Collaborative Learning Spaces:

Study Compiled for University of Illinois Veterinary Medicine Collaborative Learning Space Renovation.

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Gorski Reifsteck Architects, Construction Managers, and Interiors

General Strategies for Creating Collaborative Learning Environments:

1. They have multiple electronic display surfaces oriented on different walls. Some are large projected images, using dedicated ceiling mounted projectors. The images projected onto these screens are used to engage larger groups of students or the entire class.

Other displays are wall-mounted flat panels, 42 inches or larger, the orientation of which might be shifted from side to side. Groups of students would utilize these screens to display computer-based materials within smaller workgroups.

2. A good portion of the perimeter walls are made up of writing surfaces. They might even be magnetic to enable them to be used as tack up surfaces. Traditional cork board tack surfaces are also available for the display of paper-based materials created during class sessions.

3. In some cases, the furniture is lightweight, movable, and reconfigurable to accommodate workgroups of various sizes. Chairs are comfortable and on wheels. The room is sized to allow for comfortable circulation and a certain messiness, even chaos, during classroom project activities. Tables typically have organic shapes (kidney, oval, half-circle) to include inclusiveness and participation. Some tables should be movable and allow for adjustable group sizes.

The floor should be covered with a sturdy material, and designed with a grid of power and data outlets.

Small clusters of fixed tables may also be arranged to accommodate face-to face interaction of student project teams. Connectivity and power are integrated within the table surface.

4. At times, there is a formal instructor's workstation. Alternatively, it might be mobile and small. In either case, most of the time the instructor is a wanderer, listening in on discussions, answering questions, and furnishing resource materials.

5. Remote control of the room's audiovisual technology often is controlled from a wall-mounted control panel. Using it, a teacher or student can access network-stored multimedia, control display devices, etc.

6. Though the entire building might have wireless network connectivity, an array of hardwired outlets is furnished to provide connectivity to support ultra-high-bandwidth multimedia

applications. Wall outlets provide power for recharging purposes as well as to support various portable equipment.

7. The lighting is zoned such that the fixtures closest to the projection screens could be turned off independently of the other fixtures. Indirect lighting provides a comfortably soft illumination and is daylight-balanced. Room sensors might automatically extinguish lighting when the room is not occupied.

8. The HVAC is quiet and possibly even independently controlled from each room. The acoustics of the classroom ensure that the space would not be too hard or reverberant and that the space would be well isolated to ensure that "exciting" or overly enthusiastic learning activities in one room did not disturb adjacent classes.

9. For students who do not own their own laptops, a mobile cart of these devices could be available to support computer-aided learning activities as necessary

10. There may be fixed work surfaces along a portion of the periphery of the room. On them, students assemble projects and use the document camera, printer, or computers dedicated to the room.

11. The room would have a dedicated computer and DVD player and would be able to receive cable or satellite, as well as Internet based video programming. And the display system should have connectivity for personal video devices, such as iPods or notebook computers.

12. Ceiling or flat panel speakers would be used to provide the sound from any recorded or live program material.

13. Dedicated video origination capabilities, consisting of cameras located at the front and rear of the room would be used to capture classroom activities. These activities could be recorded, digitally, for later viewing, distributed anywhere in the building, or used for distance learning activities. Also video teleconferencing would allow collaboration with field teams and other remotely located groups. Guest lecturers would also participate this way as well.

14. Commonly, these rooms are designed with an enclosed equipment niche that provides access to the technology when necessary and hidden from view when appropriate.

The degree to which permanent storage is provided within the room depends on the particular requirements of classes being held there.

In order to meet budget constraints when designing these types of spaces, consideration should also be given to delaying initial equipment purchases but ensuring that the base building infrastructure, power, conduit, sight lines, and support structures in the ceilings and the walls are furnished.

