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STRATEGIES AND TACTICS FOR PLANNED CHANGE IN THE TECHNOLOGY-DRIVEN ORGANIZATION

The University of Oklahoma PH.D. 1983

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A

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SUBMITTED TO THE GRADUATE FACULTY

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BY

EVERT KEITH HUCKABAY

Norman, Oklahoma

1983

STRATEGIES AND TACTICS FOR PLANNED CHANGE

IN THE TECHNOLOGY-DRIVEN ORGANIZATION

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TABLE OF CONTENTS

CHAPTER		Page
I.	INTRODUCTION.	1
	Rationale and Significance of the Study Statement of the Problem Limitations Definition of Terms Organization of the Study	
II.	REVIEW OF SELECTED LITERATURE	7
	Characteristics of the Technology-Driven Organization Research on Planned People Change in the High-Technology Organization Broad Perspectives on Planned Change Strategies and Tactics for Planned Organizational Change	
III.	DESIGN AND METHODS.	45
	Selection of Population and Sample Data Collection Procedures Analysis Procedure	
IV.	RESULTS OF DATA ANALYSIS.	54
	Interview Summaries 1-9	
V.	CONCLUSIONS AND RECOMMENDATIONS	115
	Summary of Procedures Conclusions Recommendations for Implementation Recommendations for Further Research	
BIBLIOGRAPHY		161
APPENDIX A		165
APPENDIX B		168

STRATEGIES AND TACTICS FOR PLANNED CHANGE IN THE TECHNOLOGY-DRIVEN ORGANIZATION

CHAPTER I

INTRODUCTION

This study examines the process of planned change within high-technology organizations such as computer/data processing, electronics, chemicals, and aerospace. Many such organizations are continuously involved in rapid change. They confront such significant and constant change that planning for and successfully dealing with rapid change has become a major institutional objective.

Rapid technological change has made such organizations increasingly common; most often these are large business organizations which must utilize major technological advances if they are to compete and survive. Change within such organizations is technology-driven: structure and function must change to accommodate new technology. The human structure of the organization and the functions of organizational members must continuously alter to fit the "shape" and requirements of new technology.

One aspect of change within the technology-driven

organization is of particular interest in this study. In spite of the organization's commitment to change, certain critical types of change may often be neglected to the point that they evolve in a random, unplanned manner. There is often an organizational blindness for "people change" (behavioral change in members of the organization) ...primarily because of a preoccupation with technological change. There is such a focus of attention on bringing about successful technological change that appropriate responses (behavioral change) in people may be assumed rather than planned for and developed. The human structure and functions of organizational members are usually less visible and less demanding aspects of the organization than advancing technology. Although the human aspects of the organization must inevitably change also, they may suffer chronic neglect...and ultimately change in a haphazard, unplanned fashion which is damaging to the organization.

If the change agent is to successfully create people change in a technology-driven organization, the characteristics peculiar to this type of organization must be understood. Furthermore, change strategies and tactics that are suitable for this environment must be identified. It is the intention in this study to examine these matters--to examine the process of planned people change in large business organizations which are subject to rapid technological change. Data processing divisions of large corpor-

ations are the subjects for the study; such organizations epitomize rapid technological change. The focus of the study is strategies and tactics for implementing change projects within the environment of the technology-driven organization. More specifically, the study deals with strategies and tactics for the implementation of new training departments or programs within data processing organizations.

Rationale and Significance of the Study

Insufficient planned change research has been done within the technology-driven organization. Achieving "people change" in this increasingly common environment is certainly deserving of study; new insights concerning planned change strategies, tactics and models may be gained.

The study may benefit the change agent working in this type of organization. It may provide assistance with one of the most critical questions facing the change agent: "How can support for people change be acquired in an organization which is primarily involved in technological change?" Even a partial answer to this question would be of significance to the practicing change agent (the training manager) as well as to planned change literature.

Statement of the Problem

The problem studied was the following: "What planned change strategies and tactics are used to implement change within large technology-driven business organiza-

tions?" More specifically, "What change strategies/tactics are used by training managers in implementing new training programs or departments within the environment of large data processing organizations?"

