

CHAPTER TEN

Building an Instructional Design Organization

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Instructional design and the instructional design process have been explained in earlier chapters. The roles and tasks of instructional designers have also been described, as have the varied applications of the design process. But what is the nature of the organizational unit in which all these activities and people reside? How is such an entity structured, staffed, and managed? How can you maximize the benefits and productivity of such an organization? And the basic question: When does it make sense to create your own instructional design unit at all, as opposed to buying the products and services of "outside" contractors?

WHAT IS AN INSTRUCTIONAL DESIGN ORGANIZATION?

An instructional design organization can take many different forms across various business and institutional settings. It can be defined as either a provider of services (training) or of products (materials). It can be at line or staff levels in the larger organization. It can function as a profit center. It can measure

its outcomes in numbers of students, in productivity improvements, in dollars, or in employee morale. It can be of any size, encompassing a wide range of functions and specialists.

In short, the nature of an instructional design organization is difficult to classify. It can have many things in common with such different organizational units as an academic department, a public relations unit, a market research group, a publications office. However, what will always distinguish the unit is the primary purpose or function it was established to fulfill.

An instructional design organization can be defined as any organization whose purpose is to design, develop, and produce materials and activities intended to address a learning or performance requirement of a given audience. This definition emphasizes several critical characteristics of such an organization through the presence and absence of certain key terms.

- The definition focuses on “a learning or performance requirement” to distinguish it from marketing, communication, entertainment, and “pure” research organizations that encompass many similar characteristics, but which are fundamentally different in success factors and management requirements.
- The characteristic that it “produces materials” can be taken very broadly to include any medium to any stage of completion. The instructional development organization may do more management of production than actual production, but in the end it is accountable for the final deliverable.
- The stipulation that these units “design, develop, and produce materials or activities” is also intended to point out that instructional design organizations differ in focus from the more general category of training organizations or academic programs. The focus of these latter organizations is as much on the actual delivery of instruction as it is on the preparation of materials from which the training is to be delivered.
- A “given audience” emphasizes the targeted nature of instructional design activities. Mass communication is not the point here. Instructional designers address the needs of specific populations and the specific conditions under which they can be expected to access and use the materials that the instructional designer produces.

This definition, then, identifies a finite role for an instructional design unit. This unit benefits the parent organization by crafting materials and programs which, when implemented, will improve the performance of individuals. The instructional design unit is held accountable first and foremost for the quality and cost-effectiveness of the materials produced, and second for the impact that those materials have on the performance of the individuals in the target population. Research, analysis, and evaluation—activities also usually associated with the purpose of an instructional design organization—are omitted from this definition because the emphasis here is on the applied nature of the organization.

The remainder of this chapter examines how an organization so defined

should be staffed and should function. Similar issues arise whether the parent organization or purchaser of the instructional design services is a business or a public institution, such as a university. Regardless of setting, it is assumed that the instructional design unit consists of senior and junior professionals across the disciplines of project management, instructional design and development, writing, graphics, media production, and evaluation. But before considering how to establish such an instructional design unit, we should find out when it makes more sense for a business or university to develop in-house instructional design capabilities rather than buying these functions from outside sources.

WHEN IS AN INSTRUCTIONAL DESIGN UNIT NECESSARY?

One of the most critical decisions any corporation, university, or government agency makes with respect to instructional design is whether or not to do its own instructional design work or to hire specialists. The importance of this decision is seldom recognized. Instead, the organization proceeds by default to do its own instructional design work on an ad hoc basis, using people whose primary value to the organization has little to do with the design of instruction or the fulfillment of learning/performance needs. Because this ad hoc approach is the most common way in which instructional design needs are addressed, we will consider its advantages and limitations first before examining the costs and benefits of using professional instructional design resources.

The Ad Hoc Approach to Addressing Instructional Design Needs

Most typically, individuals and organizations, when confronting the need to create some instruction, design it themselves. Thus the academician, engineer, or other subject-matter expert, whose specialization is to be the content of the instructional material, becomes both the designer of the instruction and the purveyor of its content. Often, this one-man/woman band also becomes the primary deliverer of the instruction.

