

Excerpts from the "Pocket Guide to Training"

There are many physical aspects that make up a successful training environment. They include the shape and design of the room, lighting, acoustics, furniture, visual aids, and seating arrangement.

The Shape and Size

- Ideally, the length of a training room should not exceed its width by more than 50%.
- Position the entrance in the rear of the training room. This allows people to leave and enter the room without distracting the lesson.
- Estimate the average number of trainees participating in the training sessions and the planned activities for the lesson. Crowded training sessions severely detract from the education process.
- Allow sufficient room for your "activity space". Be aware of space required for physical activities such as role playing.
- Avoid support columns and low hanging lighting such as chandeliers. These features create voids in which participants cannot see the instructor or visual aids.

Lighting

- **Issues for the VDT and AV intensive Training Rooms:**
 - Too much light impairs the image of the VDT screen or AV presentation. Most human factor experts favor indirect illumination. However, this can cause some trainees to feel as if the room is overcast.
 - Supplemental lighting should be used to brighten walls. This gets rid of the gloomy feeling caused by indirect lighting.
 - The ability to control the light source is very important, especially in a mixed use situation. Multiple switches and dimming control systems are two popular choices.
- **Issues for training in classrooms with no VDT terminals and little AV hardware:**
 - Natural light has a great effect on the morale and boredom threshold of trainees, although some experts believe windows create a distraction to the training process.
 - A good compromise is to place windows higher in the room, blocking distracting views yet allowing sunlight to enter the room

Acoustics

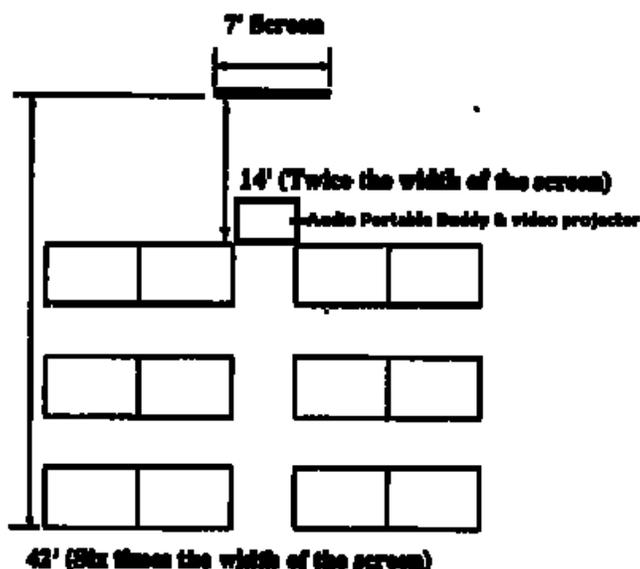
The two main objectives of training room acoustics are to maintain speaker clarity and to keep random noise to a minimum. AmpliVox provides a complete line of amplified rostrums and personal voice reinforcement systems whose power, simplicity and ease-of-use assures that your message is heard.

- Location of the training room - Avoid positioning the room near highways, crosswalks, or high traffic areas. Training rooms should be positioned in quiet areas. Sound insulation can be installed if external noises are unavoidable, but it is expensive.
- Sound requirements and coordination - This is a technical issue. The objective is to make sure the room absorbs and reflects the correct level of sound for its size. These issues should be discussed with an acoustical consultant.

- HVAC impact - Many rooms are plagued by noisy heating, ventilation and air conditioning systems. Situate the training room as far away from the HVAC system as possible.
- Size and shape of room - There is no perfect acoustical shape for a room, but certain elements are important. Construct the ceiling with acoustical tile and the wall with gypsum board. Acoustical tile should cover the back wall to eliminate reverberation. In larger rooms, the shape of the interior comes more into play. The "pie" or "trapezoid" are proven shapes. The same construction material is recommended here as well.
- Audio visual systems - Speakers should be powerful enough to reach people sitting in the back without blaring at the people in the front. As a general rule, any space that is longer than 40 feet in any direction would most likely require some sort of sound system. For extremely large rooms use two sound systems; one for live speakers and one for AV presentations. For live speakers, an overhead sound system with alternated speakers works best. AV speakers should be placed at the front of the room near the image source.
- ADA requirements - The American Disabilities Act requires that public assembly areas with permanently installed public address systems provide assistive listening systems for persons with hearing impairments. Personal receivers may be required at specific seats throughout the room.

