A communication course has been part of the accounting curriculum at San Diego State University since 1980. In 1995, we began teaching an expanded version of this course that includes more oral presentations and emphasis on small-group communication, reflecting changes in accounting education to emphasize critical thinking, interpersonal communication, and problem solving. In the late 1980s, the professional accounting community joined with educators nationwide to stimulate accounting education reform aimed at developing skills and abilities for a changing environment. As a result, the School of Accountancy at San Diego State University undertook a complete revision of its undergraduate upper division program. The culmination of this effort was the replacement of traditional accounting courses with three mandatory six-unit accounting courses, all team-taught; two accounting electives; and one expanded communication for accountants course.

San Diego State University is a large regional university with a nationally known business school. Our accounting graduates typically have a very high national pass rate on the annual Certified Public Accountant's (CPA) exam. Our accounting curriculum, revised to meet the Accounting Education Change Commission goals, now uses teams extensively both in and out of class to teach students problem-solving and interpersonal skills. One objective in revising our courses was to demonstrate the interrelated nature of various accounting sub-disciplines. Another objective was to show how accountants are part of a larger, dynamic environment where they must anticipate, understand, and respond both orally and in writing to the information needs of a variety of constituencies. A third objective was to create a learning environment that included students as interactive participants. Computer conferencing is used in the re-engineered accounting curriculum for student/instructor questions and comments, homework problems, case discussions and write-ups, and working with other team members.
members. Spreadsheet templates for projects that previously had been distributed by copying floppy disks are now stored on the server, and students can upload these to workstations.

This chapter discusses how the Reporting for Accountants four-unit course uses computer conferencing, collaborative learning, and team teaching to strengthen a formerly more traditional course. The three-unit course offered since 1980 required a number of papers and two presentations, but students had only one team project. Reports were written and revised; text material and cases were discussed in class after lectures on professional communication topics.

In the revised course, students receive more practice in team writing and presentations and write on some topics based on actual accounting practice, in addition to observing teamwork between instructors and using computer conferencing to exchange information. We recently changed the computer conference program but need to continuously evaluate new options as technology evolves. In the past, students tended to communicate on the conference only when required. We find, however, that more user-friendly systems encourage more and more varied online communications between students.

**Internet Research**

We use information searches extensively in company/industry reports. Students attend a lecture by a business librarian that demonstrates online Internet research and electronic library holdings research so they can access various sites, including Hoover’s On-Line and EDGAR (Electronic Data Gathering Analysis and Retrieval), the Securities and Exchange Commission (SEC) electronic filing database. Students are also introduced to Lexis/Nexis (available only in the library itself to registered students), and various public company Web sites.

One important point we make to students is that financial information for SEC-registered corporations downloaded from the Internet from company, commercial, and government sources may not be identical, since the detailed requirements for format and disclosure in government filings do not apply to postings made by the company or by commercial organizations that evaluate and summarize financial information. In addition, hard-copy company annual reports sent to shareholders look very different because of color and illustrations as well as differences between detailed SEC filing requirements and less comprehensive annual report requirements.

Because many sources exist that are not available on Lexis/Nexis, students need to use the full range of services available in the school library rather than relying on just one. For the company/industry reports, we require that students use at least the annual report and the 10-K (annual SEC filing) plus other business press sources to give a picture of the company and its place in the industry it represents.
Computer-Supported Writing of Team Reports

Computer-aided writing helps students work collaboratively and makes the teacher a "learned coordinator" rather than a lecturer. Like Lanham (1990, xiv), we find that computer collaboration helps balance class contributions (people who may be silent in class can contribute anonymously via computer), gives students a chance to both create and analyze writing, and adds the ease of electronic text (easy changes, varied typography, cutting and pasting). Revising documents on a computer also helps students see writing as a process rather than just as an end product, recognized by Maxine Hairston as a paradigm shift in English composition classes (Kemp 1993, 161).

Boiarsky has compared classroom computer writing to collaboration among journalists in a newsroom, as long as students can make substantive comments on documents (1990, 59). The computer can be used to record team activity and comments so no member has to take notes of team meetings (Cyganowski 1990, 70). One idea that comes up often in the literature about computer classroom writing is that the teacher becomes a coach (Langston and Batson 1990, 147) rather than the rule maker.

