

**Final Report of the Emergency Planning for the Teaching  
Program Task Force**

**School of Public Health**

**University of Minnesota**

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**Charge:** Dean John Finnegan formed this task force in February 2006 and charged the task force to develop a strategy that would allow the School of Public Health (SPH) to maintain its teaching program during emergency situations, such as a pandemic, that would prevent in-person classes from being held. We focused on emergency situations such as a pandemic that could hit in the middle of a semester and result in instructions for students and faculty members not to come to campus for a few weeks or the rest of the semester

**Assumptions.** As we developed our recommendations, we made four assumptions:

- (1) Periods banning in-person classes will be short (i.e., a few weeks vs. months) and intermittent, occurring at different times within a semester;
- (2) Most faculty and students will still be healthy;
- (3) Basic infrastructures such as telephone and computer systems will still be functioning;
- (4) Level of comfort dealing with technology will vary across faculty members.

**Options for Handling Classes.** We identified four possible levels of interactivity for maintaining courses during an emergency situation (note: higher levels include components from lower levels):

- |                              |  |
|------------------------------|--|
| (1) <b>Very basic:</b>       | Use e-mail only (for small classes only) <sup>1</sup>  |
| (2) <b>Basic:</b>            | Post class material (e.g., PDFs, PowerPoint, Word docs, images, urls) on line, administer exams through a secure website, use discussion boards for communication, |
| (3) <b>Interactive:</b>      | Post pre-recorded oral presentation of lecture (audio with slides or video with audio)   |
| (4) <b>Very Interactive:</b> | Use live oral presentation with simultaneous discussion  |

We examined different technological options that could be used for each of these options, considering their ease of use and capacity. We also surveyed SPH students and instructors to assess their use of different technologies. Results are summarized below.

**Student and Instructor Use of Technology.** We conducted a brief survey of SPH students and instructors (Appendices A and B). Only 15% (153/1028) of eligible students participated in the survey, limiting our ability to generalize results to all students. However, among those students who participated, 96% indicated having access to a computer at home, with 88% having access to high speed/broadband connection. Almost 30% of the respondents indicated that they would relocate if an emergency such as a pandemic occurred—but 85% would still have access to a computer and 76% would still have access to a high-speed connection. More than 90% of students indicated that they were “somewhat” or “very” comfortable using WebCT. Fifty percent or more of the

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<sup>1</sup> Technical support and training is not needed for the very basic level (except for maintaining e-mail capabilities), however, we do not recommend that this level be used for the majority of the courses. While course material can be included in an e-mail as an attachment, students may have difficulty downloading the materials depending on their software and the speed of their connection.

students were not familiar with the other technologies we considered (e.g., wikis, Breeze, portal, podcasts).

Eighty-seven percent (135/155; note: I assume adjunct faculty members are included on the e-mail list) of the instructors responded to the survey. All but three of the instructors have access to a computer at home and 84% have high-speed connection. Almost two thirds of faculty members would remain at home during a pandemic and most would still have access to a computer. Approximately half the instructors currently use WebCT/Vista for their courses; however, the majority of instructors do not know how to personally use many of the WebCT/Vista functions. Only 16 instructors have taken WebCT/Vista training—however, even fewer instructors participated in trainings for any other technological options. Of the 88 faculty members who responded to the question about what course components they must be able to continue during an emergency, at least 50% indicated they would need the ability to deliver:

- PowerPoint presentations
- Individual assignments
- Take-home exams
- Group discussions

Only 19 out of 88 instructors indicated that they were likely to record oral presentations of their lectures and only 14 out of 88 were likely to deliver live presentations online.

**Technological Options.** We discussed the feasibility of several different technological options (see Appendix C for matrices describing different options). We also met with staff from the University of Minnesota Digital Media Center on campus. The main concerns for most of the technological options are lack of familiarity among students and instructors, limited capacity for large-scale use, and difficulty of use of many of the options. Through our discussions, the committee concluded that WebCT/Vista is currently the best technological option for meeting the basic requirements for continuing SPH courses at the University of Minnesota. Our conclusion was supported by staff from the Digital Media Center on campus. A summary of the reason WebCT/Vista is the best option at this juncture is that:

- (1) SPH students are already familiar with WebCT;
- (2) Many of the MPH and major core course already have a WebCT site (Appendix D);
- (3) Faculty members and students can access their WebCT sites through the portal;
- (4) Training courses and materials are available for WebCT on campus and on the University of Minnesota website;
- (5) Approximately 50% of SPH faculty members currently use WebCT for their courses;
- (6) WebCT/Vista currently has the capacity to handle 10,000 concurrent users.

**RECOMMENDATIONS:****Required: Ensure That All Courses Can Continue *At Least* at the Basic Level Using WebCT/Vista**

Given current technological options, specified needs of faculty members, and technological sophistication of instructors and students, we recommend that the SPH focus on ensuring that all SPH courses can continue at the Basic Level during short-term interruptions. In this section, we provide recommendations for how the SPH can facilitate ensuring that all faculty members are prepared to continue their courses at least at this level using WebCT/Vista.

One challenge the School faces is that currently many faculty members do not know how to use many of the WebCT/Vista options themselves. Even if they currently have a WebCT site for their course, they are delegating posting class materials and other tasks to their administrative and teaching assistants. Although it is efficient and appropriate to delegate these tasks, in an emergency situation other staff may not be available to assist faculty members with continuing their courses. To decrease challenges faculty members may face during an emergency situation, faculty members should at a minimum familiarize themselves with how to complete the basic tasks using WebCT, ensure that their computer systems have the appropriate software needed to complete these tasks, and be aware of what support materials and technical assistance will be available to them during an emergency situation.