Visual Aids

- Displays
- Overhead Projectors
- Multimedia
- Video Tapes, Films and Slides
- Screens - to determine the proper size and placement of the screen in regards to the audience, use the following guidelines: Make sure the bottom of the screen is 42 inches from the floor. The distance of the screen to the last row of seats should equal six times the width of the screen. The distance from the screen to the first row of seats should equal twice the width of the screen.



When considering the furniture for a training room, flexibility seems to be the key issue for most companies. Many can only devote a certain amount of space to training. For example, the same furniture may be used for computer based training in the morning and might then be used to accommodate a role playing exercise in the afternoon. Experts say that tables, chairs, and walls can often make or break a training session.

Lecterns

This piece of furniture has been used since the early days of public speaking. There are two common types available today, floor and tabletop. [The Floor Lectern](#) (such as the [AmpliVox Elite](#), [Presidential Plus](#), [Executive](#) or [Sound Column models](#)) is freestanding and usually accommodates lights and a sound system.

Many trainers prefer a smaller format lectern because it creates less of a barrier between them and their class. [Tabletop Lecterns](#) (like the [AmpliVox S250](#), the [EZ Speak](#) and [ShowStyle Roving Rostrum](#)) allow a lower profile and openness with the class. They are placed on top of a table and the extra table space can be helpful for keeping papers and lecture material close at hand.

The Facilitator Table is a hybrid of the lectern and has come about in the last decade. This piece of furniture accommodates an overhead projector, CPU, and a tabletop lectern. It is used mainly as a teaching station. Many trainers prefer this because it permits them to control all lesson materials and functions from one location.

Tables

- Flexibility and Storage . **Determine if the tables will need to be moved around or fixed.**
- Wire Management . **If computers are being used, be sure the tables can accommodate the electrical hook ups.**
- Size and Shape . **30" x 60" and 24" x 60" are the most commonly used table sizes.**
- Design . **Matching design with other furniture and equipment in the room creates a pleasant environment.**
- Spacing . **When using 30" deep tables, allow at least 66" from table front to table front (72" inches is ideal.) When 18" deep tables are being used, 54" provides adequate space but 60" is ideal.**

Chairs

- Stacker or Folding chairs - **inexpensive, used where space is a premium, for sessions under two hours, provide little adjustment for the user who may get restless and lose focus after a while.**
- Task or Ergonomic chairs - **used when participants are asked to sit for long periods of time. Make sure it is height adjustable by at least 6 inches, arm rests should enable the trainee to rest their arms flat, creating a 90 degree angle at the elbow. Casters also add mobility and can save time and effort when reconfiguring the room. One word of caution: the chairs should not be too comfortable, or you may lose your audience to sleep.**

Room Arrangement

The way a trainer arranges a room dictates the effectiveness of the training session. The goal is to create an environment that promotes learning by both students and trainers interacting freely and constructively together. To accomplish this, a trainer must evaluate how the room will accommodate the lesson plan. Here are some important questions to ask when considering a furniture arrangement for the training room:

- Will audio visual equipment be used and how frequently?
- Will presenters prefer standard wired mics or the "freedom to roam." [wireless](#) mic systems afford?
- Will they want the audience intimacy provided by a [tabletop](#) or [ultra portable](#) rostrum, or would they be more comfortable behind a [full-size lectern](#)?
- Will the student need tables to write on or take notes?
- Will they need room to perform physical activities?
- Will the participants take part in discussion groups, large or small? Will the sound system need to support [multiple mics](#) for interactive discussion?
- Will the tables need to accommodate computers?
- Will the trainees be asked to participate or observe role playing exercises?

