

Learning Resource Center (LRC)
University of Texas-Houston Medical School
Program Design for the New Facilities

Introduction

Due to impact of the Tropical Storm Allison in June 2001, the ground floor of the Medical School Building is being redesigned and the former home of the LRC is being relocated into the 11,000 square feet facility of the former cafeteria, across from the breezeway in the Medical School building. At present, the LRC is temporarily housed in a renovated lecture hall on the first floor of the Medical School. The heavily used facility includes seating for 160 and 50-networked computers, printers, and audiovisual devices. Each of the 160-seating is equipped with a data port for connection to the Internet. Satellite computer stations with over 25-networked computers also are available elsewhere in the Medical School building.

New LRC Facility

The former cafeteria facility provides a unique opportunity for designing a facility that will be at the cutting edge of the teaching and learning environments in top tier Medical Schools. The overall space design calls for a functional facility with customized teaching, learning and studying areas, including the following. A characteristic feature of the space design is the open architecture concept, with minimal walls and partitions within the space to provide maximum flexibility for reconfiguring space in the future, if necessary.

- 150 individualized study carrels (wired and networked for computer and audiovisual communications).
- 5 group study rooms (small group studying, peer tutoring, faculty-student interactions, including a virtual bedside encounter with patients and simulation of clinical encounters, listening to heart sounds, etc.).
- 6 PBL rooms (small group problem solving sessions which integrate basic and clinical science curricula through a Problem Based Learning strategy).
- Networked environment with high speed, large bandwidth, wired and wireless technology in support of 100 desktop and laptop computers.
- Circulation/reference desk (promote use of innovative, web based and multi media instructional resources).
- Collection of instructional resources (formats ranging from paper, multimedia to digital instructional resources in support of the curricular offerings of the Medical School).
- A dedicated space for study in the Medical School, accessible 24 hours a day.

Teaching and Learning Technologies in LRC

The evolving trend in development of Library/Learning Resource Centers calls for a networked environment of digital information systems to facilitate instantaneous dialogue between faculty and students and between students and knowledge databases through networks, self-study aids, web-based instructional resources, bibliographic searching, referencing and accessing

required and supplementary resources posted by the faculty. The computers and the multimedia linkages will allow the faculty and students to interact at will even when they are not geographically co-located. The Medical School's LRC will subscribe to this thinking expounded by the American Association of Medical Colleges (AAMC).

In its description of the competencies required for the digital age, the AAMC has defined certain standards, which must be inherent in today's Medical Schools. These competencies, from the Objectives section of the "Medical School Objectives Project: Medical Informatics Objectives". Highlights of competencies are as follows while the complete document is available at: <http://www.aamc.org/meded/msop/informat.htm>

A. Competencies for Life-Long Learner

1. Demonstrate knowledge of the information resources and tools available to support life-long learning. Knowledge includes awareness of these resources, their content, and the information needs they can address. Relevant resources include MEDLINE and other relevant bibliographic databases, textbooks and reference sources, diagnostic expert systems, and medical Internet resources.
2. Retrieve information, demonstrating the ability to: (a) Perform database searches using logical (Boolean) operators, in a manner that reflects understanding of medical language, terminology and the relationships among medical terms and concepts. (b) Refine search strategies to improve relevance and completeness of retrieved items. (c). Use a standard bibliographic application to download citations from a search and organize them into a personal database. (d) Identify and acquire full-text electronic documents available from the World Wide Web or a local "virtual" library.
3. Filter, evaluate, and reconcile information, demonstrating the following: (a) Knowledge of the factors that influence the accuracy and validity of information in general. (b) The ability to discriminate between types of information sources in terms of their currency, format (for example a review vs. an original article), authority, relevance, and availability. (c) The ability to weigh conflicting information from several sources and reconcile the differences. (d) The ability to critically review a published research report. (e) Knowledge of copyright and intellectual property issues, especially with regard to materials that are retrieved electronically.
4. Exhibit good "information habits." These reflect attitudes that support the effective use of information technology, and include: (a) Using multiple information sources for problem solving. (b) Maintaining a healthy skepticism about the quality and validity of all information. (This includes recognition that technology which provides new capabilities also has the potential to introduce new sources of error.) (c) Making decisions based on evidence, when such is available, rather than opinion. (d) An awareness of the many ways information becomes lost or corrupted and the need to take appropriate preventative action (for example, routinely employing backup procedures for personal and institutional data). (e) Effectively using security procedures (for example, choosing

"good" passwords, not sharing them, and changing them often). (f) Protecting confidentiality of private information obtained from patients, colleagues, and others.

