# INNOVATION ABSTRACTS

## A New Use for Voice Mail

The concept dawned on me while I was listening to the menu options being recited by the automated answering system. I thought that this technology might be adapted for use with my students. If it was possible for our college's voice mail system to handle extended messages, it would provide an additional resource for my students. The premise was to place extended information messages in a voice mail system that students could access for review of lecture material. Previously, I had thought of using a computer/e-mail setup for such a connection, but a major drawback was that not all students have computers or modems.

Students always seem to have questions which come up at times other than during lecture—e.g., when notes are being reviewed and textbooks read. Our student population is completely commuter-based, so in most cases they study at home and at times that vary widely with work schedules and family duties. With voice mail, the students would be able to access information 24 hours a day from any phone. The cost to the student would be minimal, and no special expertise would be required.

I sought student input about the value of my idea and asked how they would like to see the system operate. Several useful ideas came from these discussions. The students suggested that I give a page reference to my lecture notes (my students are given a copy of my lecture notes and diagrams at the beginning of the semester). Also, the students wanted input into lecture topics selected for review in the system.

I wanted the system to repeat messages and advance through various messages. I asked if our voice mail system could perform these tasks. Apparently, it could, but I would have to experiment because such a system had not yet been tried. I asked for the maximum number of mailboxes, since I wanted to leave several messages for each class. Students would be able to access the messages separately rather than having to listen to several messages just to reach the message they wanted.

Our phone system allows for a maximum of nine menu selections from the touch pad of a push-button phone and has a maximum storage time of approximately 16 hours. The system has the capacity for

expansion. I configured the system so that when students call my individual college phone number from off-campus, or my extension from on-campus, they hear a menu which gives them nine options (see the diagram below).

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| 328-5372  |   x5372    |
|_____|_____|
       |_____|
            |
        ┌────────┐
        │  Menu  │
        └────────┘
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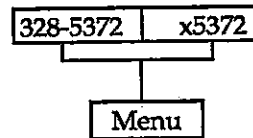
1  Leave a message mailbox or default connection to secretary
2  Anatomy & Physiology I ——— Use * to recycle Listen only to mailbox #1
3  Anatomy & Physiology I between mail- boxes or 1-1 to Listen only to mailbox #2
4  Anatomy & Physiology I repeat message Listen only mailbox #3
5  Anatomy & Physiology I ——— Listen only mailbox #4
6  Anatomy & Physiology II ——— Use * to recycle Listen only mailbox #1
7  Anatomy & Physiology II between mail- boxes or 1-1 to Listen only mailbox #2
8  Anatomy & Physiology II repeat message Listen only mailbox #3
9  Anatomy & Physiology II ——— Listen only mailbox #4

The first menu selection is for access to a voice mailbox where they can leave messages or be connected with our departmental secretary by default. The next four selections are for students enrolled in my Anatomy and Physiology I course. The remaining four boxes are for Anatomy and Physiology II students. All these mailboxes are listen only; the students are not able to leave any messages. Students may advance to any mailbox within their course at any time by pressing [*]. They move to the end of a message by pressing [3-3], and they can have the message repeated by selecting [1].

Some students have used their answering machines to record the messages. This has reduced the cost to repeat usage for students in peripheral locales that require toll calls. In some cases, the microcassette tapes

from the answering machines have made it to portable machines, so I am taken for a ride as students commute to campus.

The initial setup of this system was completed just prior to the first major examination in each course. This "perfect timing" allowed for an immediate trial of the system. My students and I selected the topics to go into the system, and I recorded the informational messages. The messages varied from five to 12 minutes.

Office Services Department has analyzed the activity in each mailbox. By examining the number of calls to each individual mailbox for the two courses, it could be determined if individual callers accessed more than one message per call. Also, there were some topics in which the students had more interest and which drew more calls. It could not be determined from the data who made the calls, but it is safe to assume—based on the numbers—that a large percentage of the classes took advantage of the opportunity.

The system certainly seemed like a success from the examination of the early reports. Students said it helped them; they understood better after hearing things a second time, grades were better, and it was a good opportunity to catch up when they could not make it to recitation or office hours.

Students were told that the messages were not intended to be a substitute for attending lecture, and attendance did not drop when the system was put into place. The students knew that a quick review of a topic would in no way cover the detailed content presented in a 75 minute lecture.

In the Anatomy and Physiology I class, the first examination had more "A" grades than with any other class in 20 years of teaching. Although I cannot make a direct link, circumstantial evidence indicates that this new technique had some positive influence. Learning should certainly be enhanced when a student can listen to information messages as many times as he/she wants and at a convenient time. The students also found out it was best if they had studied the topic prior to calling! Of course, I was delighted they reached this conclusion.

With such evidence of success, I decided to continue to expand the use of the system beyond reviews for exams. Now I place messages into the system on a weekly basis as we work through different topics. And, I use the system to give students their grades quickly and anonymously by the evening of exam day. This timely access to grades seems to reduce anxiety and provides me with more valuable lecture time which was previously spent returning examination papers. Students now review examinations in recitations or in private during office hours.

Utilization of this system can be affected by its expansion capabilities. When all of my mailboxes were full prior to an examination for both classes, I was using 16% of the system's total capacity. The cost of expansion would have to be weighed in relation to the value added for students.

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