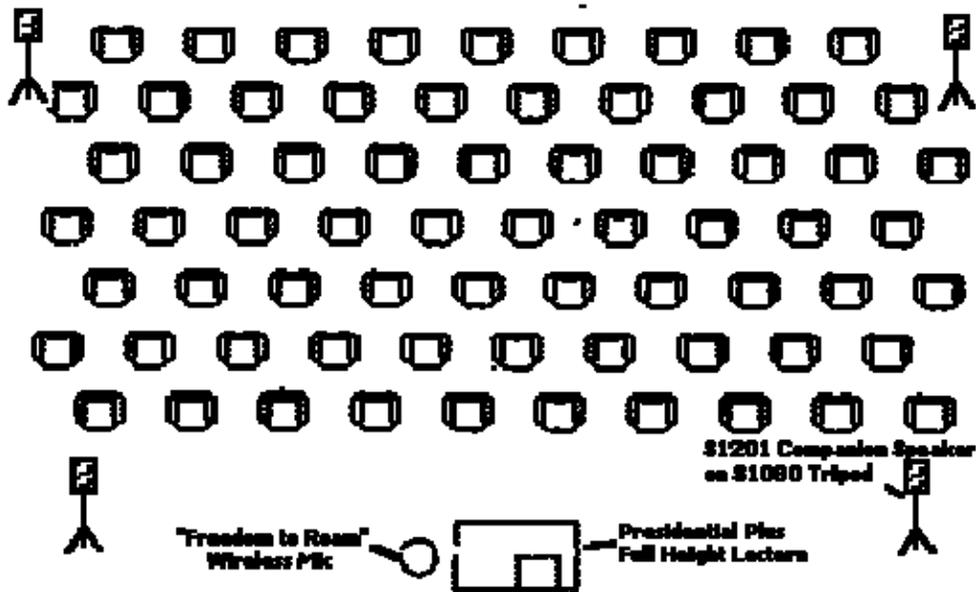
The furniture and seating arrangements can be organized in a variety of different ways. Each arrangement is used for a specific type of instruction to maximize the efficiency of the lesson being taught. The more flexible the furniture, the easier it will be to create different seating styles to fit the immediate need.

Here are some terms that will help evaluate the following seating configurations.

- **Accommodates AV** simply implies if the seating arrangement is conducive to visual displays or multimedia presentations.
- **The Action zone** denotes where most of the instruction or group involvement is taking place.
- **Group involvement** refers to the amount of participation the students are actually involved in during the lesson. Seating refers to specific seating requirements recommended when using a certain configuration.
- **Tables** refers to specific table requirements.
- **Space per person** recommends the amount of space needed per individual in order to be comfortable without being cramped or isolated.
- **Maximum # of people** expresses the highest quantity of participants that can successfully gather information and constructively participate in the lesson.
- **Advantages and Disadvantages** specify the pro's and con's of each setup, respectively.
- **Variations** or hybrids describe slight changes made to the arrangement to accommodate specific applications or problems.

Arrangements:

Theatre Style:



Action Zone: Front, center of the room.

Group Involvement: Little to none.

Seating: Facing the front of the room in rows. Chairs should be aligned 2 inches apart. The first row of seats should be located 6 feet away from the trainers table.

Tables: None in this configuration.

Space per person: 10 square feet.

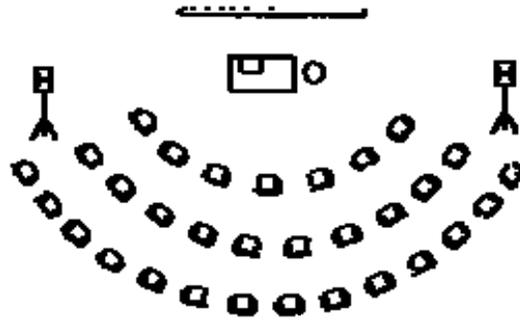
Maximum # of people: There is no maximum for this configuration, as long as 10 square feet are provided for each person.

Accommodates AV: Yes. Will accommodate equipment well. If a group is larger than 40 participants, consider using projected images on a large screen so everyone can view the presentation.

