

studentPOLL

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The rush to embrace new computer-based communications technologies in student recruitment is not yet justified by market interest or capability. While signs point to the potential for rapid growth, investments in these technologies should be made with prudence.

PUBLISHER'S NOTE

As industry analysts forecast an explosion in the number of Americans using the Internet and its multimedia offspring, the World Wide Web, colleges and universities nationwide have eagerly jumped on the technological bandwagon, rushing to develop applications in student recruitment. A spate of new on-line interactive college information services have emerged, each competing for institutional resources and commitments. Admissions Web sites ("homepages"), ranging from slick commercially created productions to the home-grown institutional variety, are proliferating.

In the face of all the media ballyhoo, college and university leaders are increasingly concerned that any delay in embracing these technologies and making them a central part of the admissions process will severely weaken their institution's competitive position. We have little evidence to justify this concern.

In fact, our findings suggest that many of the claims made about the

broad market impact of these technologies on prospective students currently amount to little more than another dose of "Silicon Valley snake oil." While no one can dismiss the promise of technology's impact on the admissions process and recruitment communications, there is little reason to believe that a revolution is imminent.

For now, as our findings document, only a small fraction of the prospective student market is taking advantage of these new communications technologies, and a lack of computer expertise and sufficient hardware present major barriers to access.

These findings mirror for prospective students patterns for the adult population at large as reported in a recent study conducted by the Times Mirror Center, *Technology in the American Household: Americans Going On-line... Explosive Growth, Uncertain Destinations*. That study revealed that, while the number of Americans using on-line information services or the Internet has more than doubled in the past year, no single on-line feature, with the exception of e-mail, is used with any frequency. Moreover, while an increasing number of Americans

have modem-equipped computers, most of these modems are not used.

While we are confident that the findings reported in this issue of *studentPOLL* accurately represent current market conditions, we are equally confident that change will occur swiftly. Indeed, we see our findings as important benchmarks against which key trends can be charted over time. Because of their profound implications, *studentPOLL* will, on a periodic basis, measure and evaluate these trends and suggest appropriate institutional strategies and tactics.

What does all this mean for colleges and universities pursuing or considering major investments in these communications technologies? The jury is still out. Given the uncertainties of the marketplace and consumer behavior, there is no reason to panic or rush ahead blindly. Now — while the stakes are still low and the consequences of missteps minor — is the perfect time to test and experiment.

Richard A. Hesel
Publisher

1. While nearly all students have access to computers at home or at school and more than half own their own machines, fewer than two in five have the hardware necessary to use on-line and other new computer-based

Table 1.
Computer ownership and access

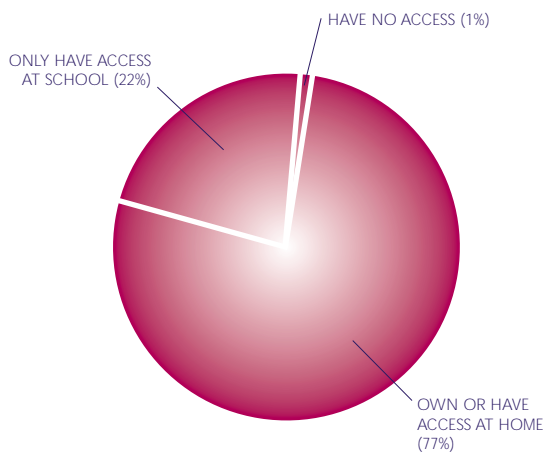
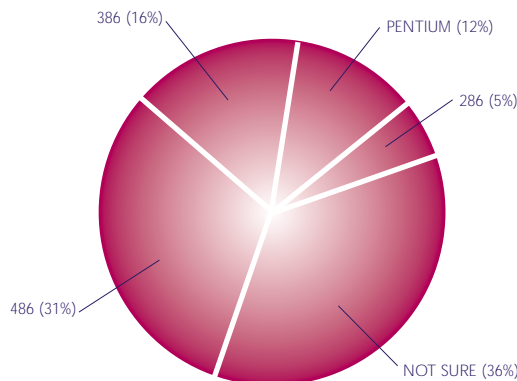


Table 2.
CPU or IBM-compatibles owned or used at home



To use computer-based multimedia communications technologies, students must have access to a computer with a processor of sufficient power and speed, a high-speed modem, and, for some applications, a CD-ROM drive. *studentPOLL* findings reveal that a high percentage simply do not have the necessary hardware.

