

MOD System: a Teaching-Assistant Project Conducted by Library Professionals

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Abstract

Founded on nursing education, the school has been established for almost five decades. The use of conventional plastic dummy as a technology teaching tool to assist students acquiring problem-solving adaptability is soon to be expired in the new education reform movement. One major reason is that clinical nursing skills have to be practiced repetitively in simulated clinical scenarios in order to enhance the overall clinical care capacity of nursing students, which is important for reducing nursing and medical negligence and protecting the precious life and safety of patients. Considering the importance of clinical education, the librarians had constructed a teaching resource integration platform, which as known as Multimedia on Demand Teaching-assistant Project (hereafter referred as MOD Project), for knowledge sharing and development via adopting their professional capacities in classification, catalog, and educational supporting. The purpose of this project is to facilitate the nursing department in creating a more comprehensive and effective learning assisting system. The first function of this system is helping the instructors record the learning process of their students in details, which can improve teaching quality because the instructors become better at keeping track of the students' learning condition. The second function of the system is systemically integrating those enormous teaching files to improve learning efficacy by letting the students obtaining relevant information without time or space restriction. At this moment, instructors after receiving the training provided by the librarians have uploaded 188 files using this system. Consequently, for those students attending clinical intern at hospitals off-campus are now able to repetitively practice scenarios and skills they previously learned at school via this system. This is a concrete example of how librarians can support teaching via technology and professional knowledge.

Keywords: Multimedia on Demand, Librarian, Clinical, Nursing, System

Literature Review

The MU Library Professional

I. Library Professionals and Tasks

In this era with fast advancing computer communication technology and easily accessible Internet, students, instructors, as well as librarians on the campus have often developed self-expectations that are quite distinct from their predecessors. Therefore, it is time for the librarians to redefine their roles and functions in order to provide more adequate information services to each type of users using their professional knowledge and skills. The American Library Association (ALA) held the first congress on professional education in 2000. Focus on Education for the First Professional Degree): Task Force on Core Competencies Draft Statement is one of the topics on library professional education at the symposium “Focus on Education for the First Professional Degree” [1]. According to this draft statement, a professional librarian should be equipped with the following seven core competencies:

1. Knowledge resource organization Competence
2. Understanding the association between information and knowledge
3. Providing services linking mankind and concepts
4. Promoting learning
5. Management competence
6. Technology competence

Due to the experience of managing modules in integrated library system (ILS), the MU Library information professional can play a multiple supporting role, such as searching for literature appraisal, and designing a system for data analysis and management. Indeed, the librarians are professional in the field of collecting data, analyzing data and producing reports and qualified the 7 core competencies which required by the ALA.

II. Strengths of the MEIHO University Library

The MEIHO University Library (hereafter referred as MU Library) has significant contribution for both users of on-campus and off-campus. With extensive and proactive publicity and promotion, the school’s electronic resource usage is one of the highest in the nation, revealing a good level of information literacy of the students and teachers of this school. Furthermore, the MU Library also provides interlibrary-loan services to residents in the neighboring areas, forming a close link with the local communities. The MU Library can be considered as a regional education and cultural center. In the school year of 2008, the MU Library implemented the project “The Construction and Development of Interlibrary Resource for Senior High and Vocational Schools” of the Ministry of Education. In the school year of 2009, the MU Library collaborated with 22 universities in Kaohsiung and Pingtung areas to implement resource integration of library

collections and the practice of interlibrary-loan. An interlibrary-loan agreement was signed among the schools. Each year the MU Library holds various library resource related seminars for the students and teachers on-campus by inviting well-known, acknowledgeable scholars, writers, and religious representatives as guest speakers. These guest speakers offered students insights as well as means concerning life education from their personal experiences. The MU Library had received great feedbacks from the students for this type of event.

III. Contributions of MU Library

Therefore, the construction of MOD system at least exhibited the following five major professional competencies of the MU Library:

1. A competence in video and file database management
2. A professional competence in video and file classification and catalog
3. A professional competence in integrating available files and files into an automatic management system
4. A competence in holding instructional video making activities
5. A competence in providing informational education and delivering intellectual property concepts

As a result, during the construction of the system, the MU Library had perfectly performed the duty as a modern academic library. First of all, the MU Library structured the MOD system based on its technological competence. Secondly, the MU Library has helped the students and teachers of the nursing department understand that their class contents (information) would be uploaded into the system for online viewing at any time, which can help the students in improving their clinical skills (knowledge). Third, the librarians have carried out continuing education based on specific plans to help nursing students understand services offered by the MU Library and to promote their learning activities. Fourth, besides building the system with technological competence, the librarians have also worked on uploading nursing-related instructional information using their catalog professional skill. Fifth, the librarians have well used their professional competence in library information organization to teach and promote intellectual property concepts to the nursing instructors. As a consequence, the instructors can collect films legally whereas the students can use the resources properly.