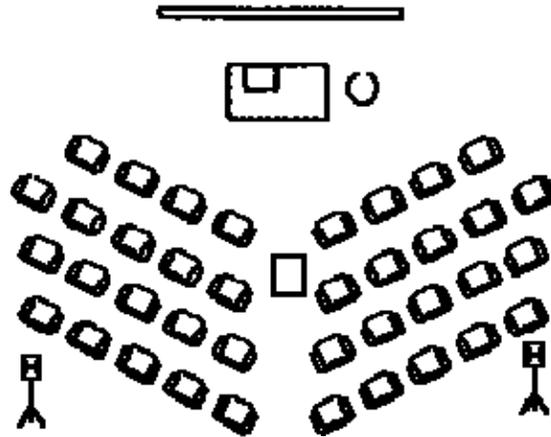
Advantages: Ideal for large groups. Good for presenting videos or films that do not require discussion. Straight lectures with little group participation also work well with this style.

Disadvantages: Does not allow for much group participation. Does not provide writing surface for taking notes. People in the back rows may feel removed from the lecture.

Variations:

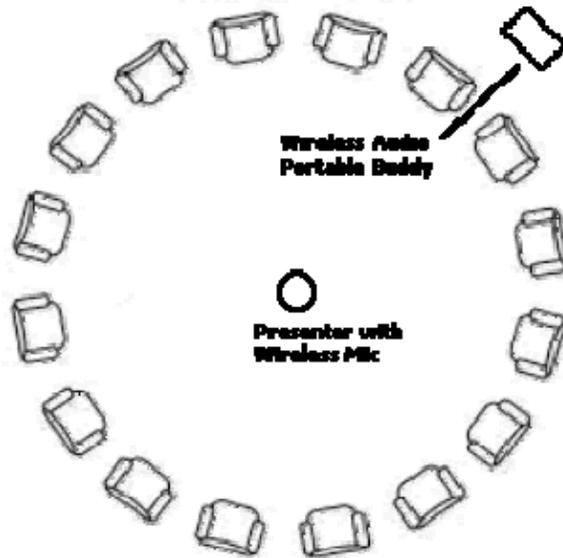


Semicircular - A slight bend is added to the rows to give a feeling of togetherness. Not recommended for large groups because much floor space is wasted.



Chevron or "V" - Seats are aligned in straight rows, angled at 30 degrees facing the instructor or visual presentation. Again, used to create more harmony in the group.

Circle of Chairs:



Action Zone: Center of the circle.

Group Involvement: High. Aims to involve all participants in group interaction.

Seating: Chairs arranged in complete circle.

Tables: None in this configuration.

Space per person: 10 square feet.

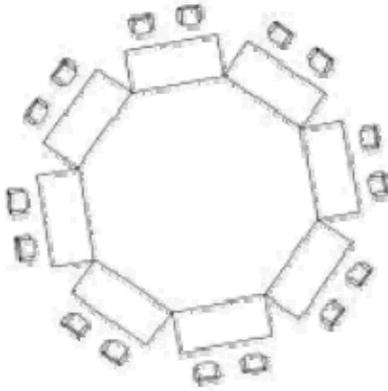
Maximum # of people: No more than 20 participants.

Accommodates AV: No. Not conducive for AV presentations, used primarily for group discussions. Cannot place a visual aid in an area that can be viewed by everyone.

Advantages: Involves everyone in the group. There is no table in the middle, therefore people are unobstructed and can speak directly to each other. Creates equality among the group, with no designated "leader" position.

Disadvantages: Some people feel uncomfortable or exposed in this type of arrangement. Can only handle small groups of people. Not conducive to visual aids or AV presentations.