The benefit of this approach is that it puts in charge of instructing others the individuals most familiar with the subject. This also means that the organization does not have to commit additional resources, beyond the subject-matter expert's time, to creating the materials.

A major drawback to the ad hoc approach is that it uses typically scarce and expensive resources (the subject-matter experts) to do something that they are typically *not* expert at: the design and production of instructional materials (Lent, 1986). The instructional design and development task becomes a high-risk endeavor for the subject-matter experts, in that they typically understand their material from a technical—not a learning—viewpoint. Furthermore, instructional materials development is typically not a formal part of most subject-matter experts' jobs, and they receive little recognition or reward for their contributions on such efforts. As has been pointed out, university faculty are hired and rewarded for their research and writing. They are rarely rewarded for their teaching effectiveness—and almost never for the quality of their instructional designs or materials.

In business, the picture is seldom any better. Training is often designed and led by someone who is a subject expert, not a teacher. Business typically defines the solution to a personal training need in terms of technology transfer or information dissemination. This leads inexorably to classroom lectures by the subject-matter expert because this is the archetypal information transfer technology—someone who knows tells someone who doesn't.

Even where a business has an established training organization, it frequently is staffed by people whose original value was subject-matter expertise. (They may have lost some of that original value as they devoted their efforts to training.) The training organization, meanwhile, is frequently judged for its dissemination function, for "getting the word out." The training organization is seldom measured or valued on its ability to "make the work stick." In this environment, the training organization may represent little in the way of instructional design or subject-matter expertise, but exists instead as a simple training delivery medium.

All of this is not to say that very good instruction cannot be designed and delivered by subject experts. Great experts/designers/deliverers like Socrates, Galbraith, Drucker, and Sagan come to mind. However, such renaissance individuals are rare. A more reliably cost-effective way of obtaining materials and programs to address specific instructional needs is to obtain professional instructional design assistance. The question, then, is whether to buy such services from an outside source or to build an internal instructional design unit to supply them.

BENEFITS OF HAVING YOUR OWN INSTRUCTIONAL DESIGN CAPABILITY

There are six main advantages to establishing a permanent, internal instructional design organization. The advantages are interrelated and emphasize the return to the host organization. A few of the advantages also reflect the benefits of professional instructional design support and could be achieved by using outside resources as well.

Dedicated Resources

For many businesses, government agencies, or universities, the ability to produce effective instructional programs on a fixed schedule and/or on short notice can be critical to the overall achievement of the organization's strategies and objectives. Nowhere is this more apparent than in a competitive, rapidly changing marketplace like the computer industry, where a company's success depends heavily on getting new products to market quickly, and ensuring that the company's sales and service staff are prepared to support the new product. An internal instructional design unit can begin designing the training support materials while the product is still in development and can coordinate the final production and "roll-out" of the training to correspond with the product's roll-out. In less commercial settings, a dedicated instructional design organization can also help an organization to respond more quickly to the changing needs of its clientele, or to ensure that existing training programs are being revised and updated as needed to maintain their utility.

Efficient Use of Scarce Resources

An internal instructional design organization can also help the host organization make better use of scarce subject-matter resources. Good instructional designers know how to extract the necessary information from subject experts while minimizing the demands upon the experts' time.

Control of Proprietary Information

In business and government settings, proprietary information often means the competitive difference. An internal design unit can manage such information more carefully and effectively. It can also help the host organization to implement key strategic moves quickly and efficiently when such moves require the retraining of large numbers of employees.

Quality Control

Internal design groups can facilitate tighter control of the quality and consistency of training programs. They can institute standards and systems that ensure consistency of instructional approach and delivery. They are also better able to place each program within the context of the parent organization's overall training and reward structure.

Organizational Effectiveness

Owning your own instructional design unit also means that it can help the parent organization to implement its various strategic initiatives for growth and change. Specifically, the instructional design organization's goals, priorities, and measures of success can be defined so that its efforts will be congruent with those of the larger organization. The design unit can shape both its programmatic emphasis and the content and language of individual courses to help introduce such cultural interventions as improved service. And, perhaps most important, an internal unit can develop strong, effective relationships across all areas of the parent organization's management structure, thereby fostering the effective implementation and integration of performance improvement programs.