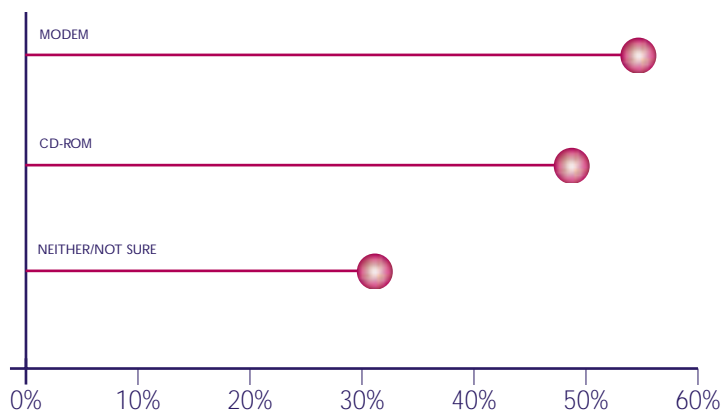
Access to computers is almost universal. More than 50 percent of the respondents reported owning a computer. Among those who do not themselves own a computer nearly all have access to one: almost half both at home and at school and nearly all of the balance at school (Table 1).

A closer look at the hardware configurations of the machines students own and use is more revealing. About 20 percent of these machines — both PCs and Macs — are equipped with CPUs of marginal power, which makes running the software needed for contemporary on-line services a painfully slow experience (Table 2). While more than half of the computers students own or use are equipped with a modem, only 41 percent of these modems are believed to have a baud rating of 14.4 or higher. These data, combined with other findings concerning Internet access, indicate that it is likely that fewer than two-fifths of the market currently has the hardware needed for efficient access to multimedia on-line communications such as the World Wide Web.

It should be noted that high percentages of the students interviewed did not know the CPU power or modem speed of the computers they own or use. Our access projections are based on the assumption that CPU power and modem speed distributions are roughly the same for these groups.

CD-ROMs are somewhat less frequently present than modems in the computers students own or use — slightly less than half say they have them (Table 3).

Table 3.
Percentage of computers owned or used most frequently that have modems or CD-ROMs



A D V I S O R Y

NATIONAL ADVISORY BOARD

CONSIDER MAJOR INVESTMENTS IN NEW COMPUTER-BASED COMMUNICATIONS TECHNOLOGIES CAUTIOUSLY.

Take time to plan and test while student use is still relatively low. Do not treat the technologies as communications panaceas or replacements for print, video, and other more traditional tools: their long-term impact may be overestimated.

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ABOUT *student*POLL

*student*POLL is an authoritative national survey that measures the opinions, perceptions, and behavior of higher-ability, college-bound high school students and their parents. Available only by subscription, it is published quarterly by Art & Science Group, Inc., marketing consultants to higher education and the non-profit sector. The National Advisory Board suggests topics to be studied in *student*POLL and reviews survey instruments. Board members serve in a voluntary capacity as individuals, not as representatives of their institutions.
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SURVEY METHODOLOGY

The findings reported in this issue of *student*POLL are based on in-depth telephone interviews with a scientific national sample of 500 high school seniors who were about to enroll in four-year colleges in the fall of 1995. To qualify, respondents must have achieved a combined SAT score of 1,000 or higher (before recentering). The sample was drawn to represent five broad areas of intended college study: engineering, science, and computer science; social sciences; humanities and arts; business; and education and allied health professions. Other analytical variables taken into account in the study design and sample included geography, and family income. Questions about survey methods or findings, should be addressed to Art & Science Group, Inc., see page 11.

2. Only a small percentage of the market is highly proficient in the use of computers. Just one in three students indicates computer proficiency beyond word processing.

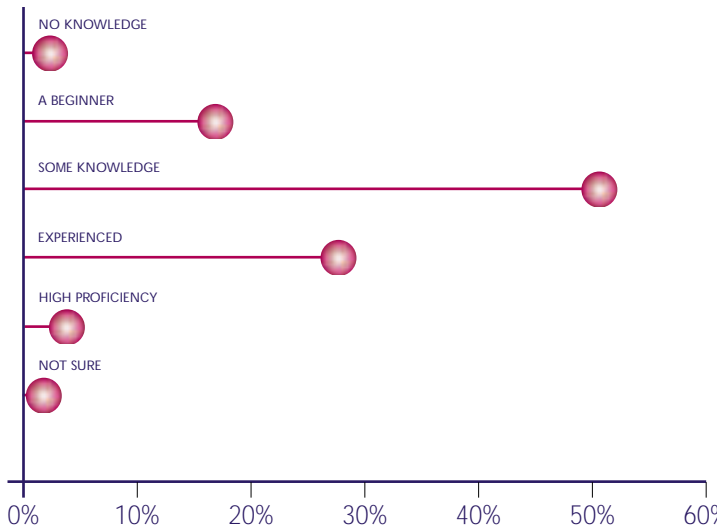
Students with little or no knowledge of software programs are likely to get lost in cyberspace in a hurry, particularly when the problems that seem almost a normal part of computer use arise. From this perspective, the news for on-line communications technologies is not good. Two-thirds of survey respondents rated themselves as “beginners with limited knowledge of software programs” or as having “some knowledge of word processing and/or other