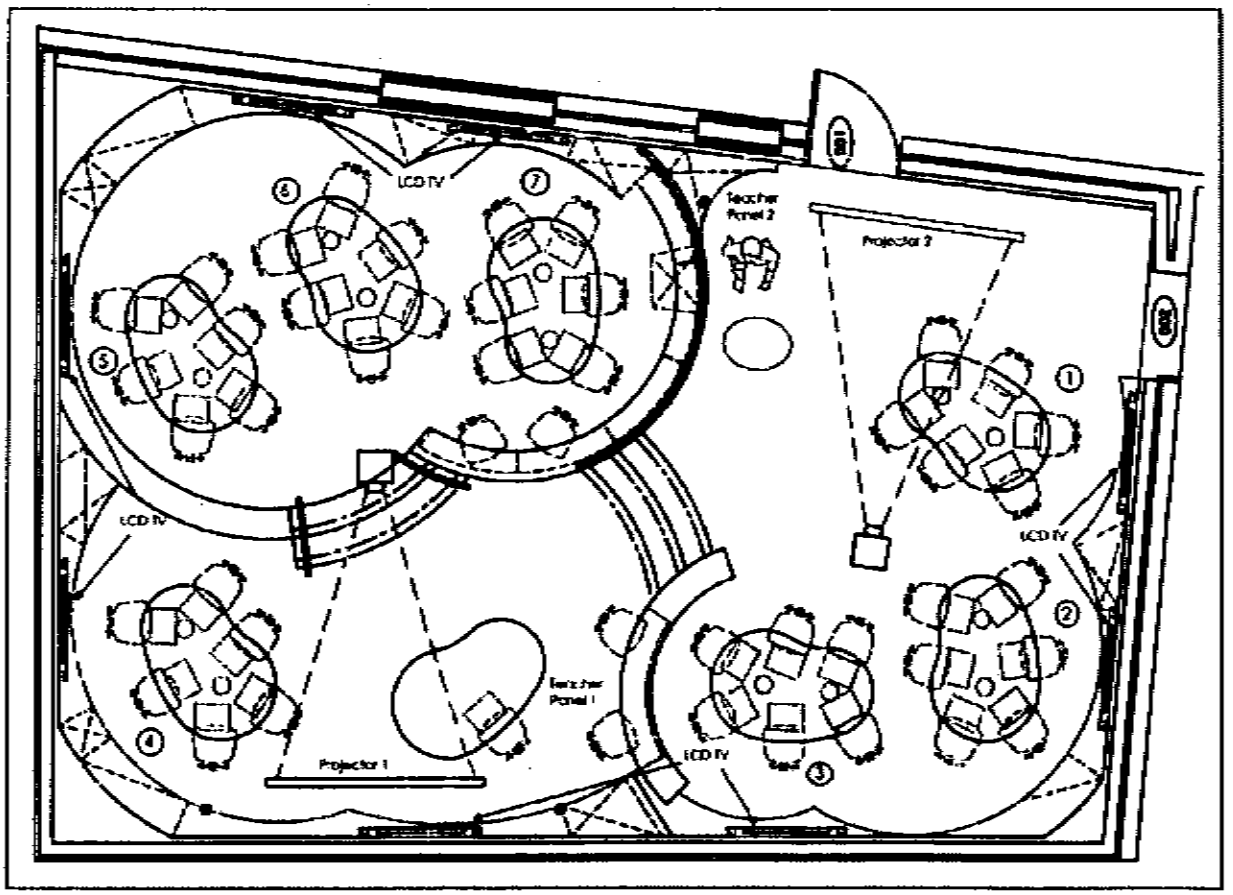
Text quoted from Campus Technology: http://campustechnology.com/Articles/2010/05/19/Studio-Classroom-Designing-Collaborative-Learning-Spaces.aspx?Page=1