Specialized Programs and Services

Finally, an internal instructional design group is likely to have one or more specific benefits unique to its charter and relationship to the parent organization. For example, this could mean the ability to develop highly specialized training programs on subjects where the parent organization itself may be the only source of specific subject matter expertise (as is the case with many high-technology industries). Owning your own instructional design capability could also mean the ability to develop a number of highly similar training programs more efficiently than anyone else could, particularly if such programs are likely to be needed on short notice in connection with a new-product introduction. Finally, many "in-house" instructional design organizations have been able to set themselves up as profit centers, reselling their courses and services to external clients to generate a net contribution of new dollars back to the parent

organization. For example, Digital Equipment Corporation's Educational Services and The University of Maryland's Center for Instructional Development and Evaluation both provide significant financial returns in addition to fulfilling their internal charter.

In addition to these benefits, a number of liabilities are associated with maintaining an internal instructional design capability. These include the difficulties of establishing and maintaining what is a highly specialized function, and of keeping the instructional design unit productive, creative, and motivated in an environment where the only career ladder leads up and out of the training function. There are also questions of cost-effectiveness in light of high fixed expenses for what is typically viewed as a support function.

BENEFITS OF BUYING INSTRUCTIONAL DESIGN SERVICES FROM OUTSIDE SOURCES

Sooner or later most organizations, even those owning their own instructional design capability, will also buy some instructional design services from independent contractors. Some organizations forego any substantial internal investment and buy almost all of their services from outside sources. In general, the advantages of using outside resources have to do with flexibility, speed, and quality control.

Buying Just What Is Required

First, outside instructional design resources can be purchased only as needed. Projects can be planned and managed to fit the specific circumstances per the old project manager's saying: "Good, fast, or cheap, pick two." No ongoing overhead need be considered. And projects can be staffed to produce video tapes on one project and computer-based training on another, without concern for the effective use of existing staff (whose skills might be in workshop design).

Quality and Creativity

Second, going to external instructional design agencies provides an opportunity to select only the best and most creative specialists for a given job. Outside consultants also bring a fresh and original perspective to a problem, and they have often had experiences with other organizations that can be brought to bear on the new project.

Efficiency and Focus

Third and finally, the use of external resources means that they are clearly focused as a project team. They function outside local political issues and are completely focused on the task at hand. Furthermore, external contractors are usually managed by the job, not the clock, and they will devote themselves to whatever schedule is necessary to meet the deadlines.

A number of liabilities also are associated with the use of external instructional design resources. First and most basic, it is extremely difficult to choose good contractors. Many training companies, for example, claim to have instructional design expertise. What they actually offer, however, is a group of

people who have a particular approach that they apply to all education and training problems. A second drawback is that where they lack skills and experience they may need to use the client's time and money to pay for their own learning curve. Finally, there is the risk of a lack of continuity from project to project, leading to potential inconsistencies and inefficiencies in the design and delivery of what should be a family of related programs.

Comparing the Costs of Each Approach

One area in which there is surprisingly little difference between owning your own and buying outside services is costs. When viewed at the level of the individual project or person-day of time, the cost of an external contractor is quite similar to that of a comparable internal resource. This comparison assumes that the cost of the internal resource also takes into consideration a portion of the overhead and benefit expenses appropriate to that resource, meaning that the salaries used for comparison are "loaded" with these extra costs. Moving from the project or individual level of cost comparisons, however, there is a meaningful financial differential between buying or building instructional development resources. It is a question of the financial risk inherent in investing in an internal capability and then not being able to apply it so as to receive the appropriate return on the investment. Outside of mistakenly buying the wrong contractor, this type of risk does not apply to a decision to use external contractors. On the other hand, there is never any economy of scale in working with external contractors.

Summary

In short, there are no simple answers as to when to choose to use outside contractors as opposed to building an internal capability. The best option may be to do both. Like a balanced investment program that includes both stocks and bonds, building an internal capability while also planning on the use of external resources for a certain percentage of projects enables the training investor to obtain many of the benefits of each approach while minimizing the risks.