software.” Only about 30 percent of the total market rated itself as “experienced in the use of a variety of software programs” or “highly proficient writing your own software,” with less than 4 percent rating itself as “highly proficient” (Table 4).

As noted above, many of the students interviewed were unable to identify the processor or modem speed of the computer they own or use most frequently. This suggests a lack of hardware or knowledge that could be a barrier to on-line access. While new operating software plat-

forms such as Windows 95 make detailed knowledge of hardware and software less important than in the past, the installation of a modem or CD-ROM remains a somewhat daunting task when “plug and play” fails to live up to its promises or when new software must be configured for proper modem or CD-ROM operation. This may explain why, as the Times Mirror survey documents, so many modems shipped with computers today remain unused.

Table 4.
Self-rated computer proficiency



A D V I S O R Y

MAKE THE BEST, MOST CREATIVE USE OF THE TECHNOLOGY'S INTERACTIVE CAPABILITIES WHEN DEVELOPING ON-LINE COMMUNICATIONS, AND FOCUS ON QUALITY.

Students will not be engaged by on-line communications that are text-heavy or unimaginative. Unless it lends itself to multimedia, interactive presentation, avoid a Web site that is little more than an on-line version of your viewbook.

3. Computer ownership, proficiency, and access to various on-line services correlate with income and SAT scores.

Virtually every indicator of access and capability — computer and modem ownership, access to on-line information services, computer proficiency, and even knowledge of the model and CPU of the computer used — correlates with income and academic ability (as measured by combined SAT scores).

For example, 69 percent of the students reporting household incomes over \$100,000 versus only approximately 42 percent from households with incomes below \$40,000 said they owned a computer (Table 5). Over 61 percent of those with combined SATs over 1300 reported computer ownership versus only 45 percent with combined SAT scores between 1000 and 1100. The same pattern holds true for modem ownership (Tables 6a and 6b) and access to on-line services (Tables 7a and 7b). Seventy percent of students from households with incomes over \$100,000 said they had computers with modems, compared to only 45 percent with incomes under \$40,000. Likewise 62 percent of students with SATs over 1300 indicated they used or owned a computer with a modem, compared to only 46 percent with scores below 1100. Self ratings of computer proficiency show a similar correlation with income and SAT scores (Tables 8a and 8b).

In contrast there is little statistically significant variation in CD-ROM ownership or access across income or ability. Moreover, CD-ROMs are less prevalent than modems among higher ability students and those from the most affluent households (Tables 6a and 6b).

These findings suggest that increasing reliance on computer-based communications technologies in the

Table 5.
Computer ownership or access at home
By household income

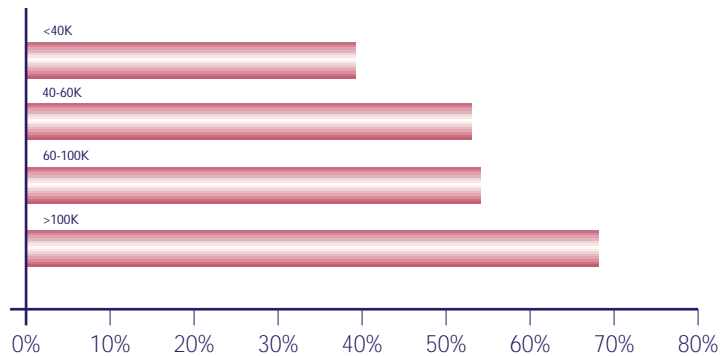


Table 6a.
Presence of modem or CD-ROM in computer owned or used most frequently
By household income