B. Competencies for the Educator/Communicator

1. Select and utilize information resources for professional and patient education, demonstrating: (a) Practical knowledge of instructional technologies and resources available via the Internet, CD-ROM, video teleconferencing, and other media. (b) The ability to effectively utilize various computer-based instructional tools, including electronic tutorials and patient simulations. (c) The ability to effectively utilize a variety of computer-based self-assessment tools.
2. Effectively employ written, electronic and oral communication, demonstrating the following: (a) The ability to use software to create visual materials that effectively support oral presentations. (b) The ability to create a handout that includes simple graphics and tables for use in teaching or patient education. (c) The ability to collaborate across multiple sites using electronic mail, discussion lists, news groups, teleconferencing, and related communication technologies. (d) Knowledge of institutional electronic communications policies.

LCME Standards on Information Systems and LRC

The Liaison Committee on Medical Education (LCME) has developed criteria and requirements for Information/Library/LRC services and facilities, which are also being referenced in the design of the new LRC. These include the following:

1. Adequate collection of print and non-print holdings as a resource for students, graduate students, and faculty members.
2. Usability and functional convenience, including hours of operation, reference services, study spaces and resources such as computers and audiovisual equipment.
3. Integration of computer-assisted instruction as (a) a study aid and (b) an integral part of course instruction.
4. Use of computer-assisted instruction as a substitute for more traditional teaching and assessment of students.
5. Access to well-maintained collections and information facilities, sufficient in size, breadth of holdings and information technology to support the education and other missions of the Medical School.
6. Teaching specific skills such as in computer usage and bibliographic search, retrieving and managing information; interaction with the curriculum committee to coordinate various library and information resources with planned curricular design.

LRC Functions and Services

The LRC will be the primary facility for the students to study and utilize instructional resources, which complement the curricular offerings of the Medical School. It will be accessible 24 hours a day while the circulation desk will be staffed every day until 10 pm except for major holidays. The collection, comprised of over 3,500 items will support the curriculum offerings in the basic

sciences and clinical rotations and will include multimedia formats, computerized and web based resources, required and recommended texts, reserve and course materials, anatomical models, heart-sound simulators, etc.

The staff will assist students in the utilization of web-based instructional resources on the Medical School's desktop and students' laptop computers as well as assist faculty find appropriate and innovative instructional media. In conjunction with the office of Management Information Services and the Office of Academic Computing, the staff will assist in maintaining computer and printer systems, assist students with the use of computers, including instructions on bibliographic searching, use of on-line resources, resetting passwords, configuring computers for remote access, assigning digital IDs, dispensing print cards, etc.

The staff will also assist students in the use of the Hermann-Memorial Systems Patient Information Network and the Houston Academy of Medicine-Texas Medical Center Library's electronic collection. The LRC will continue to coordinate the videotaping of course lectures in the Medical School and in conjunction with the Director of Biomedical Information Technology, the video streaming of these lectures for utilization by the faculty and students. The LRC will work with the Computer Advisory Committee of the Medical School and provide feedback on the use of computer resources, make recommendations on hardware and software standards and generally promote the use of computer resources in the Medical School.

The Director of the LRC will serve as an Adjunct Librarian at the Houston Academy of Medicine-Texas Medical Center Library and a Member of the Texas Medical Center-Health Information Librarians (TMC-HIL) Group, generally responsible for promoting collegiality, sharing and updating information on Library/LRC developments in the Texas Medical Center.

Proposed LRC Space Layout

See attached diagram

Additional Information

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