HOW IS AN INSTRUCTIONAL DESIGN ORGANIZATION STRUCTURED, STAFFED, AND MANAGED?

Once the decision to create and maintain an internal instructional design unit is made, a number of fundamental decisions about structure, staffing, and management will determine the unit's overall efficiency and effectiveness in achieving its desired outcomes. The focus here is on strategic organizational issues that set the direction for the instructional design group's performance. More tactical issues, such as the skills required of an instructional designer, and desirable approaches to project management and performance appraisal, are addressed in the next chapter.

Structure

Planning for an instructional design unit should begin with answers to four questions. These questions help to define the essential nature of the new entity, and provide a basis for the organizational and management decisions to come.

Who Are the Unit's Clients?

Fundamental to planning any organization is an understanding of the clients whose needs that organization is intended to fulfill. For an instructional design unit, the clients may be other organizations within the parent organization, or the parent organization's external customers in its chosen market. An instructional design unit may also have a mixture of both internal and external clients.

This question can be more difficult to answer than it seems. It leads to consideration of organizational accountability for client satisfaction. It also raises the issue of whether the funder of the design unit is different from the entity receiving the benefit of its services. Not surprisingly, the best arrangement is usually to have the service provider (in this case, the instructional design unit) directly accountable to its client, and for its client to be the funder of the service provider's activities—to have, in other words, a client-provider relationship. Any difficulties or confusion that arise in defining this relationship typically reflect the parent organization's reluctance to grant sufficient accountability to the instructional design unit to manage its own success.

Will the Unit's Primary Value Be Judged in Terms of Services or Products?

This second question deals with what the client is actually buying. Instructional design units can provide two very different "goods." They can provide their clients with consulting services on how to solve a given performance improvement requirement. Or, they can provide the "solution" to the given requirement, e.g., a course. In the latter case, what the instructional design unit provides its clients is a finished product of its services. In the former case, the client buys the services directly. Whether the design unit is intended to provide services or products will have a major impact on its structure and staffing. It also determines whether the unit's business model will emphasize billing rates and applied time goals, or project size and production efficiencies.

Is It to Be a Cost Center or Profit Center?

A closely related "business model" question has to do with how the unit's financial performance is to be evaluated. Instructional design units can function as cost centers in which they are evaluated on their ability to apply their given resources effectively and efficiently. The measure of financial performance is its ability to satisfy its clients' needs while meeting the budget. On the other hand, the unit could function as a profit center whose performance is judged on its ability to satisfy clients and to generate a profit.

Where Should the Unit Be Placed Within the Parent Organization?

This final question should be considered even if it seems to be a foregone conclusion. The placement of the instructional design unit within the parent

organization can have a marked influence on the unit's success. For example, if the design unit is to be an internal change agent, to fundamentally affect the operation of the entire parent organization, then the unit should be highly placed within the management hierarchy with an appropriate power base, visibility, and influence. On the other hand, if the design unit's primary clients are external, it should be closely associated with that part of the organization that has primary responsibility for sales and service to external clients.

A third option for organizational placement is also conceivable. If the instructional design unit is seen primarily as a research and design function for an internal client, then it might be located in a less visible position within the parent organization. This is like setting up a planned "skunkworks," where the key to the unit's success with its client is that it have sufficient freedom to experiment and make mistakes.

To summarize: The instructional design organization should be placed within the parent organization to be as close to its main client base as possible. It must have direct access to the parent organization's key decision makers, and sufficient authority to carry out its mission effectively.

Organization and Management

Another level of decisions in planning an instructional design unit involves its internal organization and management. The tradeoffs between project-versus nonproject-driven organizations, and functional versus matrix organization models, are considered first. The discussion concludes with a review of key personnel management challenges.

Project-Versus Nonproject-Driven Organizations

Howard Kerzner (1984) has done an excellent job of clarifying the management issues of project- and nonproject-driven organizations. His distinctions help clarify the management issues internal to the organization of the instructional design unit, as well as clarifying how the management and organization of that unit must match the management environment of the parent organization.