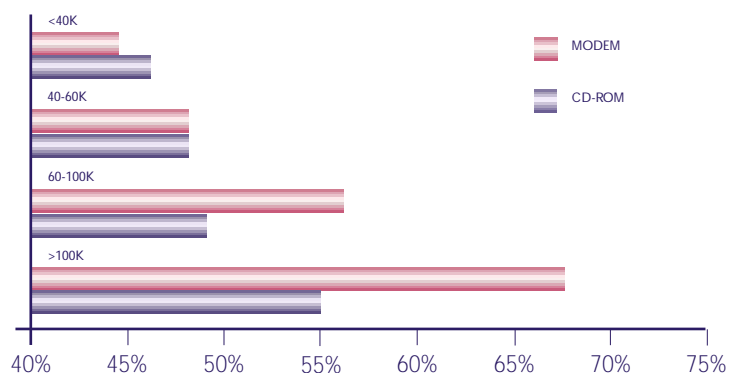


Table 6b.
Presence of modem or CD-ROM in computer owned or used most frequently
By combined SAT score

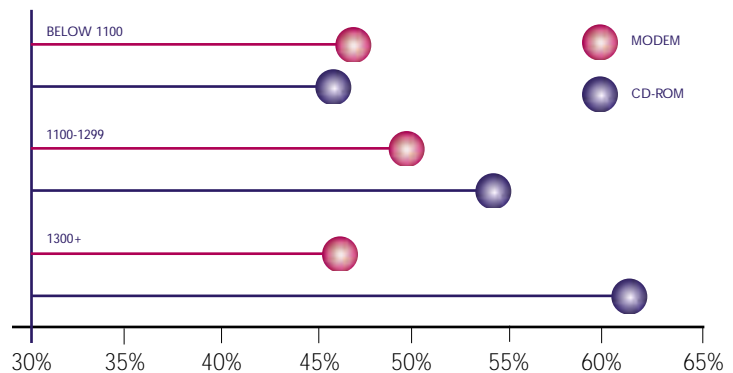


Table 7a.
Internet Access
By household income

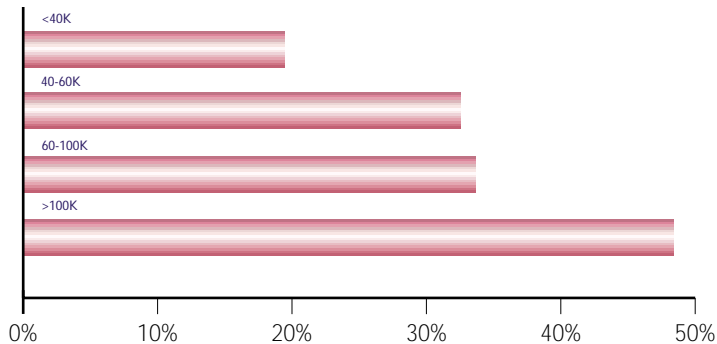


Table 7b
Internet Access
By combined SAT score

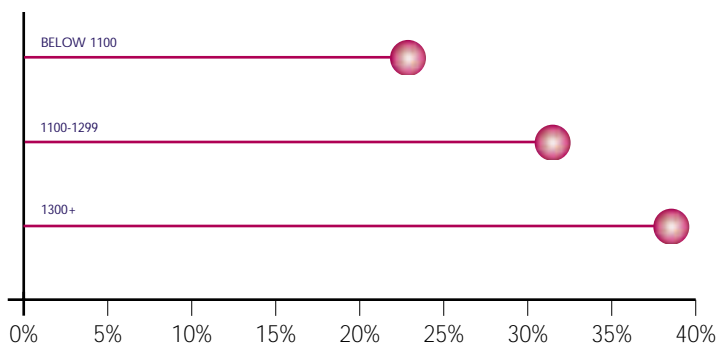


Table 8a.
Students rating their computer proficiency "Experienced" or "Highly proficient"
By household income

