

Designing Recreation Facilities Without a Drawing Board

Al Ellard, Re.D
Associate Professor
Recreation, Parks & Leisure Services Administration
Finch 107A
Mount Pleasant, MI 48859
989-774-4471
Al.ellard@cmich.edu

Keywords: Design, Planning, Facilities

Facility Design Without Drawing Boards

Introduction: Many “more mature” parks and recreation educators, such as the author, learned facility design using drawing boards, 2H pencils and T-squares. Although creative and hands-on, this method has very little to do with the reality of the facility design process of today. First, the technology of design no longer employs a drawing board. Computer Aided Design (CAD) technology has replaced velum, pencils, and triangles. While anyone can draw lines on paper with a pencil, CAD software has a longer learning curve and doesn’t warrant curriculum time in most parks & recreation programs. Second, recreation graduates are not going to be called upon to “design” facilities. Facility design has become the domain of design consultants working with architects and engineers. Any industry magazine is filled with ads for these services. Today’s recreation practitioners must be prepared to guide the process of facility design. Recreation practitioners must be able to work closely with community and user groups, agency staff, design professionals, and public officials to orchestrate the design process. The skill needed by tomorrow’s managers has more to do with the process than the final product. This paper describes a number of hands-on instructional activities the writer has created to provide students with familiarity with several elements of the facility design process.

Description of the Activity

Community Input:

The process of designing a community recreation facility begins with the community. The community input process is not merely about arriving at a list of features to be included in the proposed facility. How the community input process is handled

is critical to the willingness of the community to support funding the project. Ignoring, overlooking or excluding users or user groups is at your own peril.

Exercise 1: Community Meeting.

For this exercise, students are assigned roles as members of a community. Students are individually assigned to play the parts of users such as a senior adult, swim team parent, hockey player, a person with a disability, etc. Some students are also assigned to represent other community organizations such as the owner of a private fitness center, the area agency on aging, the school superintendent, or social worker. An effort was made to create roles widely representative of individuals and groups in the community who may have an interest in the creation of a new community recreation center. Students were assigned to reflect on their role and the recreational needs/interests of the role they were playing and what that person would bring to the planning process. Students were asked to write a paragraph describing what their role would like included in a new recreation facility as well as any concerns their character might have with the construction of the new community facility.

The next class period was used to role play a public meeting. Students were reminded to respond "in character". A modified nominal group process was used (given limited class time) to solicit facility features of interests to the participants. The session ended with participants using peel and stick dots to vote for the top facility features preferred by their character. This information was then summarized for the next step.

Exercise 2: Community Survey & Master Plan

For this exercise, students were provided the results of a local community-wide facility survey and a copy of the parks & recreation master plan priorities for the community. Given the results of the community meeting in Exercise 1, the survey results and the parks and recreation master plan priorities students were asked to write a summary, based on the three sources of information, and develop a propriety list of recreational use areas/spaces that should be included in the new facility.

At the next class period student working in groups of 4-6 were asked to come to a consensus on the priority list. This provided an opportunity for varying interest groups to interact. Groups presented their priorities to the class. At this point discussion was directed toward arriving at a class consensus, weighing the relative weighting given to the various sources of information used, and identifying factors that may influence varying outcomes.

2. *Design Consultants.*

Very few recreation facilities are designed without the assistance of design experts such as design consulting firms, architects, and engineers. A new breed of recreation facility design specialists has emerged in the industry offering a range of services to the organization designing a new facility. Design Consultants can provide valuable assistance to communities in all stages of the facility design process, frequently teaming up with architectural & engineering firms. Consultants can be hired to conduct parts of the design process or to complete the entire process from concept to final product. For this exercise, bid documents were selected representing a number of bids received by a local community. From these, five representative bid documents were selected for the exercise.

Exercise 3: Hiring the Consultant.

Students were given access copies of five bid documents and the RFP for the design work along with a bid evaluation form. Students were asked to review the proposals for conformity with the bid specifications and to score the five bids using the rating system listed in the RFP. Students were then asked to write a memo addressed to the "City Commission" making a recommendation for the selection of a design firm. Memos were to address the strengths of the winning selection and the second choice with a rationale. Students were also to provide a rationale for the rejection for the other three bids.

During the next class period, the merits of the various proposals were discussed. Discussion ensued regarding the differences between proposals, why proposals received high or low marks on parts of the evaluation, strengths and weaknesses of proposals, costs, timelines, and qualifications of bidders. Finally, a vote was taken of students to determine the bid to be chosen.