To begin with, Kerzner classifies all organizations as either project- or nonproject-driven. Project-driven organizations treat each project as a separate cost center with an individual profit-and-loss statement. The overall financial performance of the organization is determined by summing the individual project statements. Management attention focuses on project performance, and the organization is structured, and individuals rewarded, accordingly.

In the nonproject-driven organization, financial performance and management attention are focused along functional or vertical lines. Projects are viewed as supporting the parent organization's product or functional lines. Resources and priorities are allocated by revenue-producing line activities rather than by project.

Project- and Nonproject-Driven Instructional Design Units

Looking at the internal organization of the instructional design unit relative to its primary value to its clients, one can see that it can operate as a nonproject-driven organization if its primary value is in the provision of various services

to its clients. The unit might consist of several functional areas or cost centers representing the various types of expertise to be sold, such as instructional design, media production, and so on. The basic unit of management is the hours or days of a particular expertise to be "sold" to the client. If, however, the instructional design unit is providing completed solutions or products to its clients, then it will make more sense to structure it as a project-driven organization, because it is the project that is the basic unit for managing costs and returns. It is the project and its outcomes, not the days of expertise, that is of value to the client.

Instructional Design Units In the Environment of a Project- or Nonproject-Driven Parent Organization

The organization and management of an instructional design unit must also take into account the management environment of the parent organization. A project-driven parent organization provides a much more successful environment for a project-driven instructional design unit. A nonproject-driven design unit, however, could successfully provide its services within either a project- or nonproject-driven parent organization.

A number of the challenges facing a project-driven unit and project management within a nonproject-driven organization have been specified by Kerzner (1984 p. 36):

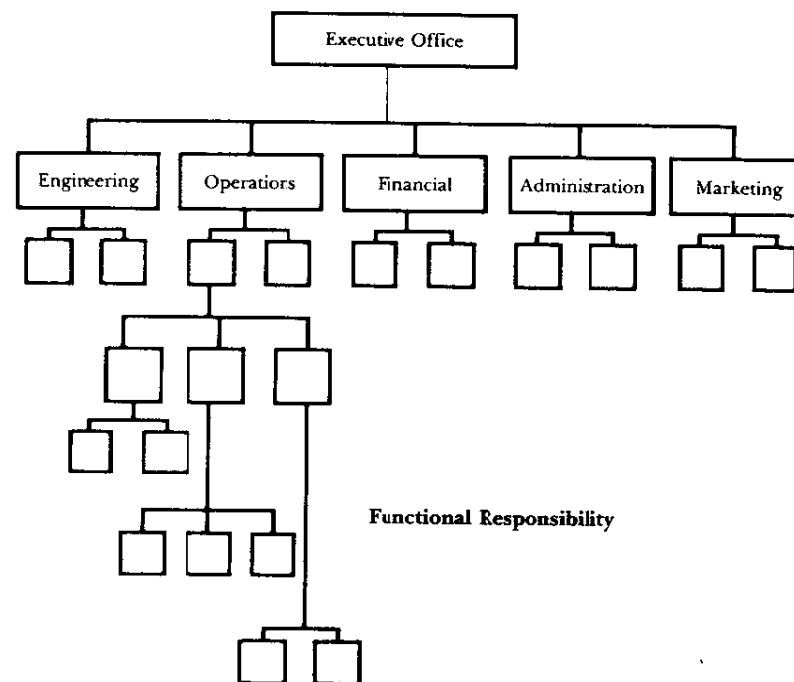
- Projects may be few and far between.
- Not all projects may have the same project management requirements, and therefore they cannot be managed identically.
- Executives do not have sufficient time to manage projects themselves, yet refuse to delegate authority.
- Projects tend to be delayed because approvals most often follow the vertical chain of command. As a result, project work stays too long in functional departments.
- Because project staffing is on a "local" basis, only a portion of the organization understands project management and sees the system in action.
- There exists heavy dependence upon subcontractors and outside agencies for project management expertise.

