

Education of Multimedia Technology in a Medical School

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1. Introduction

Although today's advanced form is electronic nature, multimedia material such as slides and charts has been utilized in the medical field to achieve diagnosis and therapeutics for long time. Medical students, however, do not much realize the significance of the information technology directly related to their future professions. Thus, the educational system we have developed was fundamentally based on an incentive. In the system, faculty members of medical professions, not computer specialists, have classes in which the information technology is fully applied to demonstrate medical problem solving with a computer as a black box. And consequently, application of the technologies as a tool would be taken for granted.

A difficulty is that, since the informatics education is rather new in the academic field, professors of today did not sufficiently obtained the benefit of the informatics education when they were college students. Thus, faculty members of medical profession must have acquaintance with information technology first to demonstrate later in the course of the medical discipline.

In order to promote this issue, incentive of the professors to learn computers must be induced as much as eliciting students' incentive.

2. The curriculum

Availability of computers in the course of medical education is considered to be significant to promote the information technology. A computer room called MacRoom was provided adjacent to a medical library on campus. The room is equipped with thirty desktop Macintosh computers and other information devices such as an X-ray film scanner. The room is managed by librarians who are specially trained for computers and networks.

Every new student obtains a notebook computer (Macintosh iBook) and an IP address when entering the school. Faculty members of medicine teach information literacy applying medically related examples in a freshman class. They also demonstrate solving medical issues applying information technologies and multimedia teaching materials in their professional lectures, laboratories or hospital training.

The assessment of student's abilities is proceeded in other professional classes, by means of report writings with analyzed graphs, receiving and sending data via networks.

While, to promote faculty members' ability of information technologies, several extension courses as continuing education are opened at MacRoom. The theme of the course includes,

- a) Effective writing of scientific papers
- b) Construction of clinical database
- c) Medical and biological image processing
- d) Medical and epidemiological statistics

3. Results and discussion

More than ten years have passed since MacRoom was founded, and six years now since the class of information literacy started for new students with their own computers. There is prominent evidence that favorable outcomes have been manifested judging from the increasing activities of students at the room. The students seem to understand the relevance of the information technologies to medical professions in reality in some medical fields such as internal medicine.

Approximately ninety percents of faculty members are medical profession background in our private medical school. Most of them did not show much interest ten years ago. And now, the formidable crowd of attendee to the extension courses has past a few years ago. Now statistics on faculty members showed that drastic increase of utilizing computers for their own professions, such as conversion of medical images to electronic form to analyze and construct private database. A feedback of that dexterity, however, to the student class of profession has not fully arrived yet, although multimedia material in an electronic form is already common as a means of disciplinary teaching.

4. Conclusion

In order to elicit students' incentive of applying information technology to their professional works, it would be effective to educate professors who affiliate with medical profession, and let them demonstrate the technologies to solve medical problems in their classes. It was not laborious to promote them, contrary to our prediction, as many of them had an intrinsic motivation. Transition from here to more disciplinary application of technology including an evidence-based medicine in every department would take some more time.