Limitations

Several limitations were placed on the study, relating primarily to the sample chosen and to the design of the study.

1. The study was limited to large data processing organizations, having a minimum of 100 employees.
2. The organizations studied are located in the southwestern region of the United States.
3. The organizations studied have implemented a new training department or program within recent years.
4. The change projects studied are relatively significant to their organizations--as evidenced by investments in equipment, facilities, and employee time.
5. The sample of training programs was limited to those recommended by a panel of professionals (educational representatives with large national training companies).

Definition of Terms

1. For the purpose of this study, "organization" will be defined as all employees, functions, and departments making up a business/industrial corporation. It should be emphasized that "organization" in this study denotes a cor-

poration which is forced to change by new technological developments. This type of organization can not choose to remain the same (an option available to more static corporations); change is required if the organization is to compete and survive.

2. "Training department" will be defined as the training staff as well as all the educational activities, courses, etc. which are offered to the organization.

3. "Training program" will be defined as a particular course, educational activity, teaching device, or combination of these making up one product offered by the training department.

4. "Technology" will be defined in the terms of Skibbins (1974, p. 237):

> Technology includes the machinery employed to produce goods and services and the tangible mechanical equipment which one might see on a shop floor; it also entails the knowledge, skills, and methods which enter into the processes that convert inputs to outputs.

5. "Training manager" will be defined as the person with direct control over and responsibility for the training department. In most organizations, this person is a middle-level manager.

6. "Planned change" will be defined as planned efforts toward gaining the acceptance of and establishing the use of innovations that are intended to benefit the organization.

7. "Change agent" will be defined as any person who is attempting to bring about planned change.

8. "Change strategy" will be defined as an overall plan for facilitating acceptance of change, including goal-setting and action steps.

9. "Tactic" will be defined in the terms of Havelock (1973, p. 153) as "explicit sequences of action steps that make up...strategies."

Organization of the Study

Chapter I is concerned with the background, rationale, and significance of the study; a statement of the problem and its limitations; and a definition of terms used in the study. Chapter II contains findings of the review of literature. The design and methods of the study are explained in Chapter III. Chapter IV gives the results of the analysis of data. And Chapter V presents summary, conclusions, and recommendations of the study.

CHAPTER II

REVIEW OF SELECTED RELATED LITERATURE

The purpose of this chapter is to review selected literature related to the study. As stated earlier, this study will examine the process of planned people change in large business organizations which are subject to rapid technological change. The focus of the study will be strategies and tactics for implementing change projects within the environment of the technology-driven organization. Therefore, the following questions have served as guidelines for inclusion of literature in this review:

* What are the characteristics of the technology-driven organization?
* What research is available on planned people change in the high-technology corporation?
* What are the major theoretical perspectives on planned change?
* What does the literature report concerning principal change strategies and tactics?

Characteristics of the Technology-Driven Organization

In industries such as computers/data processing, electronics, chemicals, and aerospace, the effects of high

technology are decisive. This is true not only for industries which utilize such technologies but also for those which manufacture the technologies. In both cases, such industries are subject to rapid and continuous change as well as a variety of similar problems and similar management issues. In short, they have in common a variety of organizational characteristics.

The continuous change which characterizes the technology-driven organization is well summarized by Ramo in The Management of Innovative Technological Corporations (1980, p. 133):

> High technology is a dynamic field with the products and techniques for manufacturing them changing rapidly. One technological development leads to another, and systems of doing things are affected by advances in the components of the system or new systems concepts that bypass the whole approach. Over a period of time, a technological corporation will have to alter products, manufacturing facilities, marketing strategies and application engineering, and shift emphasis to some extent back and forth from components to systems. All this means that the technological corporation's organization must be very flexible.

The continuous change of the technology-driven organization is induced by the environment in which it must function and survive; as environment changes it must quickly and successfully adapt. Skibbins (1974, pp. 6-7) remarks of this adaptive capability that

> Only the more advanced business and industrial organizations in the United States consistently demonstrate this trait. They have this characteristic because they must and do face up to

> rapidly changing conditions in an open, high-technology, high-competition market. In contrast to such enterprises, few of the other institutions of industrial societies display much adaptation. Our schools, governments, religions, cultural organizations, and settlements change far more slowly than business enterprise...most organizations cling to turn-of-the-century homeostatic concepts and are slow to accept the adaptation techniques developed over the last 50 years.