Variations:

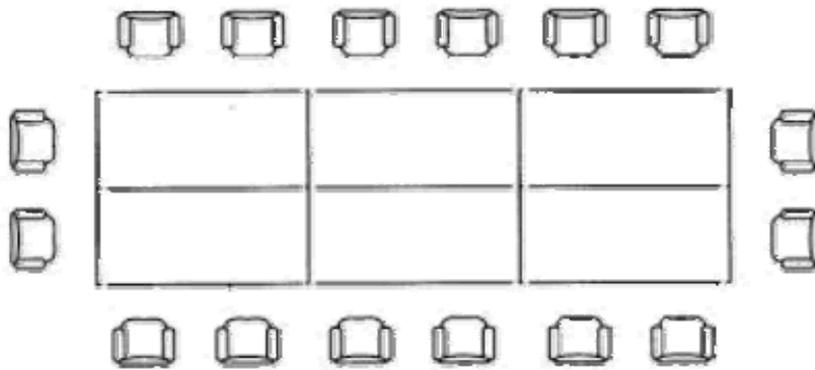


Circle and Table - Combines informal, open characteristics of a circle, yet gives trainees a table for books and note taking. The table may also remove the sense of vulnerability.



Broken Circle - Possesses all of the advantages of the circle but allows visual aids to be used effectively. Also identifies a leader position to pressure involvement of participants if needed.

Conference



Action Zone: Table top or ends of the tables.

Group Involvement: High. Encourages the involvement of people in the group. Creates a more formal setting than the circle.

Seating: Arranged along sides of tables. Seats at the end of the tables can designate leadership positions.

Tables: 30" x 60" or 24" x 60" ganged together in a rectangle work well for this configuration. Use as many as needed, seating two at a table. Half moon tables can also be added at the ends to provide a cleaner look.

Space per person: 30 inches of space at the table. 20 to 30 square feet for the entire room, per person.

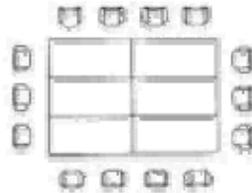
Maximum # of people: 32, but works best with groups under 20 people.

Accommodates AV: Can be used, but part of the group must temporarily move around to see the presentation.

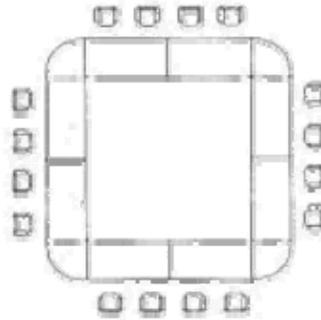
Advantages: Participants can hear and see each other easily. Unity is created by sharing the table and encourages conversation. Can be used to identify work groups; one group of workers can be seated across the table from another group to present and discuss different ideas.

Disadvantages: People must be rearranged when using AV equipment. Extremely long tables can give a feeling of isolation and discourage participation. Cannot see the faces of all the people. Can highlight tensions between separate groups.

Variations:

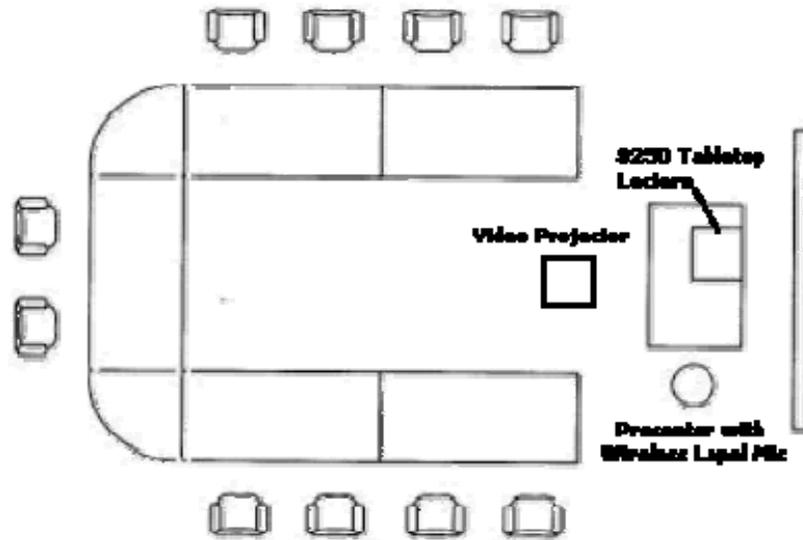


Square Table - Another formal arrangement but tables are configured in a square. Allows for more groups to be identified and involved in the meeting.



Hollow Square - This arrangement keeps the center of the square open.

