Interior Architecture

Ohio University College of Fine Arts School of Art+Design

ART 2650 Design Process and Programming
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Interior Design Programming Explained

What is 'programming' in the design professions?

Design programming is usually defined as the research and decision-making process that identifies the scope of work to be designed within a project.

Programming is a process during which information about the project parameters is collected, analyzed, and clearly stated to provide a basis for the design proposals that will follow.

The program defines the client/user situation, including problems, needs, and desires, before a design proposal is attempted or presented. Programming is pre-design analysis whereas design is a synthesis of needs and desires.

Many different programming formats incorporate the same essential elements.

In all cases, the design programming fits within a larger context of planning efforts which can also be programmed.

Example 1

Programming involves deciphering the needs, wants, and goals of the project.

- What do you want to achieve?
- What are your must-haves?
- What look or feel do you want to create?
- What activities must happen in this space?
- Who uses this space and what needs do these individuals have?
- What color do you love most, and how would you like it reflected in this space?
- What are you thinking of spending for this project?

The questions can go on and on.
Sometimes clients are ready with answers to all these questions and more.

Sometimes clients need more time to come up with answers.
Sometimes some of these items contradict each other - like the list of must-haves and budget.

Example 2

For design programming for a building or interior, a six-step process such as this one is common:

1 Research the project type
2 Establish goals and objectives
3 Gather relevant information
4 Identify strategies
5 Determine quantitative requirements
6 Summarize the program

Example 3

Another way to describe the process:

The Designer usually meets face-to-face with the Client to find out how the space will be used and to get an idea of the Client's preferences and budget.

The Designer also will visit the space to take inventory of existing furniture and equipment and identify positive attributes of the space and potential problems.

For example, the Designer might inquire about a store or restaurant's target customer to create an appropriate space.

After collecting required information, the Designer formulates a design plan and estimates costs.

Programming means the scope of work which includes, but is not limited to:

- conducting researchidentifying and analyzing the needs and goals of the client and/or occupant(s) of the space
- evaluating existing documentation and conditions
- assessing project resources and limitations
- identifying life, safety and code requirements
- developing project schedules and budgets

It is essential to do a thorough Programming before proceeding with Conceptual Design.

Example 4

The following descriptions are taken from
"Programming" by Robert. G. Hershberger, Ph.D., FAIA

Design programming has developed as an activity related to, but distinct from, architectural design.

All types of clients need programming services. Institutional, government, and corporate clients are most likely to recognize this need and be willing to pay for programming services.

Expertise in information gathering is the heart of the programmer's domain and requires the ability to

• Conduct efficient literature searches
• Employ active listening skills to conduct diagnostic interviews
• Record meaningful data during a walk-through study
• Develop comprehensive space inventories
• Obtain trace evidence
• Conduct systematic observations
• Know when and how to develop and administer questionnaires

Knowledge of space size standards for various building types is a fundamental requirement for programmers.

Before going into the work session, they must know what the standards are for a building type as well as what space the client actually has, so they can guide the client to agreement on appropriate net space needs for a particular facility.

Steps for identifying the space needs of a specific facility include the following:
• Identify required spaces
• Establish the size and relationships of these spaces
• Develop appropriate factors for estimating efficiency
• Project budget and schedule requirements

When determining factors for estimating efficiency, allow for nonprogrammed areas such as halls, walls, restrooms, service areas, two-story spaces, and the like.

Information Gathering

Five types of information gathering are used in design programming:

- literature search/review
- interviewing
- observation
- questionnaire/survey
- group sessions

Literature search/review.
This task comes first in the programming process, beginning even before the commission is

awarded, to give the programmer background knowledge of similar facilities and a general familiarity with the client's mission and language.

The literature search includes gathering reports on existing facilities along with site surveys, construction documents, and other relevant documents that the client may possess.

It also involves obtaining relevant government documents, including applicable codes and ordinances, as well as recognized building and planning standards, historical documents and archival materials, trade publications, research literature, professional publications, manufacturers' publications, and even sources in popular literature and on the Internet.

Interviewing.

In most cases this is the core activity in programming. It begins with the client interview.

Interviews with key personnel, other users (clients, patrons, customers, etc.), and interested community members follow.

Successful interviews are carefully planned.

The programmer first tries to identify the basic values that will affect the design of the facility—human, cultural, environmental, technological, temporal, economic, aesthetic, and safety-related.

In planning interviews, the programmer should consider what data could make a design difference, who could provide the most useful information, who has the authority to make decisions and establish priorities, the amount of time and the size of the budget that are available, and how interviewing will relate to other information-gathering techniques that may be used, such as observations or surveys.

