

## Using Internet Resources to Enhance Communication Skills

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### **Abstract**

Our objective is to address issues of improving students effectiveness in information gathering and sharing. The purpose is to develop a model for use in class. The program is applied to both graduate and undergraduate public works courses. Our intent is to improve the student's comprehension of course content and expand the student's ability to process a greater volume of information. The primary means of improving these communication skills will be a short focus on Internet interactive services. A secondary objective is critical reading.

### **TOOLS for DEVELOPMENT**

There are several online storage services on the Internet free of charge. We have been using the service provided by Freedrive.com, any of several similar services would do.

Power point is the presentation program of choice. It is readily available and widely accepted as a standard tool of communication.

We use a power point presentation on effective presentation, and one on the use of search engines, Internet library systems and we encourage the use of brick and mortar libraries as well.

We recommend Copernic, a search engine which mounts locally. This program performs a meta search of many engines and reports results in a very easy to use form. Searches may be refined and repeated to reflect new materials in changing environments.

Our critical reading quiz is under development. This will be generated with a suite of Java program from Half baked software.com, called Hot Potatoes. This software generates a variety of quiz styles suitable for posting on the internet. The results of this software are very clean and professional looking. The product is free if the products generated by the program are freely available. Otherwise the price is nominal.

To test the effects of our program, we will employ another Java program from Half baked Software called Quandary to present a short "In basket test" which will be an exercise involving most of the skills featured by this project.

Due to a large percentage of, English as second language, students there will be a recommended text: *Elements of Style*, Fourth edition Strunk and White. Paperback: ISBN 0-205-30902-X

The course content also includes guest speakers from many aspects of public works. City managers, facilities spokespersons, police and fire executives, and engineers from public works contractor are some of the typical speakers. Students are able to see working professionals in the public works field. This gives them further appreciation the importance of communication in real world applications.

### **METHODS for IMPLEMENTATION**

A stand alone course could easily be based on the model we are developing. It is however our intent to provide a process that can be scaled to support any course that requires the search, assimilation and reporting of information.

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Professors are invited to freely adapt the model in whole or in part to assist their students in building skills to cope with the processing of information.

It is suggested that only one storage/ file sharing service should be employed per term, to reduce confusion. These services have lots of assistance for your students. There are several levels of service ranging from 25 megabytes to 300 megabytes; some require signing up for e-mail as part of the account. The smaller limits should be adequate for most situations. Note that students may find several other uses for these accounts once they get started.

There is a web site with the text of this paper and links to resources suitable for implementing our model. It is: <http://gatorengineer.com/comfile.html>

Step one will be to the introduction of the chosen file sharing system. The student will receive only a general orientation. Going through the process of signing up and learning the features of the service is viewed as a part of the learning experience. A light assignment to establish that students are signing up for the file sharing account is used here. This requires the student to locate three paragraphs that are notable examples of either good or bad communication, and indicate why they chose the particular examples. This assignment is shared with the professor giving the student a first real use for the service. The professor gains an insight to the level of critical reading early in the course.

Next we demonstrate by using the file share system to download the guide to effective presentation. This presentation will accent clarity and communication rather than operation of the software. It is meant to impress the student with the concept that a presentation isn't communication until the other person correctly understands the message is the purpose of this presentation.

The next class session will start with a search engine presentation, which covers effectively using the vast resource of the Internet and some specifics on library systems. Use of brick and mortar library will be encouraged as well. The assignment for this session will be locating two source items from the Internet at large, two from Internet library systems, such as LUIS and two from the university library.

Practice of these skills comes from assigned presentations, which take several weeks of class. We have had the luxury of the use of studio classrooms that are media enhanced. Output from any media can be presented on large screen monitors. A computer workstation is available with web access. Students can acquire videotape of their presentation if they desire. The students are divided into teams and use the Internet for collaboration and support of their presentations. Since the presentations are given in a classroom with Internet access, students use the web interface of their account to deliver their presentation to the class room computer. After presentation the Power Point files are shared to the professor's account for grading. The final project is a research paper chosen by the team from a list of topics provided by the professor. This paper is also given as a presentation. In this assignment should be evidence of improved communications skills both for presentation and on an intra personal level in the function of the teams.

### **GOAL EVALUATION**

As the term progresses student assignments are evaluated for application of several criteria.

The students are graded on assigned homework and presentations as well as class participation. The student who shows evidence of the skills we present will achieve a superior grade.

Does the student comprehend the course content? (In this case, a text on public works and copious handouts)

Does the student demonstrate an ability to evaluate research materials in support of given topics and incorporate this information in support of his projects?

Does the student demonstrate an ability to work in a team environment?

Is the student establishing potential for leadership?

Is the student making progress with communication skills in terms of clear concepts, clarity of presentation, and actively interfacing with an audience?

Does the student manage to incorporate personality and humor as well as factual information?

The critical reading quiz and "in basket test" are not taken for a recorded grade. They are designed to allow the student to self evaluate his skill in these areas. The critical reading will be easy for some and difficult for others.

Recording a grade would penalize those who have difficulty. It is our preference to let the student see how strong or weak they are in this skill. The "in basket " test is meant to demonstrate how the skills we encourage can be of value in a real world environment. Most students have little experience of decisions that can mean profit or loss, on going work problems or result in legal liabilities. Concise communication and critical reading and information evaluation are skills that make a difference. Demonstrating this is the purpose of an "in basket" test.

Our goal is to prepare students to perform in the work place with concise communications skills. The student will learn to locate, evaluate and process information resources in an efficient and meaningful process. These skills will be of value to them all through their lives.

The tools we present to students are meant to make it easier for them to deal with the massive information input in the modern work place. We hope our students will be above average in their ability to add to this mass of information.

Our observation to the present is that students react well to these tools. A concerned professor can learn a great deal about his students in this program and offer students advice specific to their strong and weak points. The modern engineer functions in a fast paced work environment that will favor those best equipped to absorb and report information.

Our program hopefully will be of value to aid professors in fast tracking a group of students to enable them to cover more course content in the time available.

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Mr. Dobson has been involved as a resource person with this distance learning program. Originally his duties involved the daily production of videotape for remote delivery. Part of this program has been the application of video for feedback to students of several departments to promote communication skills.

As webmaster of an award winning web site he has served as a resource to faculty assisting them with their own web sites and recommending software that may be of use in class presentation..