EXPERIENCES IN CREATING AN INTERNET CHEMISTRY COURSE AND STUDENTS’ ATTITUDES TOWARDS THE COURSE

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ABSTRACT

The delivery of information to students and the approach to teaching has been undergoing tremendous changes in the past few years with the Internet becoming so easily accessible. There is also becoming a growing population of students who would prefer an asynchronous approach to course material. Thus a one-semester non-science major chemistry course was developed using WebCT, an authoring tool for placing course material on the Internet, and ChemSkill Foundations electronic homework. The WebCT chemistry course consisted of the following: a) a brief outline of topics that students were expected to know and understand, b) a calendar to list class activities and assignment due dates, c) the course quizzes and exams, d) a bulletin board for student discussions and announcements, e) student grades and f) a private e-mail system for members enrolled in the course. The exam portion of WebCT permitted random generation of numbers for mathematical problems and permitted random selection of exam questions so each student received a unique examination. For drill and practice type of assignments, WebCT allowed students to repeat the activities to perfect their skills and knowledge. The learning curve for utilizing WebCT to create the course was relatively short. The newly designed WebCT chemistry course was taught for four semesters and one summer session. The first semester the newly developed course was taught, it was taught as an asynchronous course. The class period was strictly used as a help session for those students having difficulty with the assignments and thus attendance was not required. Of the 120 students enrolled in the class, 20 usually attended the class period help session. The students complained they had to learn the material on their own and they preferred a “lecture” course. The students did like the flexibility of no deadlines for assignments. This feature also removed from the instructor the decision of whether an excuse for late material was valid. Each succeeding semester the course was modified to include more “lecture” and more credit was given for in-class activities. Class attendance improved so attendance averaged about 90 students. Most students liked the Internet course and found the ChemSkill Foundations electronic homework helpful. The laboratory portion of the course was required of all students and was performed in the traditional manner. The laboratory made use of computer based labs (CBL) including graphing and t-test analysis.