One of the most prominent characteristics of the highly innovative organization, according to Shepard (1967, p. 474) is "periodicity." Shepard describes this as the capability of alternating in various ways, for instance, altering "organizational form to suit the requirements of the task at a given phase of innovation." The organization may take one shape during the initiation of an innovation and another during the implementation of the project:

> For the generation phase of an innovation, the organization needs a quality of openness so that diverse and heterogeneous persons can contribute, and so that many alternatives can be explored. For implementation, a quite different quality may be needed: singleness of purpose, functional division of labor, responsibility and authority, discipline, the drawing of internal communication boundaries, and so on.

Other types of periodicity are the use of special task forces or the use of a modified project form of organization--that is, use of temporary organizational units designed for specific tasks and containing all necessary skills. In addition, several groups may be assigned to work in parallel on the same project, with intergroup communication planned for at regular intervals.

Several researchers have discussed the type of organizational structure frequently seen in the highly technological industry. Jasinski (1959, p. 86) states that the more technological industrial processes require horizontal and diagonal organizational relations--and that very often these can not easily be patterned or clearly defined. Such horizontal and diagonal lines would, of course, cause difficulty in the more traditionally organized "vertical" organization. But, as Skibbins (p. 237) explains, "the presence of technological change itself in an organization tends to require that horizontal structure relationships replace hierarchical vertical relationships."

Skibbins goes ahead to point out other influences that the technical system has on structural aspects of the organization:

> Research has revealed that the following structural characteristics correspond closely to the technical sophistication of an operation: the length of the line of command; the span of control of the chief executive; the percent of total turnover allocated to the payment of wages and salaries; and the ratios of managers to total personnel, of clerical and administrative staff to manual workers, of direct to indirect labor, and of graduate to nongraduate supervision in production departments.

Thus, the management system required in the organization with rapid technological change is quite different from the traditional: a system with loosely defined roles and tasks is required; a network method of communication and control is needed; horizontal rather than vertical interactions are

more effective; and the broad diffusion of authority by qualifications rather than by status is required (p. 238).

In addition to sharing a variety of structural and behavioral characteristics, the high technology organizations also have in common a special set of problems. Ramo (p. 132) explains a number of these as follows:

> The complexity and diversification of the products, relationship with the customer (which may involve a great deal of cooperative application engineering), technological obsolescence factor (which involves adaptation to change)--these and many other special characteristics of technological corporations put high stress on the continual need for critical examination of the patterns of assignment of responsibility and authority and of communication and control.

It is very different, Ramo points out, to plan and create something new, organize for it, and then market it than it is to organize a stable corporation which produces in a predictable environment.

Ansoff in "Strategies for a Technolgy-Based Business" (1967, pp. 71-81) argues that much attention has been given to the special problems of the research and development (R & D) function, but that very little has been given to what he calls the "technology-based industries."

> In technology-based industries, however, a subtler but no less significant complex of problems has escaped the recognition of many managers who are daily grappling with its symptoms and manifestations. This is the array of new problems and requirements imposed on the technology-based corporation.

This complex of problems resides in four areas: business

strategy, organization, planning and control, and marketing (1) Business strategy: What technologies to invest in? How much? And how much in R & D? What are the threats and profit opportunities in the technology of competitors? (2) Organization: How to make the organization flexible enough to deal with rapid change? How to adjust the organizational structure as products evolve? (3) Planning and control: How can research objectives be formulated: Does research need a different control than development? (4) Marketing: What marketing strategy is best? What technical advantages in the products are needed to give the corporation a competitive advantage?