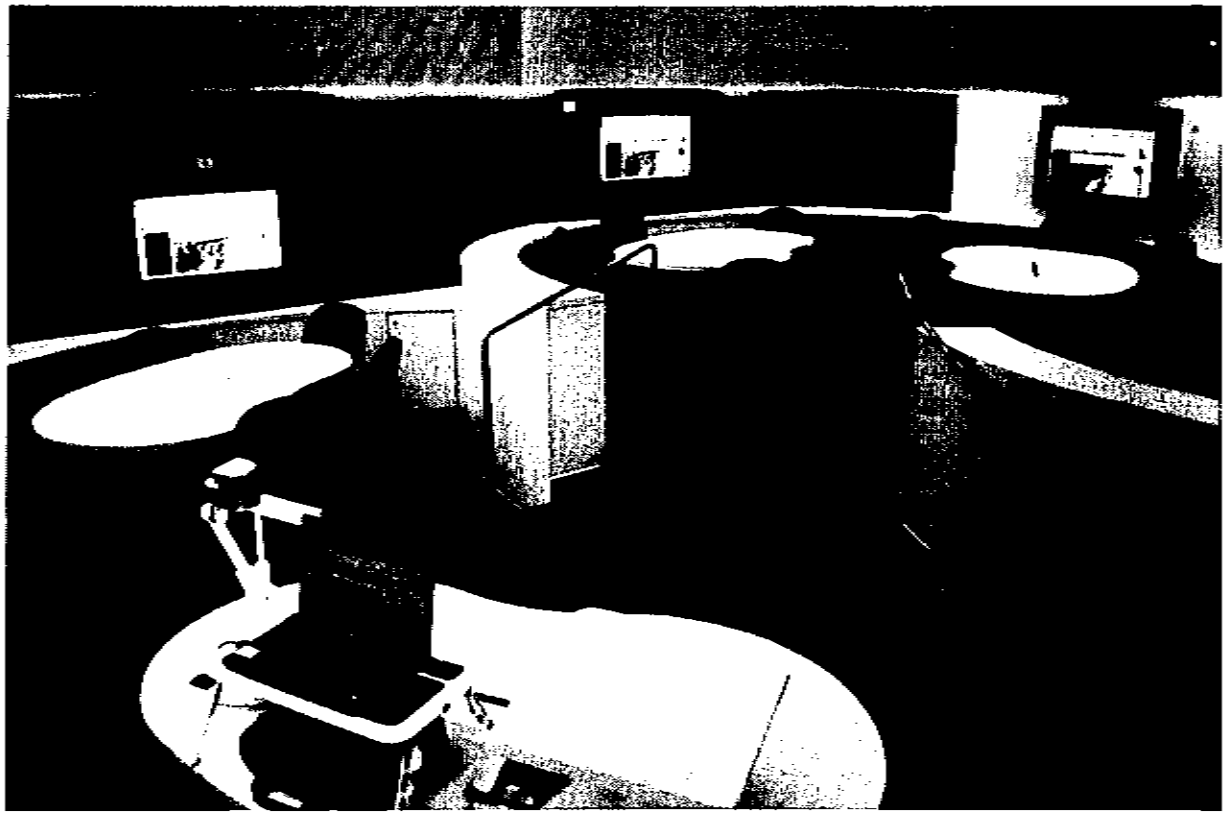
Collaborative Space Precedent 1: http://www.cetl.hku.hk/new_space

2 teaching stations for 7 learning spaces (30-40 seats) with groups of 5-8 seats

Each table is equipped with a 42-inch LCD TV; teachers and students can connect their notebook computers to the panel/table to display their notebook output onto the corresponding LCD TV for their small group discussion and for subsequent presentation to the full group.

Multiple level space creates privacy for group meetings while remaining open enough to present to the group as a whole if needed.