For larger organizations, the programmer usually reviews the organizational chart with the client to identify the key officers, department heads, and other persons likely to be knowledgeable about facility needs or in decision-making positions.

Others within the organization who might be interviewed include department managers, members of special committees, maintenance people, a sampling of typical employees, and employees with special needs.

Those who use or visit the building but do not work for the client organization, such as suppliers, service people, fire officials, or customers, also may have important input.

Interviews may take place in an individual or group setting.

Whomever is interviewed and however the interviews take place, the objective is to obtain complete and reliable information.

It helps to conduct the interviews in or near the client's or user's existing environment.

This setting tends to make interviewees more comfortable in answering questions, and also makes it easier for them to focus on their own architectural environment.

Interviewing techniques vary widely and should match the data-gathering objectives.

Observation.

This task is another information-gathering technique that programmers should use.

A walk-through observation of the existing facility with the property or facility manager is an excellent way to orient yourself to obvious programming requirements.

A space inventory, including plans and annotated photographs of existing spaces, equipment, and furnishings, can provide important baseline information.

The programmer photographs and measures existing spaces and documents existing furniture and equipment to better understand the space requirements.

Trace observation documents wear and tear on existing facilities (surfaces, furniture, fixtures, and equipment) and may tell an important story about traffic and circulation patterns, use levels, and other factors that should be accounted for in the program.

Behavioral observation (time-and-motion studies) can document the functions
that the building occupants perform and the adequacy of the space accommodating them.

For example, the programmer may observe that a hospital room has an inadequate turning radius for a wheelchair when a visitor chair is placed in the room.

Quite often the programmer will be told during client or user interviews that a particular space is a problem, prompting subsequent observational study of the space to determine the cause of the problem.

Questionnaires and surveys.
These are yet another information-gathering tool used in programming.

Surveys are an efficient way to gather facts and quantitative details in a large organization.

Furniture and equipment needs of individual users, for example, can be ascertained through a written survey form.

The questions must be carefully developed using a systematic process that includes pretesting, or there is a good chance that the resulting data will be meaningless or at least difficult to analyze.

Group sessions.
These are the final way to obtain needed information in design programming.

It is important to conduct at least one group work session (usually several)

as a feedback mechanism to allow the client and users to consider, debate, and eventually resolve and agree upon the true nature of the design problem—to reach a consensus as to which values, goals, facts, needs, and ideas should influence the design of the facility.

This is a type of group interviewing process that typically involves feedback of information obtained from the other information-gathering methods.

Techniques include brainstorming new ideas and rejecting as inappropriate some of the information collected earlier, concluding with prioritizing the goals and needs for the project.

It is not only a way of gathering information but also a method of obtaining agreement.

Data Analysis.
Throughout the data-gathering process it is important to organize data so that they can be retrieved and analyzed quickly and easily.

A key technique is to seek and record only information that will be vital in making design decisions.

Based on analysis of all information gathered, the programmer will develop performance and design criteria for the facility.

Space requirements, space relationships, circulation, ambient environment, safety and security, needed surfaces, furnishings, flexibility, and site information are among the issues usually addressed.

Graphics such as matrices showing space allocations and relationships and bubble diagrams showing adjacency relationships are also developed.

During analysis, the programmer will identify major unresolved programming issues and begin to develop some preliminary ideas about options for their resolution in the final building program.

Some writers have referred to these ideas as “precepts” (a term implying acombination of preliminary and concepts, yet still clearly preliminary to conceptual design).

Here the programmer’s task is to develop options (precepts) for solutions, to help with their evaluation, and to recommend the most effective alternatives.

For example, in a residential facility such as a nursing home or a juvenile justice institution, there might be a trade-off between privacy and isolation in residents’ bedrooms.

Options might be single, double, or multiple-occupancy bedrooms.

A recommendation might be to have a mixture of rooms to allow for occupant or staff choice.

The programming team presents the various options or precepts to the client and guides the client through evaluation of the alternatives.

As with interviewing, there are many different ways to structure these presentations, and the approach should be tailored to the needs of the client organization and the particular project.

Deliverables.
The usual deliverable is a written design program, which is a comprehensive report that includes documentation of the methodology used, an executive summary, value and goal statements, the relevant facts, data analysis conclusions, and the program requirements, including space listings by function and size, relationship diagrams, space program sheets, stacking plans, precept drawings, and flow diagrams.

Photographs or even videos may be used to illustrate space planning requirements.

A comprehensive program will also include project cost estimates and a project schedule.