Research on Planned People Change in the High-Technology Corporation

The research discussed to this point in the review has examined the technological organization--its characteristics and problems. For the most part, however, these works have not treated people change in the organizations studied. On the other side of the matter, there are significant numbers of planned change works available which deal with people change in business/industry/management--but most do not deal specifically with the high-technology environment. Relatively few major works focus on planned people change in the high technology corporation; two of the more significant of these are by Floyd Mann (1960) and James C. Taylor (1971). Even these studies do

not deal directly with the technology-driven organization. Mann, reflecting the earlier interest in automation, studies resistance to "one-time" automation in electrical plants in Automation and the Worker. Taylor in Technology and Planned Organizational Change studies the effects of technological change in an insurance company and a refinery. In the strictest sense, neither work treats the type of organization involved in rapid and continuous technological change. The industries studied do, however, contain sophisticated technology and do undergo people change as a consequence.

Mann studies electrical plants in the process of introducing sophisticated new automation. His focus is reducing workers' resistance to and personal anxiety over the new automation. He concludes that

> People must be considered as being integral parts of the production process. Our present findings emphasize the profound effects which the design and location of equipment have both on the various jobs which workers perform in a plant and on the kind of organization and group relationships which develop among them. In planning for automation, equipment and process design must be considered not only for its technical effects, but also in terms of its implications for the character of the workers' jobs, the subgroups which will form, and the total human organization which will evolve (p. 193).

Mann's central thesis is that management is preoccupied with the technical facets of change, not realizing the interactive balance between technical and social systems. During technological change, management does its planning

primarily in regard to equipment--cost, performance, available space utilization, etc. After these factors have been considered, Mann explains, the new factory is built or the present one changed. "People are considered only as adjuncts to the machinery, where they are needed from an engineering standpoint. The social system is overlooked at this stage of planning."

Taylor's Technology and Planned Organizational Change studies 300 work groups in two organizations. His main hypothesis is that

> work group acceptance of planned social system change in the direction of more participative and responsible activities (e.g., Likert's 'System IV') will be enhanced in subunits with initially high or complex technology. This acceptance is increased as a function of the amount of situational constraint applied by the technology and the degree to which prior technological change can be considered a continuing source of behavioral constraint, and of 'unfreezing' in the lifespace of the work group (p. 29).

Taylor's thesis is that technological change facilitates social change; organizational change is more effectively created by technological change than by small, internal changes. Technological change creates broad, permanent change with less resistance. Taylor draws heavily on Katz and Kahn's open system theory (1966). Katz and Kahn postulate that changes can not be effected in the technical system without repercussions in the social system. Systemic change in the input from the environment is the most powerful approach to changing organizations. A still

earlier work that postulates similar theories is Cottrell's Energy and Society; the Relation Between Energy, Social Change, and Economic Development (1955).

Another area of research is of interest here, even though it does not deal specifically with the high-technology organization. Within the past few years a literature has begun to develop on the dynamics of large-system change in complex organizations: Beckhard (1975), Beckhard and Harris (1977), Harris (1980), Nadler (1982), Ackerman (1982), and Roeber (1973). Most of these writers have discussed the "transition" state in the change of complex organizations; and what they have to say provides a useful analysis of the high-technology organization. The concern in these works has been how to manage a major organizational transition when the future of the organization is unstable or uncertain.

These writers emphasize (1) the interdependence of the components or organizations and (2) the effect of the outside environment on the open system of the organization. Harris (1980, p. 63) explains that "The types of environmental forces affecting organizations include economics, legal agents, culture, and technology. The types of environmental forces have not changed, but rather the magnitude and pervasiveness of the forces have increased in recent years." He continues,

> ...as a consequence of environmental forces

> and the associated complexity and interdependencies, achieving and maintaining organizational stability has become problematic. Open-systems dynamics increase uncertainty and dependence and thus decrease organizational stability. As a result, organizational anxiety is increased.
>
> The nature of the organizational world--turbulent environments and increasing interdependencies--makes organizational futures uncertain; and as things look as though they will become more complex then uncertainty will become increasingly more characteristic of organizational life.

Nadler points out that this uncertainty and turbulence in the organization causes management to overlook the problem of people change in the organization (p. 43).

> Finally, situations with uncertain future states are by definition turbulent and potentially threatening to the organization. As a result, senior management is frequently preoccupied with environmental and strategic challenges that must be dealt with. This may leave little time for attention to the maintenance of the human organization during transition.