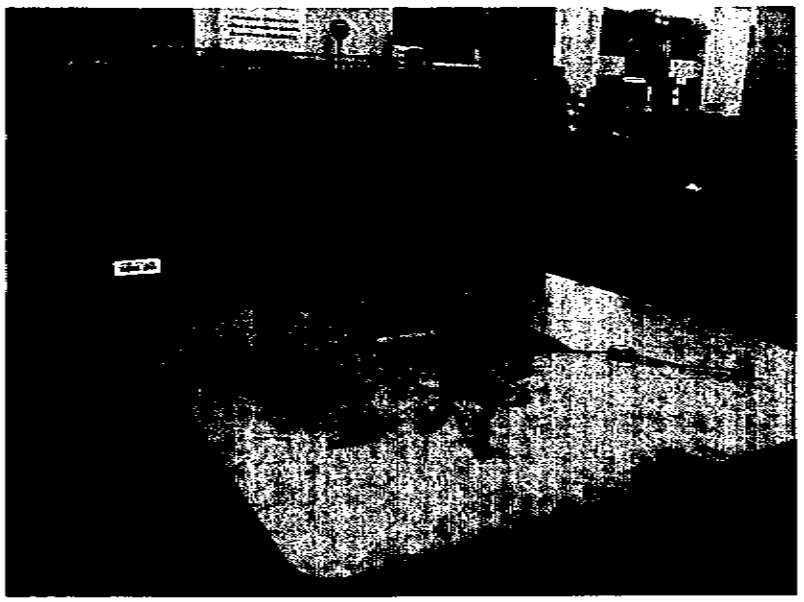


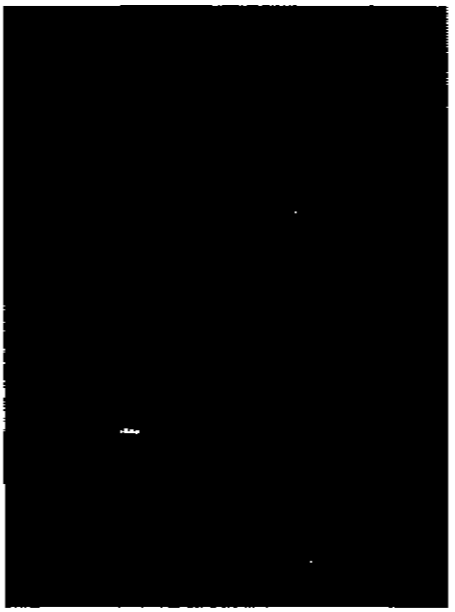
Collaborative Space Precedent 2:

http://www.speedofcreativity.org/2011/05/13/collaborative-learning-spaces-for-students-at-texas-tech/

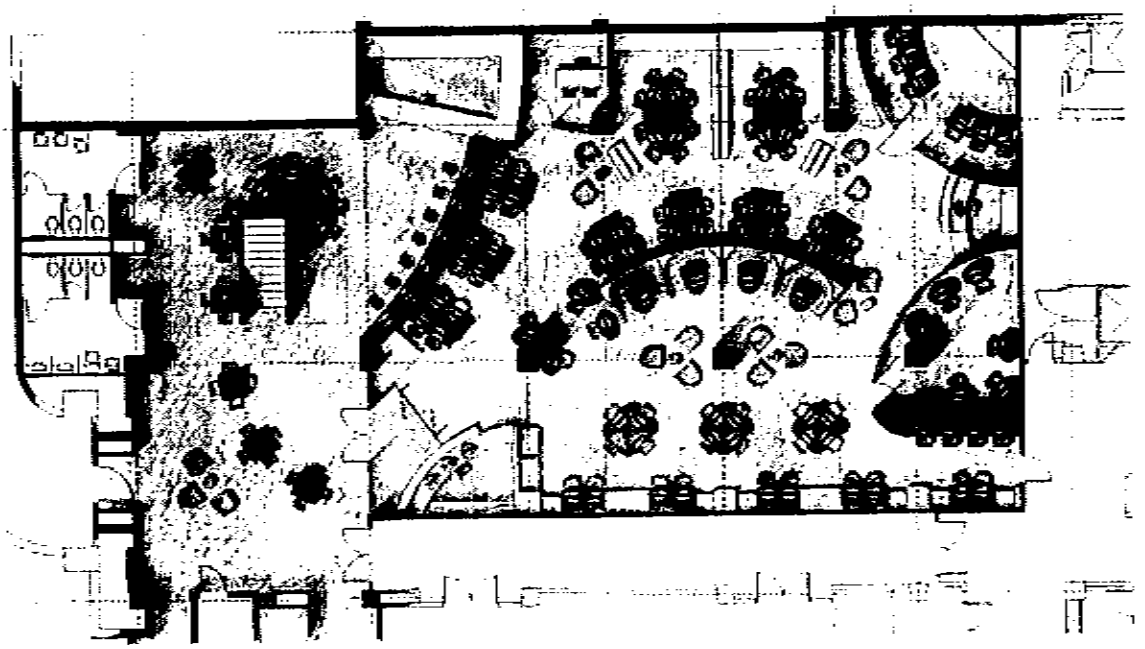
Portion of the library with collaborative learning stations.

Shows successful integration of data connections and LED screens.





Various Images of Collaborative Work Spaces:



The University of Chicago The John Crerar Library Computing Laboratory Plan