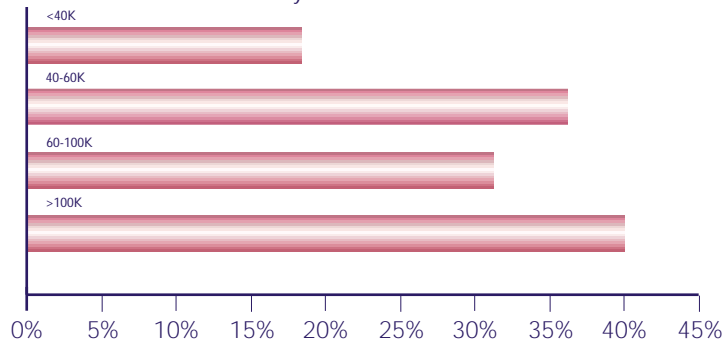
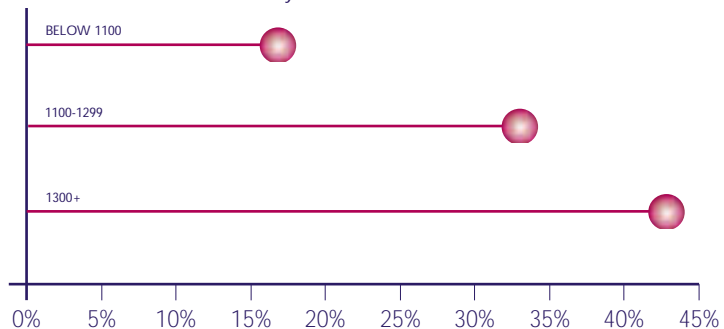


Table 8b.
Students rating their computer proficiency "Experienced" or "Highly proficient"
By combined SAT score



recruitment process — particularly on-line communications — is likely to exclude less affluent students disproportionately.

A D V I S O R Y

WHILE CURRENT USE OF ON-LINE COLLEGE INFORMATION SERVICES AND OTHER COMPUTER-BASED COMMUNICATIONS IS EXTREMELY LOW, THEY APPEAR TO PROVIDE A GOOD OPPORTUNITY TO REACH MORE AFFLUENT, HIGHER ABILITY MARKETS.

On the other hand, over-reliance on these technologies is virtually certain to result in the exclusion of less affluent populations. When developing these technologies for admissions, give careful attention to steps that help ensure access for less affluent students.

4. While about a third of the students surveyed report that they now have access to America Online and the Internet, the findings suggest that the Internet is poised for greater growth than any of the major commercial on-line networks.

Our findings suggest that the Internet will be students' preferred on-line information network service in the future, while commercial services such as America Online, Prodigy, and CompuServe may diminish in importance over time, their role reduced to providing a gateway to the Internet. While America Online (AOL) currently enjoys the highest access rate for commercial information services (equal to that of the Internet) nearly

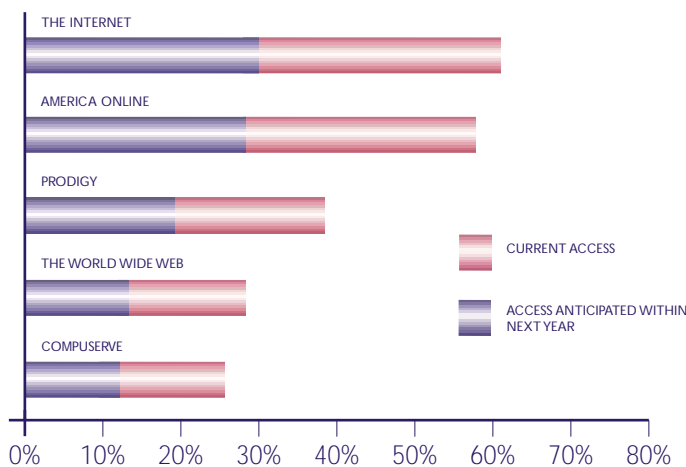
40 percent of respondents anticipate access to the Internet in the next year compared to 30 percent for America Online (Table 9). The other major commercial on-line networks evaluated — CompuServe and Prodigy — lag far behind.

As with many other findings already reported, access to the Internet correlates directly with income and median SAT scores. For example, nearly 50 percent of the respondents from households with incomes over \$100,000 say they have Internet access, compared to only 21

percent of those with incomes below \$40,000. Likewise, 39 percent with combined SAT scores over 1300 report Internet access, compared to 23 percent with combined scores between 1000 and 1100.

As Table 9 also indicates, current use of and anticipated access to the World Wide Web is far lower than that for the Internet. Lest readers be confused by this finding, we should note that we measured the Web and the Internet separately, partly out of the suspicion that students were less likely to be familiar with the former and that the "Internet" was the catch-all name for the major uses of the information superhighway. We assume that the findings at least partially confirm this assumption. The difference may also be explained by the fact that some students who have access to the Internet do not yet have Web Browsers.

Table 9.
Current and anticipated access to online networks and services



A D V I S O R Y

HALF OF THE MARKET NOW OWNS COMPUTERS AND THIS PROPORTION IS VIRTUALLY CERTAIN TO RISE.

Initiatives such as those requiring students to buy a computer or providing students with computers when they matriculate are likely to have diminishing market impact.