Once our students learn the positive points of writing as a team activity, they resist reverting to the solitary model of writing that Handa fears (1990, 175). Even students writing drafts on their own computers can work on a final document as a team by cutting and pasting together, which is a great improvement over one person having to type a final copy of the paper for the group. An added computer-supported feature of many e-mail systems is the ability to attach files. Students can e-mail copies of their individual papers to one another for easy consolidation and editing. Revision via computer can also be faster and can teach students about the search function, for example, as Cyganowski mentions (1990, 82). We stress that technology can help writers but not produce good writing without careful use.

Accounting Topics for Team-Taught Writing

One area of improvement in the expanded course is that two people teach it nearly every day, a communication specialist and an accounting professor. Students have more “guided participation” and “shaping context” (Freedman 1995, 134) because the written and presentation assignments are, for the most part, on accounting topics.

Early semester assignments ask for library and Internet research on accounting and business frauds (some good recent company examples are Phar-Mor Corporation and Bausch and Lomb) or on funding of not-for-profit organizations. These reports are similar to ones written in many business communica-
Computer-Supported Collaboration in an Accounting Class

...tion courses and ask students to gather information and then discuss the implications of their research for a professional audience. Another successful team topic is business dress codes. Students are interested in how the real business world operates and enjoy finding out how the new relaxed dress codes, such as casual Fridays, fit into professional accounting firms. The real test of accounting student writing is whether it can both convey the facts (usually easy for our students) and do so in a way useful to a specific audience (often a difficult task). In the following short examples of facts put to use for an audience, note how the tone and emphasis show a good grasp of audience analysis. The amount of detailed factual information given (here edited for space) varied depending on audience needs.

- With our search for a computer system in mind, I found an article in *Business Week* that describes a system fitting our specific needs. Since we are a small company, finding a system within our budget, user-friendly, and with working software has proven difficult. According to Stephen Wildstrom, most dealers would rather sell their products to large companies. However, Hewlett Packard now has a computer product line directed at small businesses.

  The Hewlett Packard Vectra 515MX comes equipped with Microsoft Office—a program that we all know how to use. The system also manages voice mail and comes with its own audio system and headset for hands-free use. ... Hands-free headsets would also permit us to search for information in the computer more easily while conversing with a customer. ... This sounds like a good deal to me. Let me know what you think.

- The enclosed article highlights some of the changes we can expect over the next few months. Other than the migration of our financial data from our old accounting systems to STARS-FL, we have not felt the full impact of the 1990 CFO Act and other recent initiatives, such as the 1993 Government Performance and Results Act (GPRA) and the 1994 Federal Financial Management Act. This is likely to change beginning in fiscal year 1997. How we manage this change is of utmost importance. ..."
These employees are allowed to rent bigger cars than compacts, stay in hotels with computer hook-ups and comfortable conference rooms for client meetings, and fly business class while keeping the frequent flier miles for themselves.

Later assignments include payroll workpapers and company/industry business risk analysis. Integrating technical material from real-world exercises allows students to see the course as an integral part of their accounting program. We agree with Freedman that “writing can be more effectively taught in ways that supplement what is going on in the disciplinary classes” (1995, 140) and are developing more assignments that tie in with the six-unit accounting courses where feasible. A company-industry report is an excellent way to have students research and write an individual report and then build on that assignment by continuing to research the same industry segment in a team project. The four team projects give students a number of chances to read others’ work and comment on it, and our new technology classroom will make this even easier as students can edit work during class.

In an effort to provide students with enough writing and speaking practice and keep the grading load from becoming too large as class size approaches sixty, we are using a combination of individual and team assignments. We are still meeting our goals of improving student writing and having students write to different audiences, but we are doing this by having students critique each other’s work, and requiring students to tolerate more ambiguity in their assignments.