Multimedia on Demand Teaching-assistant Project

I. Missions and Functions

The MOD system was constructed and administrated by the MU Library in collaboration with the information network center. To enhance teaching as well as learning efficacy, the librarians with their professional competences have dedicated

themselves in building a good classification and a sound management system for the files, which include files of hand-on practice courses, speeches, and seminars [2][3].

At present the MOD system holds the following functions:

1. It provides courses for real-time recording and instant playing.
2. It provides instant playing and recording via the Internet, which enables the instructors as well as making files or slides on the same time.
3. It enables students to view lecture content online via the MOD platform by entering the MU Library website. The students can also send lecture-related questions instantaneously. In contrast to the text-only type of long distant lecturing method from the past, this new type of lecturing plan can significantly elevate the quality as well as class interaction of long distant learning.
4. It offers concurrent multi-spot-assisted lecturing.
5. The instructors can connect to the database to retrieve material for making syllabus or lecture via the Internet. The instructors need no scheduling to loan, which happened a lot before.
6. Besides uploading or sharing teaching resources, communication channels, curriculum, and various other teacher-student interaction modules, the MOD system enables the instructors to record their students' learning progress in details so the instructors can better understand the learning condition and requirements of their students. Consequently, the overall teaching quality can be enhanced.

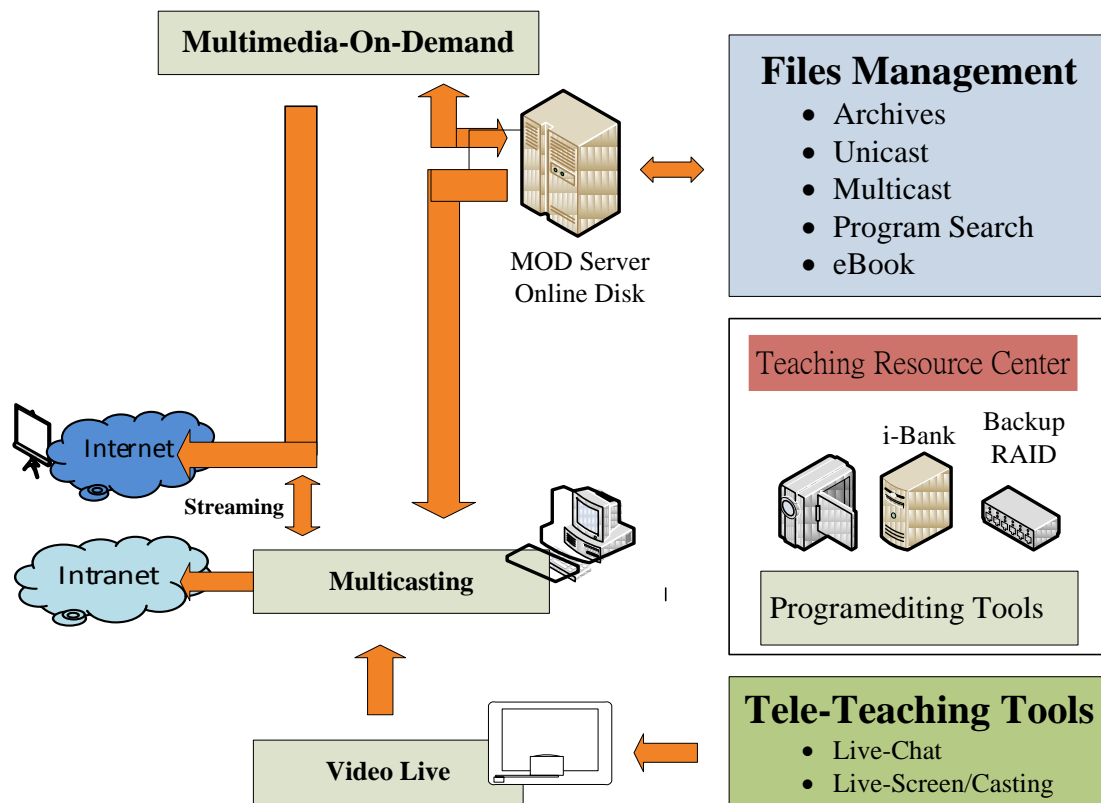


Figure 1. Framework of MOD System

II. Constructing Procedures

The purpose of the MOD project, which includes mainly a system for integrated knowledge sharing and creation, is to effectively organize, integrate, and display resources that have been authorized and released by the school, such as files, teaching materials, multimedia information collected from speeches and seminars, and learning outcomes. Therefore, the first goal is to improve the lecturing quality of nursing department so its long-distant lecturing for clinical simulation training and clinical ward training can become a paradigm for others. The second goal is to transfer those lecturing materials to the MOD system by library professionals so the students can brush up their clinical skills [4]. Here are the major procedures for carrying out the plan:

1. Constructing collaboratively the MOD system:

The MOD system has been constructed and administrated by the MU Library in collaboration with the Information Network Center.