5. Current market awareness and usage of the major on-line college information networks is extremely low.

In the last several years, a number of on-line college information services have been developed, including College Explorer, College View, Peterson's Education Center, and The College Board's ExPan. Despite the anticipated demand for these much-touted on-line offerings, we found that few students are aware of them, and even fewer have actually used them. Moreover, none occupies a position of market dominance.

Fewer than one-fourth of the respondents were able to name any on-line college information service on

a *unaided* basis (without any prompting from the interviewer). The highest *unaided* awareness of any single on-line service was achieved by College Explorer, but it was named by only four percent of the respondents. A nearly equal percentage indicated awareness of individual college Web sites (Table 10).

Aided recall (the interviewer read a list of specific on-line services and asked the respondents which ones they recognized) reveals a somewhat different pattern. College View was best known, but it was recalled by only 11 percent. Total awareness of any service was also low, with only

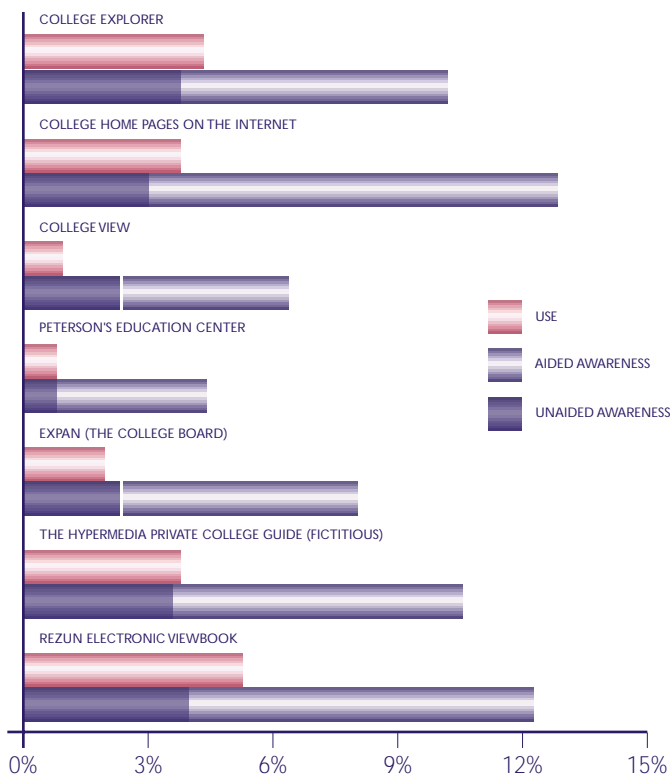
14 percent of all respondents indicating combined *aided* and *unaided* awareness of any single on-line service.

Finally, not more than 5 percent of all the students we interviewed had used any one of the on-line college information services we evaluated. That represents a total of 27 students out of the 500 surveyed. And only about one in five has used any on-line service.

It is very likely that even these low levels of awareness and use may be inflated. Because the Internet and on-line communications have been given enormous media attention, we suspected that students might exaggerate their knowledge of these services. To measure this possible bias, we created a fictional on-line service, the Hypermedia Private College Guide, and included it in the list of services evaluated in our survey. Four percent of the respondents who had used on-line services told us on an *aided* basis that they had heard of this fictional guide, and one percent said that they had actually used it. These findings suggest that *aided* awareness of all on-line services may be exaggerated by up to four percentage points.

We would infer from these findings that potential of these services for future growth appears to hinge on how student use of comprehensive directories and screening services and individual college and university Web sites will evolve. The technology is advancing in a direction which suggests that multimedia information about individual institutions will be most efficiently and accurately provided through hyperlinks between general directories and search services and individual college and university Web sites.

Table 10.
Awareness and use of on-line college information services



6. *Students strongly prefer access to on-line college information from home, rather than from school.*

Given a choice between accessing on-line college information and communications services from home or school, a majority prefers home access (Table 11). This finding has implications not only for the alliances institutions might make with companies developing and marketing school-based on-line college information services, but also for the future role of high school guidance counselors in college screening and choice.