Grading of collaborative writing is an important pedagogical issue. Enough assignments are graded individually so that we can confidently judge student work. In-class (controlled writing) communication case exams are one important segment of the final grade in the class, since the class is a graduation writing requirement mandated by the California State University system. Peer review of writing as students work in teams is a valuable tool, as students learn a great deal from seeing how others handled the same or similar communication problems.

**Mentored Online Seminar**

Several of our accounting courses require online activity to help students get through the course readings and to summarize/critique current professional publications. Often used in distance learning, the online activity ensures that students are doing the required reading by having part of the class requirement to respond to open-ended questions posed on a conference or list server. Students can be required to respond a minimum number of times weekly to discussion threads covering some of the course objectives. The instructor monitors
the discussion to make sure that course objectives are fulfilled. “This format presupposes that motivated students with access to information sources and who are capable of interacting in a community of scholars are capable of educating themselves on the course content” (Albreckston 1995, 103).

In our accounting communication course students initially learn how to write summaries of technical material. Later, in an advanced course, they are required to critique authors’ assumptions and conclusions. Other students respond to the critiques and a dialogue ensues on the issues. Each student must, at a minimum, post during the semester one summary/critique and two replies to other student postings. Building in reactions to the reading is important, because less class time is available to discuss readings now that a lot of time is used for small-group interaction to teach team-building and leadership skills in the accounting courses. The following excerpts from a discussion of Martin Feldstein’s “Time to Privatize Social Security,” Wall Street Journal, March 8, 1996, shows typical interaction. Student 1 (Patricia) summarizes and critiques a current article. Note the more personal “voice” in the critiques and the comments that follow. All comments were edited for brevity—people tend to write at length on the computer.

Mr. Feldstein illustrates that the current Social Security system cannot sustain the growing number of retirees past the year 2020 unless the system is seriously revamped. The U.S. Advisory Council on Social Security has suggested that shifting to a funded program with individual retirement accounts or 401(k) plans would permit employees to earn a higher rate of return if invested in stocks and bonds. (the summary was two screens long and detailed methods of saving the Social Security system)

I thought that this was a very enlightening article. Most of us at some point have thought that Social Security benefits would probably not exist by the time we retire, so we know that we have to look into other means for saving for retirement. Many view this tax as our obligation to support the retirees of today, our grandparents and parents, despite the fact that we may never reap any benefits when we retire. I think that this is a valid point, but if we can do the job with private investments, why not? My only concern is the fluctuation of stock and bond prices. Will the U.S. Government back these investments? I would definitely like to know more about this proposal and to see this plan or something similar become effective.

Student 2 (Deborah): Is this good for all? Patricia, I found your article summary to be really interesting. The Social Security debate is a hot issue for most Americans, especially older voters. I often wonder if the money I pay in for Social Security will ever benefit me. However, the proposal for self-saving does not seem to be the most favorable answer for everyone. I agree that responsible individuals will benefit from the proposal because they will have more money after each paycheck, and if they save properly, more money in the future for less cost. . . . Not everyone will save for the future, so then what will the government do? . . . I do know that an alternative to Social Security is needed sooner than we think, but Feldstein’s pro-
Posal seems too easy to me, and it does not take into account all those individuals involved.

**Student 3 (Jennifer):** no title. I think that what Debbie said is true; people generally will not do what is best for themselves, with regard to saving for the future, and similarly to the welfare situation, taxpayers have to step in and foot the bills. . . . Education seems to be the best hope for offsetting future bills, by providing information to employees about what is needed for their retirement living.

**Student 4 (Eric):** Social Security Rip-Off. The Social Security system is not giving the young people of our country a fair shake. Those receiving benefits now are getting out much more than they contributed. The politicians will simply raise the rates on us again to prevent the system from going bankrupt unless some changes to the system are made. . . . I think that this proposal has merit but as with anything else it must be implemented properly to insure that the risk level of invested funds is not too high and that another bloated wasteful bureaucracy is not created.

**Student 5 (Shuang):** People Need to be Responsible. Good intentions may not always produce good results. I agree with Debby and Jennifer that education will help employees to understand the importance of saving. . . . Why do Asian countries have a high rate of saving? Because in these countries, people tend to rely on themselves and their families, not their government. . . . I am all for taking care of our elderly, but the system really needs to be restructured.

