! RU? *e*

### Notes

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