U-Shaped



Action Zone: In the center and at the open end of the "U".

Group Involvement: High. Creates a sense of equality within the group.

Seating: Chairs seated around the outside of the "U".

Tables: Rectangular tables set in a "U" configuration. Pie shapes are commonly used at the corners to complete the shape and eliminate the hard edges. Trainer's table is at the opening of the "U".

Space per person: 40 square feet.

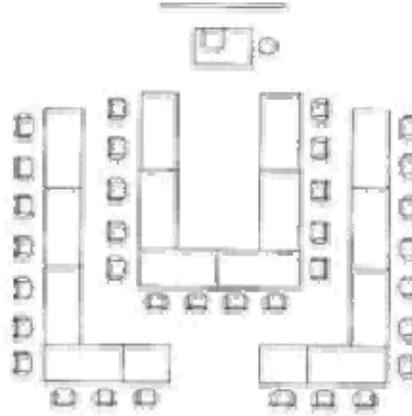
Maximum # of people: 24 people.

Accommodates AV: Yes. This configuration is one of the best for visual displays and multimedia presentations. Equipment set at open end of "U".

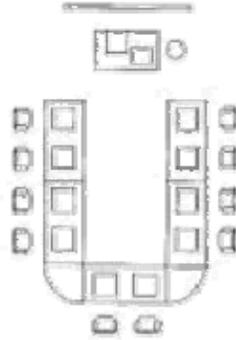
Advantages: Easy to see and hear everyone in the group. Front of room commands the group's attention. Unity is created by ganging all the tables together. Openness gives trainees a sense of freedom and encourages participation. Best set up to view audio visual presentations. Works well with role-playing and other physical activities.

Disadvantages: Requires more space than any other configuration. Due to space and learning requirements, the maximum amount of participants should not exceed 24.

Variations:



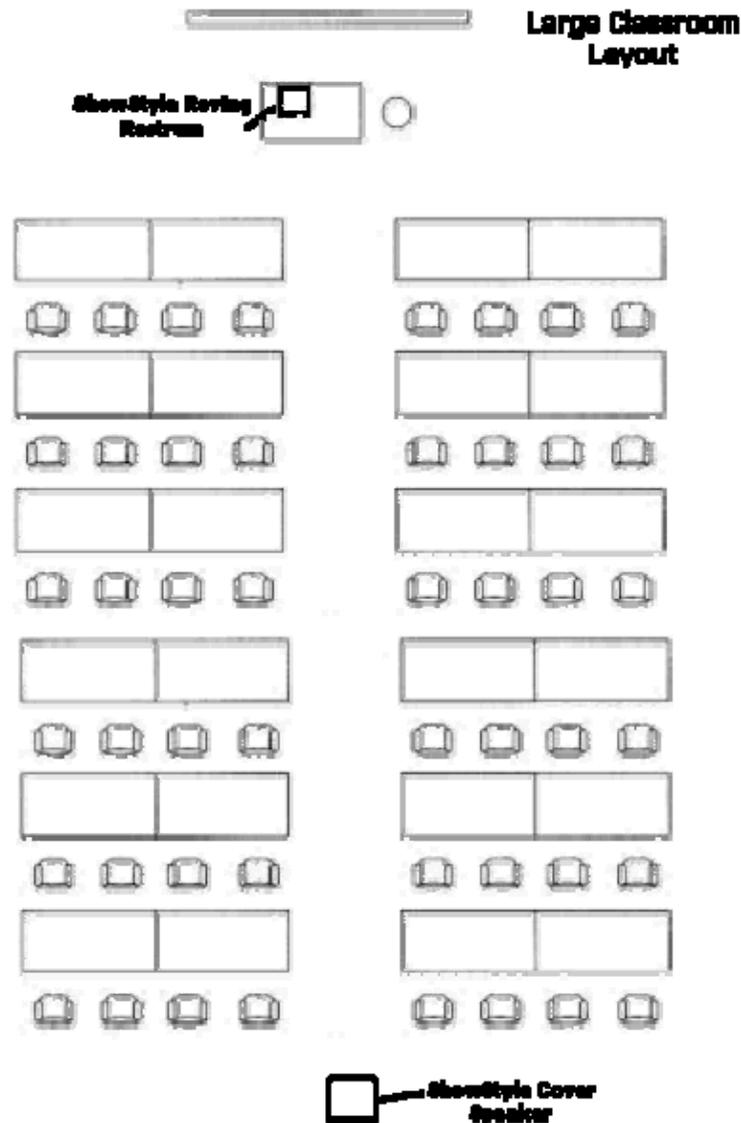
Double "U" - Allows trainer to seat more people than single "U" set up. Limits discussions between the group. Best used when the outside group is observing the discussions or activities of the inside group.