While Kerzner was not addressing project management in the context of an instructional design unit's relationship to its parent organization, all the challenges he has identified are relevant. In general, then, the project- or nonproject-driven nature of the instructional design unit should be in agreement with that of its parent organization. But, as many sectors of American business have discovered, a project-driven organization has much to recommend it. The challenge of adopting a project-driven approach is in having an organizational model that supports it.

Functional Versus Matrix Organization Models

For much of this century, the dominant organizational model in Western businesses and institutions has been the "traditional" management structure or pure functional organization pictured in Figure 10.1. As organizations be-

Figure 10.1. *Traditional management structure.*



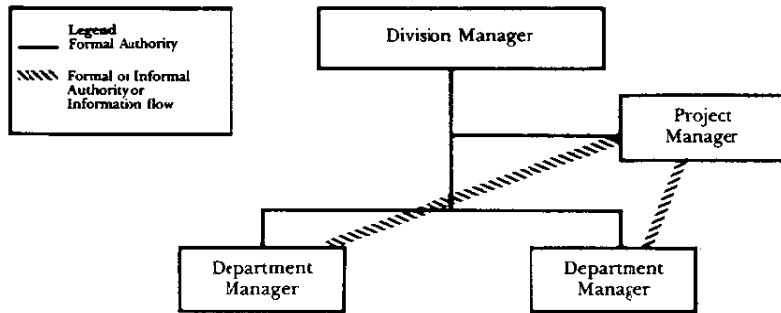
Source: Kerzner, 1984, p. 97.

came larger and more complex, however, the traditional structure began to falter. In particular, projects were difficult to manage and complete, as there was a lack of formal authority at the project level and an overall lack of responsiveness to the customer (Kerzner, 1984).

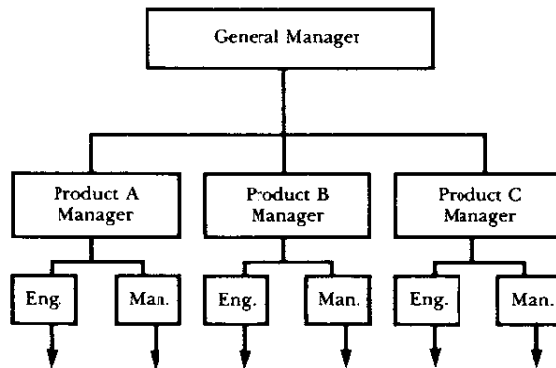
Various alternative organizational models were developed (Figure 10.2) with varying strengths and weaknesses. For project-driven organizations in particular, however, the best model that has been developed is the matrix organizational form. Figure 10.3 shows a typical matrix/management structure. Kerzner (1984) explains its features and benefits as follows:

The matrix organizational form is an attempt to combine the advantages of the pure functional structure and the product organizational structure. This form is ideally suited for companies . . . that are "project-driven." . . . Each project manager reports directly to the vice president and general manager. Since each project represents a potential profit center, the power and authority used by the project manager come directly from the general manager. The project manager has total responsibility and accountability for project success. The functional departments, on the other hand, have functional responsibility to maintain technical excellence on the project. Each functional unit is headed by a department manager whose prime responsibility is to ensure that a

Figure 10.2. Other organizational models.



