In just about every field, people are working to cut back resource use while expanding services and productivity. This extends to the teaching of college courses as many schools work to economize and/or technically enhance their liberal arts education. One approach at Carleton College has been the use of the campus computer network to create paperless courses. This chapter is about the method, experience, and important pedagogical aspects of some pioneering courses in the social sciences at Carleton College.

WHAT IS A PAPERLESS CLASS?

In our residential college context, the “paperless class” is more appropriately termed the “less-paper class.” In other contexts, the paperless class and the current enthusiasm for the virtual class (“location independence”) could be easily confused. Virtual classes are those that cater to commuter schools or focus on distance learning. These courses are typically Internet based, and there is little if any non-computer-mediated communication between the faculty and students or among the students in the courses. Paperless classes, on the other hand, augment the traditional classroom setting by giving students and faculty the ability to share digital course-related materials and carry on asynchronous discussion beyond the classroom.

The paperless class concept is clearly suited for courses in the natural or computing sciences, yet there are a number of applications in the social sciences as well. This is true especially as the uses of computing become more integrated into the curricula. In this...
chapter, I will describe the basics of paperless classes in the 1990s for the case example of Carleton College, and give an overview of the paperless class experience of some faculty and students in the social sciences. Finally, I will share principles that we have found helpful in preparing and presenting paperless classes.

THE PHILOSOPHY AND STRUCTURE OF THE PAPERLESS CLASS

Carleton’s philosophy behind the paperless class is to examine first the goals and nature of a traditional course design and then examine where network technology may be able to augment or enhance the student-faculty interaction. It is not designed or intended to replace or lessen any direct student-faculty interaction.

The successful transition to the electronic handing-in and returning of work lies in the thorough and clear training of faculty and students. The ability to mimic the hand-in and return of work from a traditional class setting has helped faculty better understand how to operate in the digital forum, which in turn helps in communicating the transition to this digital form to the students. In the network, student and faculty account privileges are configured to give students and faculty similar access to information that they already have in a traditional classroom setting.

The usual basic components include a specific folder on a server accessible by all students in the class through their network login. Students may log in from any networked computer on campus (including from their dorm rooms). This course-specific folder contains three or four subfolders or directories, such as the following:

- **CLASS-INFORMATION**: A folder for notes or “hand outs” from the faculty to the students. This can include study guides, the syllabus, sample exams, annotated maps, audio clips, and so on.
- **HAND-IN**: A folder is where students hand in assignments. They drag and drop their appropriately named homework files into this folder for faculty access. Students have only the ability to see the file names in the folder. They can not read or take back any handed in homework in that folder.
- **RETURN**: A folder which has individual folders for each student. The faculty returns homework into the specific student’s folder for student review. None of the students can see or see into any of the other student’s folders, and they cannot write to their own folders. This prohibits students from tampering with the returned homework because they can neither modify nor delete the files in this folder. When students visit the faculty with questions during office hours, both students and faculty can refer to the returned homework from the faculty office. This is true from any networked computer on campus.

To help the professor get a feel for the differences in file-access privileges, each faculty member with a paperless class is given a sample student account with which to work. The sample student account is also useful for early in-class demonstrations of accessing and using the course folder without compromising the electronic privacy of a “volunteer” student in class.

In addition, there is the possibility of using another specialized account just for taking examinations with computers (usually in a computer classroom). To discourage the use of
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