"U" Computer Training - This arrangement allows the tables to be ganged together enabling wires to run under the tables easily. Wire management is a must in this situation. This set up also allows the instructor to monitor student's work easily while speaking to the class.

Classroom

Large Classroom



Action Zone: At the front of the room. Students are focused on the instructor.

Group Involvement: Medium. Allows one way interaction back and forth between instructor and audience or between the trainer and an individual in the group.

Seating: Similar to a school arrangement with participants seated behind a row of desks or tables.

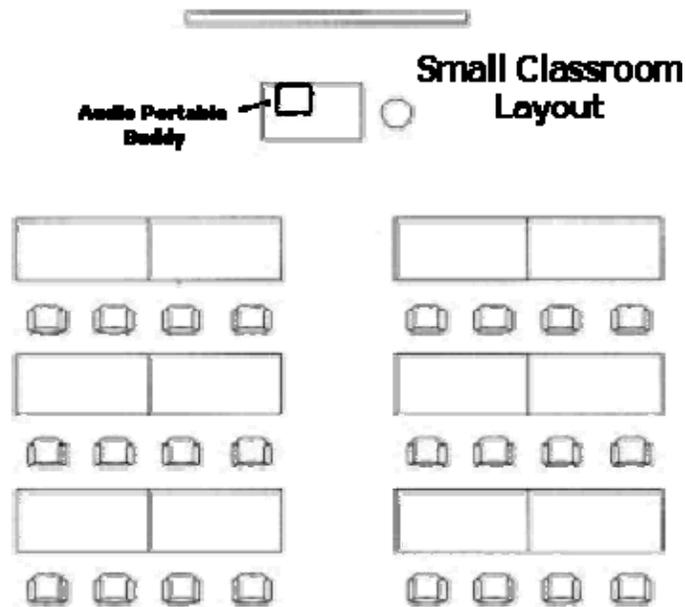
Tables: Arranged in rows, either butted together side by side or standing alone.

Space per person: 10 square feet.

Maximum # of people: Can be effective up to 200 people, provided the room has enough space to adequately accommodate the number of participants.

Accommodates AV: Yes. Works well for all presentation displays. Be aware of the limits of the presentation equipment and materials in respect to the size of the audience.

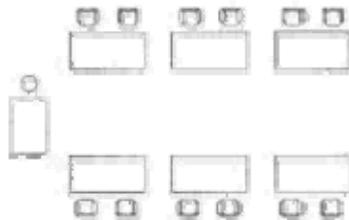
Small Classroom



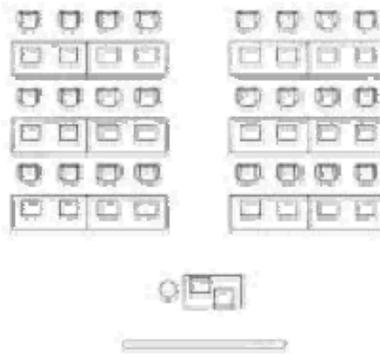
Advantages: Every participant has a good view of the front of the room. This allows the instructor a great deal of control over the students. In larger groups, it is possible for everyone to hear what is being said. Provides surface for note taking or reference materials.

Disadvantages: Hard for instructor to move into the audience, separating him/her from the students. Student participation seems to drop off towards the back of the room unless sound reinforcement is used.