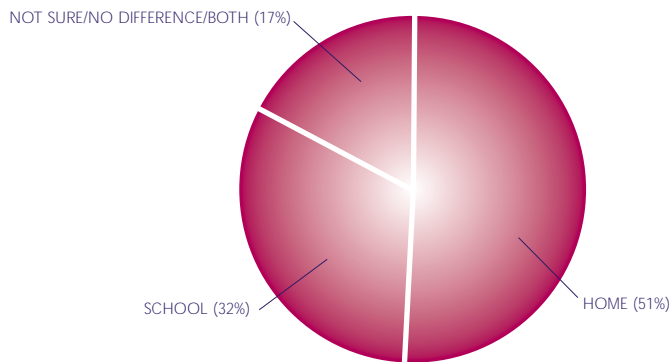
Given the strong preference for access from home, school-based information services are likely to diminish in importance and usage over time, particularly as services providing home access proliferate. Anticipating this trend, some on-line college information services such as College View and The College Board's ExPan, which were once accessible only from schools, are now available on the World Wide Web. However, some of these services charge a fee through an on-line credit card transaction. Since much information is available about colleges on individual institutional Web sites, some of which are now beginning to provide on-line features such as applications and interactive financial aid assessments, our findings raise serious doubts about the extent of current student demand for any commercial on-line college information service, except perhaps those that serve as comprehensive directories or enable college searches by various criteria. And the continuing enhancement of Web search services such as Yahoo may severely reduce the demand for even these.

Furthermore, our findings suggest a diminution of the role of the

guidance counselor in college screening and choice as on-line Web services increasingly enable students

to specify, sort, and gather on-line information about their college preferences from home.

Table 11.
Preferred place of access for on-line college information



A D V I S O R Y

**GIVEN THE INFANCY AND VOLATILITY OF THE MARKET,
DO NOT ENGAGE IN LONG-TERM CONTRACTS WITH VENDORS
OF ON-LINE COMMUNICATIONS SERVICES.**

Contract on a year-to-year basis and insist on the inclusion of precise measurements of access volume and user characteristics. When considering commitments to such vendors, look for those with adequate capital and a strong financial record. And avoid alliances with vendors that do not make on-line communications services accessible to students at home.

7. While females are almost as likely as males to own computers and have access to on-line communications, they rate their computer proficiency more modestly than their male counterparts.

Table 12.
Computer ownership, access, and equipment
By gender

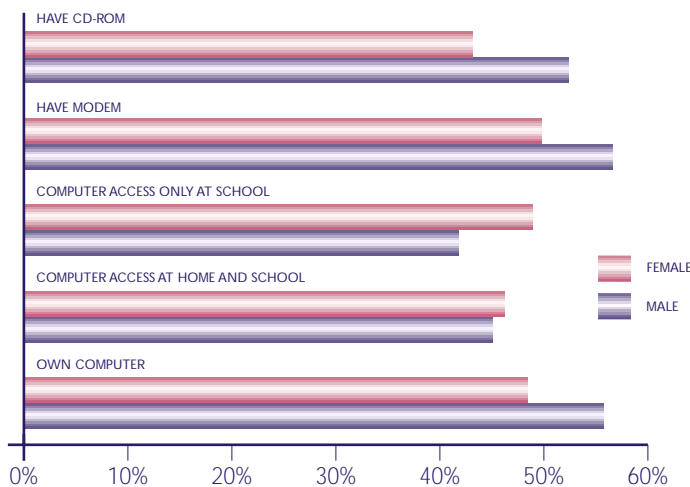
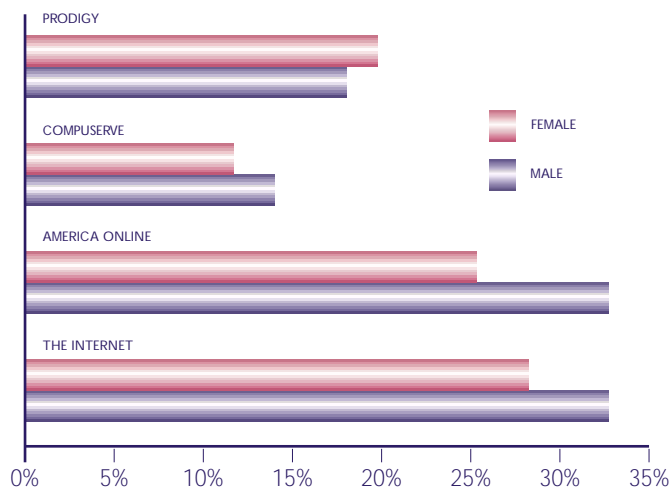


Table 13.
Access to selected on-line networks
By gender



Conventional wisdom has assumed wide gender variations in computer ownership and usage. If such a “gender gap” exists, our study reveals that it is very narrow. Fifty-eight percent of male respondents said they owned a computer compared to 50 percent of female respondents (Table 12). The presence of a modem or CD-ROM varies by relatively the same percentage as computer ownership. Only small variations exist in the numbers of male and female students who report access to major on-line networks (Table 13).