Line-Staff Organization



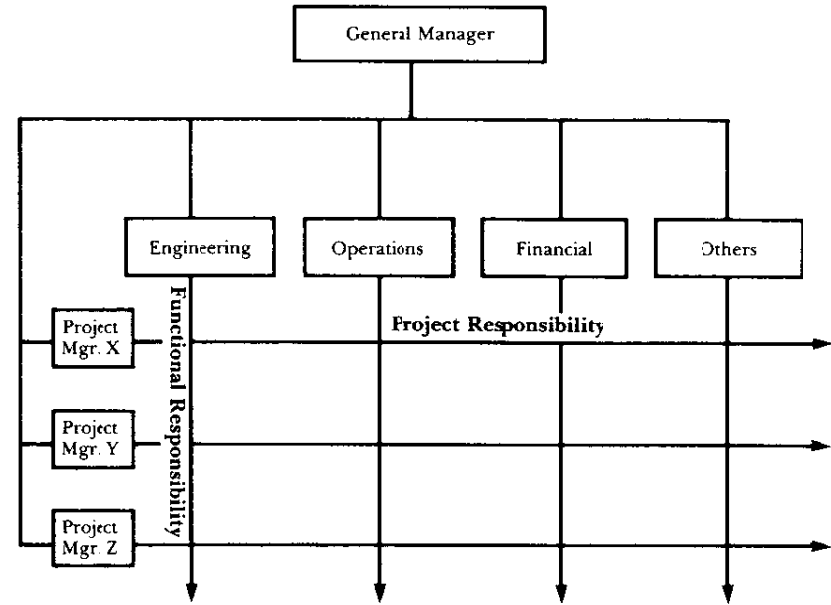
Pure Product Structure

Source: Kerzner, 1984, pp. 106-107.

unified technical base is maintained and that all available information can be exchanged for each project. Department managers must also keep their people aware of the latest technical accomplishments in the industry [p. 110].

Within this organizational model, an instructional design unit might be placed as shown in Figure 10.4. In point of fact, both Digital Equipment Cor-

Figure 10.3. Pure matrix structure.



Source: Kerzner, 1984, p. 110.

poration and The University of Maryland have placed instructional design units in such a matrix relationship to a larger organization.

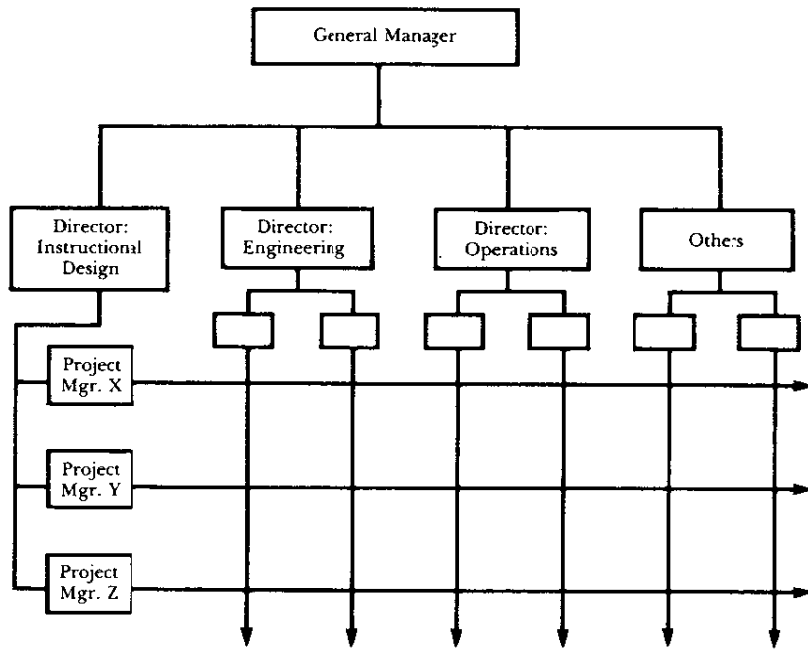
Focusing now on the instructional design unit itself: What does such a unit look like in a matrix organizational form? Figure 10.5 presents actual organizational models of two instructional design units, one designed to create print-based courses and the other producing interactive video courses. Both organizations serve a mix of internal and external clients. And both organizations also use external contractors as well as internal staff in completing their projects.

It is particularly interesting to note that the interactive video group depicted in Figure 10.5 had been initially structured as a functional organization. When it was restructured into the matrix form, productivity increased dramatically—from 1,200 hours to produce a finished hour of courseware to less than 300 hours. Meanwhile, the quality of the end products improved, and cost and time control also improved. In this case, some technical improvements and staffing changes contributed to these improvements, but here and elsewhere the matrix model has proven to be highly effective in the project-driven environment common to instructional design organizations.

Staffing and Management Challenges

Creating and staffing a given instructional design unit involves planning for a number of specific management issues. Sadler (1971) and Master (1982)

Figure 10.4. Structure with a director of project management.