Variations:

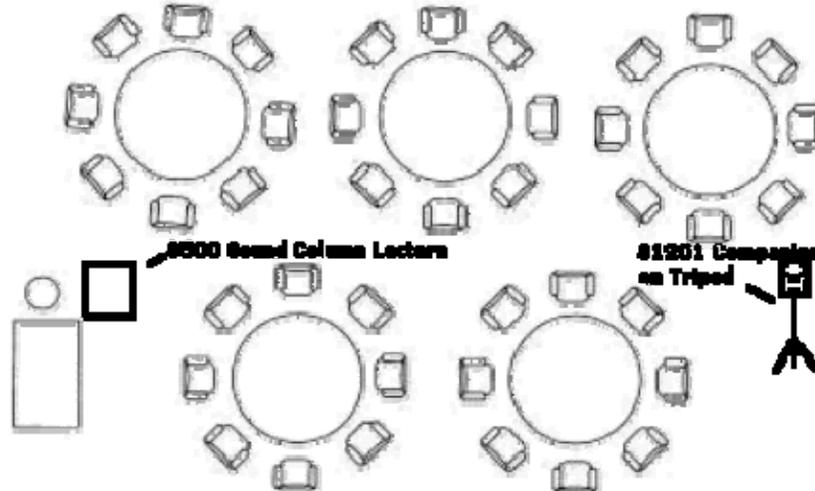


Perpendicular - Tables are arranged in long rows perpendicular to the trainer's table. The edge of the first table should be 6 feet away from the trainer's table and a large corridor should be left in the middle to allow for group participation.



Computer Based Training - The classroom set up is commonly used for computers. This can create problems with wires due to the tables being separated. Ideally, power should be supplied near every table. Wire management is a necessity with this set up to safely conceal wires around the work areas.

Rounds



Action Zone: Each individual table.

Group Involvement: High. Designed for small group interaction.

Seating: Seats 4 to 12 people around an individual table.

Tables: Evenly spaced around the room allowing plenty of space for movement.

Space per person: 10 square feet.

Maximum # of people: As many participants that can be seated comfortably. Should not exceed 50.

Accommodates AV: Not very good for visual displays. If an AV presentation is necessary, remove the seats facing the back and arrange them in a horseshoe configuration facing the presentation.

Advantages: Great for small group discussions. Allows the instructor to easily walk around to the groups and help them with the exercises.

Disadvantages: A lot of space is needed for this configuration. Not very conducive to lectures or AV presentations.

Variations:



Fishbowl: Seats are arranged in an inner circle and an outer circle. The inside group works on problem solving activities or group discussion, while the outside group observes the interaction and acts as consultants or evaluators. Very useful for role plays.

Bibliography

Articles

Benya, James R, "Lighting Systems for the Electronic Office," **Architectural Record**, February 1994, pp. s14 s15.

Glanzrock, Paul, "Training Room Acoustics: Quiet Secrets of Success," **Facilities Design and Management**, November 1994, pp. 58-59.

Janson, Jennifer L, "Computer Based Training Helps Firms Trim Budgets," **PC World**, January 1992, pp. 56-61.

Philipczak, Bob, "Make Room for Training," **Training**, October 1991, pp. 42-53.

Steffy, Gary R., "MacArthur's Makeover, A Case Study," **Architectural Lighting**, January/February 1993, pp. 32-37.

Booklets

Callahan, Madelyn R., "Succeed in Facilities Planning," **Info-Line**, April, 1985.

Darraugh, Barbara, "How to Design Training Rooms," **Info-Line**, December 1989.

Books

Finkel, Coleman L., **Professional Guide to Successful Meetings**, Herman Publishing, Inc., Boston, 1976.

Illumination Engineering Society of North America, **IESNA ED-100 Manual**, 1993.

Leed, Karen B. and James R., **Building for Adult Learning**, Leed Design Associates, Cincinnati, OH, 1987.

Lord, Kenniston W. Jr., **The Design of the Industrial Classroom**, AddisonWesley, Reading, MA.

This, Leslie E., **The Small Meeting Planner**, Gulf Publishing Company, Houston, TX, 1972.