With respect to overall computer knowledge and expertise, the study revealed much greater differences between genders. A higher percentage of women did not know the baud speed of their modem or the type of CPU powering their computer. For example, of those indicating ownership of an IBM-compatible PC-computer at home, 52 percent of female respondents were “not sure” of their computer’s processor rating versus less than 20 percent of males. Evidence of women respondents’ lack of technical knowledge or confidence about computers also is reflected in students’ rating of their computer proficiency. Nearly twice as many women as men rated themselves as “beginner.” Likewise, half as many rated themselves “experienced” (Table 14).

It is not clear whether these findings measure real differences in the

actual computer skills of women and men or simply reflect variations in self-confidence about technology. Nonetheless, the findings clearly indicate that women are nearly as likely as men to have both the hardware and software tools necessary for access.

Table 13.
Access to selected on-line networks
By gender



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SOME CURRENT AND RECENT ASSIGNMENTS

Bucknell University: Position and marketing study; tuition pricing study to explore the effect of sticker price and financial aid in the decisions of prospective students at various points in the admission process.

University of Puget Sound: Tuition revenue management analysis to determine optimum configuration of financial aid awards to achieve desired class size, quality, and mix.

Rutgers, The State University of New Jersey: Qualitative research among government, business, and opinion leaders to develop an institutional marketing plan.

Duke University: Concept development, writing, and design of undergraduate admissions introductory brochure and prospectus, as well as design standards for related materials.

North Carolina State University: Campaign communications planning and development of a preliminary case statement.

Cornell University Johnson School of Management: Survey of senior corporate executives and recruiters aimed at enhancing School placement activities.

Columbia School of Law: Creation of an interactive Web site for prospective law students.

8. IBM-compatible computers dominate the market, and are the preferred hardware platform at home and at school.

Table 15
Home computer type
(among owners)

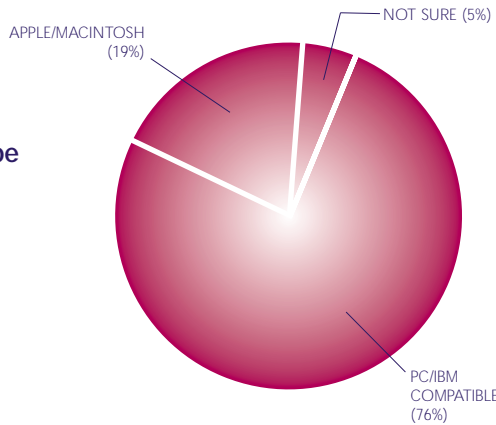
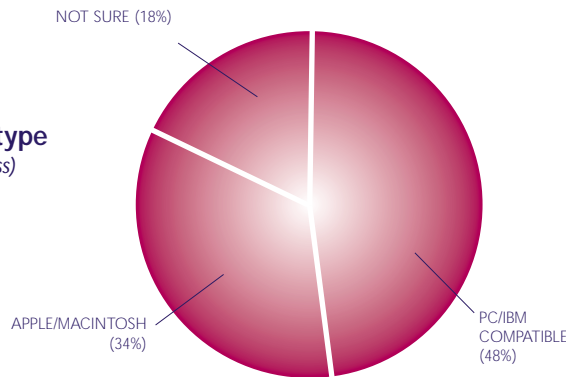


Table 16
School computer type
(among those with access)



Among those students who say they own a computer, more than three-quarters have an IBM-compatible machine, less than 20 percent own an Apple/Macintosh computer, and the remaining 5 percent said they were “not sure” (Table 15). More than 85 percent of those with SAT scores over 1300 report having an IBM-compatible machine. In addition, high student access to the Internet and high computer proficiency correlated directly with ownership of PC-based, IBM-compatible computers.

Though the school market has traditionally been a strong niche for Apple/Macintosh, it now appears to be dominated by IBM-compatibles. Forty-eight percent of students with access to machines at school report that those computers are IBM-compatibles, with only 36 percent reporting they use Apple/Macs at school. (Table 16).

ADVISORY

GIVEN THE DOMINANCE OF IBM-COMPATIBLES, GIVE PRIORITY TO DEVELOPING PC-BASED SOFTWARE APPLICATIONS.

IN THE NEXT ISSUE

The spring issue of *studentPOLL* will examine the value and effectiveness of various admissions marketing communications tools: print, personal contact and others.

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