2. Constructing a multi-media real-time recording system:

The recording system, which can be integrated into the MOD system, can record and upload contents from classes, speeches, and seminars concurrently.

3. Providing workshops:

The MU Library is charge of promoting the effects of MOD system to all the faculties and departments of the school and helps them to make a good use of this platform.

4. Enhancing the viewing efficacy of nursing-related digital files:

Library staffs may upload the transmission edition of files to the platform, so the students, whether they are at the school or away from the school, can view the files to improve their clinical skills.

Results and Benefits

The MOD project has executed for six months, and already completed the following tasks. First, the MOD system has been constructed completely by the school library in collaboration with the Information Network Center. These two departments will co-administrate the MOD system in the future. The goal is to build suitable classification system for multimedia resources, so the students and teachers can search for their items effectively while the system can be easily and well maintained.

Second, almost 70% of the reinforcement of the real-time recording system has been completed. The goal is to eliminate file conversion after recording, which can reduce manpower and time as well as provide an instantaneous broadcasting function. Third, five seminar sessions have been hold to promote the effectives of the MOD system to all the departments and faculties of the school.

Fourth, recording hand-on courses: More than 24 hand-on practice procedures from the most important courses of the school have been filmed. Fifth, a manifest of the essence of general education: There are 20 important speeches and seminar activities of the schools that have been recorded and uploaded to the system for students. The purpose is to help the students acquire more diversified knowledge without space or time restriction and to attain the goal of general education.

Sixth, the viewing efficiency of nursing-related digital files had been elevated for nearly 30%; and seventh, two achievement presentations had been hold.

The MOD project also carried out the following benefits. First, overcoming disadvantages from conventional teaching methods. The pluralized and readily available information nowadays has enhanced the interaction between instructors and students. The World Wide Web and its technology have also revolutionized those traditional teaching administrative measures. All these improvements on information technology, as a consequence, have made learning style of students more individualized and diversified. One shortcoming of classroom lecturing is that students may quickly forget the content, and furthermore, there is no way for the students to practice what they have learned repetitively. One approach to correct the problem, which is also quite popular among student, is to make a good use of online self-education.

Second, it takes advantage of the application technology of the World Wide Web to provide community-exclusive website services. The goal is to systemically construct a new conceptual digital community that makes learning unrestricted by space or time and eventually leads education toward a highly effective information future.

Third, it enhanced competitiveness of students via digital learning. Following various changes in learning, from tools to methodology, thinking models, and outcomes, it is necessary to reshape the learning theories correspondingly in order to help students developing problem-solving, skill learning, and self-management competences in this digital learning environment.

Future Research Direction

Founded on nursing care education, the school when established was the only nursing vocational college in Taiwan. The nursing department of the school has long

been the vanguard in nursing-related area in the southern part of Taiwan. Over the years the school has cultivated countless number of medical and nursing personnel who serve in hospitals and clinics across the island.

Therefore, and first of all, the MOD system will become the multimedia zone of the school for not only the nursing department but all the departments and faculties of the school. Important video and audio information and practice course related information from every faculty and department of the school will be collected and stored in this system in order to attain effective resource integration, application, and cross-disciplinary learning.

Secondly, the MOD system and the online teaching platform are better integrated than ever because it is now supported by a reinforced back-end backup system and an audio-video streaming post-production resource database. This combination makes course materials more flexible and expandable.

Last, the real-time recording system will be used all the time for large scale activities, seminars, and speeches of school-level, but it will also be promoted to seminars and workshops hold at department- and faculty-level. The goal is to broaden and enrich the content of the teaching materials.

The MOD system established by the MU Library will continue to serve the following functions. First, this nursing-related multimedia service can be treated as a starting point for expanding its services and effects to outside the school and to the neighboring region to achieve a resource and education sharing purpose [5]. Secondly, this multimedia service can also be linked to local clinics or hospitals for education or personnel training purposes. The MU Library can truly maximized its purposes for maintaining, managing, and disseminating human knowledge by realizing the two above-mentioned off-campus education functions, which are also the inborn tasks of academic libraries.

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