3. *Site Selection*

Of course no community planning process is complete without a discussion about where the new facility should be located. Many factors go into selecting a site for development. What are the criteria that must be considered in selecting a site for a new facility? How important is one criteria versus another? There is never a perfect site. More often than not site selection involves compromise and trade-offs. Using local sites in the community, five sites were selected in different parts of town for this exercise. Because this is the university community, most students have some familiarity with the locations and the community.

Exercise 4: Site Selection

For this exercise, students were given a map of the community including locations of parks, recreation areas, major roads, commercial, residential, and

industrial development along with some demographic information on the community. On the map five proposed sites were marked. Students were also given a table indicating the criteria being used to evaluate sites, along with information about each site relevant to the criteria. Students were asked to evaluate the five sites based on the criteria and derive a score for each site based on the evaluation. Finally, students were to write a memo, again to the “City Commissioner” making a recommendation for the preferred site. Memo’s had to include their rationale for the site being recommended. Students were also to indicate their second choice with a rationale and to discuss why the other sites were deficient.

At the next class period student working in groups of 4-6 were asked to consolidate their recommendation into a group recommendation. Groups presented their recommendations to the class. At this point discussion ensued comparing the rankings given by groups, the relative merits of the sites, the weight assigned to different criteria, etc. Finally, a vote was taken to choose the site for the new facility.

4. Construction Budget

Cost is perhaps the single largest consideration in the design and construction of any facility. Almost all facility projects involve many trade-offs between the concept and the final product. Costs must be cut and compromised must be made. Having collected cost figures for a number of recently developed facilities in the state, it was relatively simple to prepare per foot costs of construction of a variety of types of recreational spaces. Per foot cost varied by type of area; for example locker room construction is higher per square foot than storage space. In addition, the spreadsheet was set up to automatically compute “soft costs” (professional fees, etc), circulation areas (hallways, lobby, etc.), offices, mechanical spaces, storage, and building furnishings as a percentage of the overall cost, thus reducing the amount available for construction or recreation areas.

Exercise #5: Construction Budget

Students were provided the facility priority list created in Exercise #2 along with an excel file that included the per-foot costs described above. Students were then given construction budget to work with. Students were asked to identify the types and number of recreational areas they planned to include in their facility and to keep the facility costs under budget. Students were required to turn in a printout of their final facility budget along with a brief paper offering their reflections on their decision making process.

At the next class meeting, students worked in groups of 4-6 students. Each individual shared their facility budget and discussed the decisions they had to make to keep the project under budget. Finally, a spokesperson from each group shared with the class some of the lessons learned in arriving at the final budget.

Outcomes

These exercises are intended to benefit students in several general and specific ways including:

- Improve student's professional writing skills.
- Develop empathy for the role of citizens in the planning process.
- Read, interpret, and evaluate technical information.
- Consensus building.
- Understanding and appreciation of the roles of various planning professionals.
- Exercise decision making skills.
- Ability to set priorities.
- Understanding and appreciation of the costs associated with building a facility.

Comments and Recommendations

The five exercises described above have evolved over several years of teaching facility design. Other exercises come to mind that may be added to this course in the future. The next exercise to be developed will involve creating an operational and revenue budget for the proposed facility. Because of the great variability in the quality of finish that is available, integrating finish options into the course is also a future option. This approach could be easily adapted for designing parks and outdoor recreation areas as well.

Some of the lessons learned that may be useful to others are summarized below

- Making use of original data and documents interjects a sense of reality to the assignments that is difficult to achieve with a textbook. Use real census data, RFP's, proposal documents, survey data, master plans, etc., in your exercises. In this way, students learn what these documents are and have a familiarity with them when they go into the field.
- Because students are generally familiar with the local community, it may be beneficial to work with the local community as an example for design projects.
- Link the facility design project to the parks and recreation master plan of the local community. Facility design should not be done in a vacuum apart from other planning efforts. Don't just have students design something they have an interest in.
- Images of other facilities are great and I use many images in class. Nonetheless, it extremely beneficial to tour new parks and recreation facilities each semester with students. Tours should be planned carefully to demonstrate concepts learned in class.

- Invite practitioners who have completed a new facility to your class (or visit their facility). This provides an opportunity of students to ask question of people who have been intimately involved with designing and constructing facilities and reinforces much of what is covered in class.
- Don't be afraid to visit facilities under construction. You can frequently meet the architect/engineer on the job and get a behind the scene tour with your class.