**Student 6 (Cindy):** One Solution to the SS Problem. I agree with the frustration that those currently on SS benefits are receiving more than they put in. But we can’t just put them out on the streets! People like my Mom put in an honest life’s work knowing that SS would be there when they retired. We need to consider benefits for someone at home raising kids, so if divorce occurs, the non-working spouse has some money to fall back on in an IRA or other savings plan.

**Shuang:** In Reply to Cindy. Oops! I didn’t mean to step on your toes, Cindy! I am absolutely in favor of helping those in need. The point that I made was that no matter what is out there, we are the only people who can help ourselves.

**Student 7 (Chaomei):** Privatize Social Security? Patricia, interesting thoughts. It seems to me that for the benefit of new job opportunities alone, this is a very attractive proposal. We can certainly make a far better rate of return than the 2.5% current rate of return on Social Security. As you said, investing in stocks and bonds will earn 8-9% on average, even if the market price fluctuates over the years. An increased Social Security tax rate will, however, have a detrimental effect on the economy.

**Patricia:** Reply to Chaomei. Chaomei, I think privatization would be a good thing as long as each individual can choose which funds in which to invest their money, so each individual is responsible for choosing good long-term investments rather than risky funds. . . . I still think there should be some sort of Social Security system because you cannot be sure that everyone will invest.
Student 8 (Susan): SS and Medicare Abuses. Patricia—I cannot help but add another angle to your article ideas. If the current system were revamped to a needs-based calculation, it might become a more fair and stable system. . . . A note on Medicare—the abuses of this system are probably beyond what we can fathom . . . . Unfortunately, a system run by the government is wide open for abuses.

Students learn to summarize for the initial part of the assignment and then are able to discuss the article online. As this discussion illustrates, students' comments are based on both personal opinion and on their knowledge of how investments and savings grow and how alternative retirement plans work.

Through team teaching and collaborative classroom pedagogy, assignments are designed to incorporate changing technical areas in the field, as well as the move by the Big Six public accounting firms to specialize in industry groups, a move addressed by our company/industry reports. We have also added more material on team work and on critical thinking.

Sample Assignments

Summaries of Published Professional Articles

One assignment has students research, write, and turn in a typed memo summarizing a professional article for an accounting audience, for example, the accounting staff members in a controller's office or public accounting firm. The article summarized must be from a professional publication dated within the last few months and must be of interest to both accountants and their clients (for public accounting) or managers (internal accounting). Each summary is graded as part of an individual's grade.

Meeting in teams, students read each others' summaries and discuss any points that are unclear. They then choose one of the team member's summaries and revise it for a different audience (either clients or non-accountant managers within a firm). This revised team-written summary is then posted on the computer conferencing system, and the team prepares a presentation for the class. All students read all the summaries and prepare for a day of oral presentations designed to occur in an office environment. After reading the posted summary, the other class members are required to prepare written questions that a client might ask. These are handed in and are part of an individual's grade. Teams present their summaries and field questions from other class members. The pre-class conference posting and the prepared questions encourage active participation in class and promote the development of communication skills.

Documentation of Personal History

A more traditional assignment in business writing classes is preparing a re-
sume. In our class, students write a biographical sketch the first day of class explaining what job they would prefer if for some reason they had to change from actual accounting practice. After discussing this sketch in pairs, they use it to introduce each other to the class. Then they post a short biography on the computer conference that is used for later class discussion on the creation and use of business biographies or resumes. For the last step, they write their resume, which is peer-reviewed in draft form by members of the student’s team and the instructors and then rewritten for a grade.

**Company/Industry Report Assignment Integrating Accounting**

A major late-semester project involves individual analyses of companies (chosen by the instructors from industry groupings used by the Big Six public accounting firms) followed by team analysis of the industry group. As discussed in the Internet Research section, students need to find out from print and electronic sources what the company does, how well it does compared to competitors, its financial strength, management and operating characteristics, risks, stock and industry trends, future prospects, and so on. Keeping both the individual company and the team industry reports under three pages each while giving a professional reader a full picture of the company is a very good assignment, because it makes students sort and synthesize information, evaluate sources (and cite them correctly), plan helpful graphic attachments, and analyze and explain what they know rather than just list facts.