**Recommendations:**

- (1) **The SPH should request a WebCT site for every in-person SPH course each semester. WebCT will not create a duplicate site for courses that already have a site.**
- (2) **All faculty members must be familiar with how to complete all tasks needed to continue their courses at the basic level; faculty members should not assume that an administrative staff member or teaching assistant will be available to complete these tasks for them during an emergency situation;**
- (3) **To ensure that all faculty members are familiar with completing these tasks using WebCT, the following training options should be made available and advertised among faculty members:**
  - a. **Several in-person trainings that are tailored to focus specifically on the components included in the Basic Level; a work station could be set up to help faculty members work on their own sites as part of the training; the training should be offered in multiple SPH locations during Summer 2006;**
  - b. **A page should be included on the SPH website that provides information about when the more general University of Minnesota WebCT trainings are offered;**

- c. **The website should also include supportive written documents, including relevant sections of the WebCT training manual and a “cheat sheet” that summarizes the key steps to complete the specified tasks;**
  - d. **Key staff members in each Division should be available for individual training sessions;**
  - e. **The Dean’s office should obtain written confirmation from each faculty member certifying that they have accessed one of these training options for WebCT or that they are already skilled at and using WebCT or another technological option that will allow them to continue their courses at least at the Basic Level; certification should be completed before Fall semester 2006 begins.**
- (4) Essential personnel include all individuals needed to maintain WebCT/Vista and the current infrastructure and networking services.**

**Special Considerations:**

- (1) Vista programmers state that there is no known limit to concurrent users, under normal conditions. However, an emergency situation would not constitute “normal conditions.” Vista can accommodate many thousands of concurrent users, up to ten thousand was a rough estimate provided by Vista programmers. This means that if only SPH were using Vista, we would not have a problem. However, if the majority of the campus were using VISTA during an emergency, there may be a need to allocate timeline slots for students from different courses to log on to VISTA. As long as students used VISTA in a roughly uniform distribution the system would be fine. One suggestion is to have students log onto Vista during their normal class time. Another suggestion is to work with the University to increase the capacity for concurrent users.
- (2) Less than 20% of faculty members have participated in any WebCT training. It is critical that as many convenient training options as possible are provided to faculty members. Training is available via the University Technology Training Center (<http://uttc.umn.edu/training/>), although many of us believe it would be better to ask the UTTC to provide customized training to our faculty members.

**Optional: Continuing Courses at the Interactive to Very Interactive Levels.**

The capacity for offering live presentations for many courses and students is limited; however, the capacity is greater for recorded presentations. Breeze is currently the recommended technology for recording presentations. However, very few faculty members indicated that they were likely to use recorded presentations during an emergency situation and only one faculty member indicated obtaining any Breeze training. We do not recommend that the SPH pursue the more interactive levels as a

priority strategy. However, if faculty members choose to actively pursue building their own capacity for using technological options such as Breeze during an emergency situation, we support the SPH providing support for obtaining training and equipment prior to an emergency situation occurring. Breeze presenter would allow faculty members to “stockpile” their lectures before an emergency arises. **FACULTY MEMBERS SHOULD NOT EXPECT TO BE ABLE TO RECEIVE TRAINING ON THESE MORE INTERACTIVE OPTIONS DURING THE EMERGENCY SITUATION.**

### **Factors to Consider for Broader Technological Discussions**

We recommend that plans for emergencies resulting in longer periods of time away from the classroom should be part of a larger discussion about the expansion and improvement of technology use in SPH courses. In other words, long-term planning and development is required. As technology options change (e.g., more advanced capabilities/capacity; more user friendly), and as the University of Minnesota further develops its current infrastructure (e.g., if it pursues open-source solutions to technology enhanced learning), and as the sophistication level of students and faculty members increase, recommendations for emergency planning should be reviewed and appropriately revised. We provide some recommendations for long-term planning below.

#### **Recommendations for increasing use of technology in SPH courses during non-emergency periods:**

- a. Offer “incentives” to motivate faculty members to use more technology for in-person courses or for developing on-line courses (e.g., cover percentage of effort)**
- b. Demonstrate technological options at faculty meetings or regular seminars**
- c. Have individuals with technological/teaching expertise sit in on classes and work individually with faculty members to develop plans/skills for incorporating more technology into their courses if they desire this service**
- d. Learn from existing on-line courses: what is working and what is not; develop tool kit based on best practices with input from Digital Media Center personnel**

#### **Administrative Considerations.**

- The SPH should consider administrative issues related to the training program during an emergency situation. Most administrative tasks can be handled on-line; however, essential personnel may need to be designated to ensure all duties are covered.
- Students who do not have access to computers during an emergency situation or who become ill, may not be able to continue their courses. Plans should be made on how to handle withdrawals and refunds.

- One of the assumptions made by this Task Force is that we are providing recommendations for situations in which most of the students and faculty members are still healthy. However, we recommend that each core MPH course should have at least two faculty members that can continue to teach the courses using WebCT/Vista. This would ensure that core courses will be able to continue even if a few faculty members get sick or if some faculty members relocate to areas where they do not have access to a computer or to the internet. Each Division should have a communication plan in place to ensure that at least one of the instructors is able to continue teaching the course during an emergency situation. Each Division should decide whether any other courses are considered “essential” and work to ensure that these courses have back-up instructors.

**Communication.** A communication plan should be developed and communicated to all faculty members, staff, and students. Everyone should know where to go for the latest information about status of courses and emergency plans. At this time, a portal site may be the best option. It may also be helpful to have an “Emergency” link on the SPH website. A staff person responsible for the internal and external communication should be designated as essential personnel.