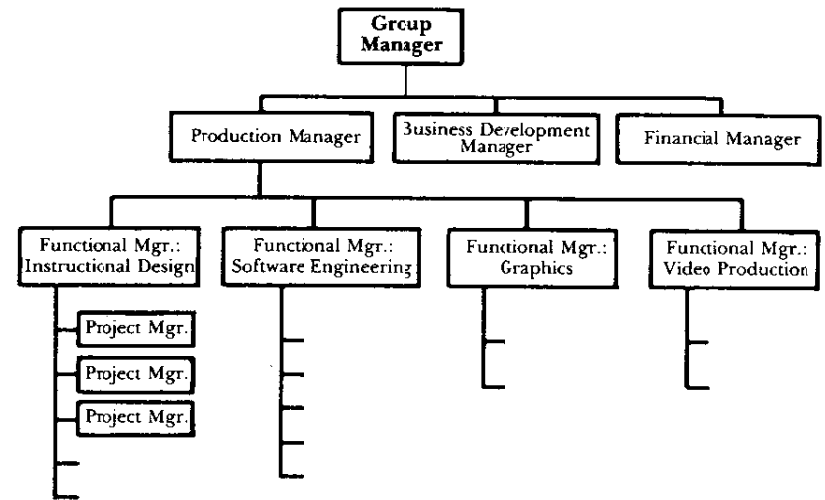


Source: Kerzner, 1984, p. 122.

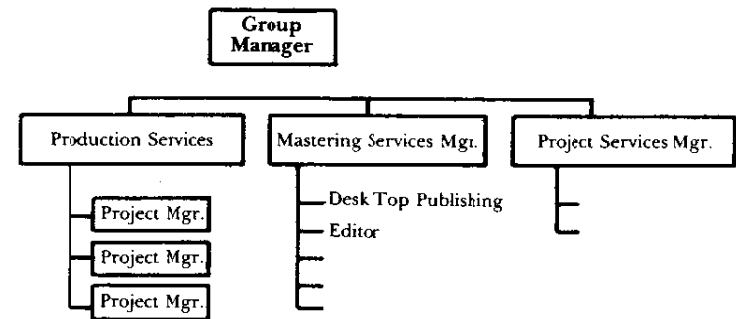
have identified various considerations in planning an organization of this type. As interpreted and expanded for planning an instructional design unit, the key staffing and management challenges to be addressed are listed below.

- What is the desired mix of senior and junior technical professionals? What are the likely career paths within the organization?
- How will staff performance be measured and rewarded? How will individual goals be set? How will evaluation and incentive systems motivate staff to improve the quality and productivity of their work? How will a sense of ownership be promoted at both the project and the organizational levels?
- What natural social relationships and alliances can be expected to evolve within the organization? Will they be productive?
- How will the demands of long-range strategic projects be balanced against the immediate, tactical demands of today's priorities?
- How will the authority and responsibility of the project managers and functional managers be defined and maintained? Who is responsible for planning and specifying project budgets?
- What steps should be taken to ensure that the organization is a

Figure 10.5. Matrix structures for instructional design units.



(a) Organizational model of an instructional design unit specializing in interactive video projects



(b) Organizational model of an instructional design unit developing print-based courses

- productive environment for the mix of personalities it must contain, from the project managers who must have good customer skills and a high tolerance for ambiguity, to the technical specialists who must be detail-oriented and highly structured?
- How will individual responsibilities be varied to avoid "burnout" in the typically intense environment of project deadlines?

- How will changes in project scope be identified and evaluated for their effects on plans and budgets?
- How will the quality of the design unit's services to its customers be evaluated and maintained?
- What market and environmental changes are likely to affect the future direction of the parent organization's operations? How can the instructional design unit adapt and evolve over time?

CONCLUSION

Instructional design units present some unique management challenges. But for many organizations they are well worth the investment of time and resources. In developing an instructional design unit, consideration needs to be given first to identifying the primary client and what the nature of the service is that they want to buy. The experience of other project-driven organizations can be usefully applied to the design and management issues that occur during development. Finally, whether located within a corporation, a university, or the government, instructional design units seem to perform best in a project-driven environment.

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