Potential industry groupings used by the Big Six accounting firms include financial services, health services, entertainment and media, government and not-for-profit, retail merchandising, computers and software, and communications. Using different subgroups and different companies gives the company/industry assignment a different flavor every term (and encourages students to produce new work). For example, one semester we might use banks as a financial services segment and another semester use credit card companies or automobile credit companies. Entertainment has segments such as theme parks, recreational equipment, television cable companies, and golf club manufacturers.

In addition to teaching business research skills (among more traditional sources, students use the SEC electronic filing Web site), this assignment integrates accounting course information into the communication course, reinforces teamwork skills, and gives students real-world experience in preparing information for business audiences. Report writing, document design, graphics development, and other communication topics become more relevant to students when they apply this material to accounting topics.

Computer-supported communication skills that students learn include the use of presentation and spreadsheet programs to depict complex financial data in a form that non-accountants can readily understand.
Interviewing Skills and Systems Documentation

One team project has students plan an interview, visit a local firm, and interview the firm about its payroll process. Students must prepare accounting workpapers to document the payroll process through computerized flowcharts, written narratives, and other formats such as tables. Students must assess the strengths and weaknesses of the internal controls and processes.

Communication skills learned include computerized graphics used in team presentations similar to those used by a professional accounting firm doing a presentation to a client. Students learn how to import helpful graphics to add value to their reports, such as producing a slide from an existing spreadsheet or adding a product photograph to a slide or report. The excellent team presentations on this payroll project have covered local companies of all sizes from three to three thousand employees.

Typical semester assignments include computer conference posting of short biographies, team memos, and reports on accounting issues such as fraud auditors; oral interviews and presentations with visuals; and observations of businesses and evaluation of the workplace. Because the course is not lecture-based, a handout (see Appendix) shows students where to find more information on important professional communication topics.

Innovative Classroom Aspects

In addition to using computerized feedback on papers, we are using computer conferencing, e-mail, peer editing, computer presentation packages, and Internet research using Web sites to access various financial and accounting material. A new “smart” classroom containing team computers connected to the Internet for in-class research will also help with team editing and teaching teamwork. This will come close to the newsroom environment Boiarsky writes about (1990, 47–67).

The computer-communication supported Reporting for Accountants course is now an even more integral part of the revised accounting curriculum. Team teaching by Information/Decision Systems and Accounting faculty encourages technology use and allows for more cross-discipline topics for real-world writing assignments. In addition, team teaching may provide useful role models for building students’ team skills in preparation for jobs in the contemporary accounting workplace.
Works Cited


Boiarzky, Carolyn. 1990. “Computers in the Classroom: The Instruction, the Mess, the Noise, the Writing.” In Computers and Community: Teaching Composition in the Twenty-First Century, edited by Carolyn Handa, 47–68. Portsmouth, NH: Boynton/Cook.


Appendix: References on Selected Communication and Teamwork Topics

**Audience Analysis**

**Basics of Business Communication**
Hirsch 17–37.
Vik and Gilsdorf 3–30.

**Documentation and Evaluation of Sources**
Hirsch 65.
Vik and Gilsdorf 592–602 (briefly covers differences among MLA, APA, and University of Chicago styles), 129–49.

**Graphics**
Vik and Gilsdorf Chapter 7.

**Intercultural Communication**

**Leadership**

**Listening and Nonverbal Communication**
Vik and Gilsdorf 465–86.
Wilson Chapter 6.

**Professional Writing Techniques (includes emphasis techniques)**
Hirsch Chapters 4 and 5.
Vik and Gilsdorf Chapters 2, 3, and 4.
Proposals

Resumes
Vik and Gilsdorf: 386–409.

Revision and Editing
Hirsch Chapter 6.
Vik and Gilsdorf Chapter 3, Appendix B.

Small Group Communication
Wilson Chapters 2–5.

Summaries