Harris discusses this problem (p. 66) with the example of organizations attempting to install sophisticated management information systems:

> Such technological changes often fail to meet expected levels of success because the technological change (introduction of the computer input-output system) occurs without consideration of compatibility with other major organizational subsystems. For instance, the formal structure, or reward systems, or personnel skills and attitudes may not be compatible with the new technology.

Nadler's recommendations for managing the transition state in an organization are as follows. (1) Create a "very tight linkage between those who plan...

and those who manage the transition." (2) Establish greatly increased communication flows with the organization. "Given the possible intensity and speed of activity, information must flow out to the organization regularly and effectively." There is also a strong need for monitoring how people in the organization are dealing with the change. (3) Senior management must "balance the time and attention given to strategic as opposed to implementation matters." Similarly, Harris recommends "macrosystem interventions" which he defines as

> a series of planned steps targeted at major system elements (e.g., structure, technology, reward systems, goals, priorities, etc.) with the goal of achieving a changed and compatible configuration among those system elements that is also compatible with and supportive of a desired level of organizational health and effectiveness.

These works on the transition state of complex organizations clearly have application to the study of the high-technology organization. Within the high-technology organization, of course, the "transition" state is perpetual. That is, this organization is not so much passing through an "in-between" or middle zone of change toward some new destination. Instead, it is undergoing <u>continuing</u> change. But the "transition" environment appears to have much in common with that of the high-technology organization. Both are "large-system" change environments, and both would appear to produce the same

consequences--a high level of uncertainty and anxiety; an increased need for communication; and a preoccupation with the "strategic" aspects of the organization (such as technological change) at the expense of other subsystem needs (such as personnel skills).

Broad Perspectives on Planned Change

A broad overview of planned change perspectives is provided by Robert Chin and Kenneth Benne in The Planning of Change (1976). In reviewing the whole spectrum of change theories and movements, they find three major perspectives: rational-empirical, normative re-educative, and the application of power. Each of these is a broad philosophical approach to planned change and includes a wide variety of loosely related or interconnected theorists/movements.

The rational-empirical approach makes the fundamental assumptions that men are rational and that they will rationally pursue self-interests once they are revealed. The change agent, therefore, must first rationally justify the change and then show what the client will gain by the change. More specifically, the change agent encourages research and acquisition of knowledge and then utilizes general education to communicate the results of research... this on the faith in rational acceptance once communicated. This view of change is identified with the Enlightenment and classical liberalism: Jefferson and Horace Mann are

cited as early advocates of research and education as means of bringing about positive change. Major change movements included are as follows:

(1) Basic Research and Dissemination of Knowledge through General Education;

(2) Personnel Selection and Replacement;

(3) Systems Analysts as Staff and Consultants;

(4) Applied Research and Linkage Systems for Diffusion of Research Results;

(5) Utopian Thinking as a Strategy of Changing.

Among the principal theorists of the rational-empirical school are Clark, Guba, Jung, Lippitt, Havelock, Benne, E. Rogers, Bohlen and Beale.

The second major approach to change, the normative-re-educative, is based on the assumption that action and practice are supported by sociocultural norms and by commitments to these norms. Chin explains that "Change in a pattern of practice or action, according to this view, will occur only as the persons involved are brought to change their normative orientations to old patterns and develop commitments to new ones" (p. 23). This view of change is different from the rational-empirical in that change is seen as a product of changed attitudes, values, or relationships rather than changed knowledge/information. Humans are guided by norms, habits, values; and these must be the targets of the change agent.

The normative-re-educative approach to change is characterized by emphasis on the change agent--the agent who makes direct interventions into the organization or community. The change agent is ordinarily seen as a helper in some sense...rather than as one who automatically provides solutions through technical information. The client (whether person, organization, etc.) must collaborate with the change agent to clarify values and adjust them as needed.

Change movements within the normative-re-educative perspective are listed by Chin and Benne as follows:

(1) Improving the Problem-Solving Capabilities of a System;

(2) Releasing and Fostering Growth in the Persons Who Make Up the System to be Changed.

Among the principal theorists in the re-educative category are Bennis, Benne, Chin, Lippitt, Mann, Argyris, Blake, McGregor, and Likert.

The third major change perspective, the application of power, is based on the assumption that the use of power or authority will insure compliance with plans, directions, or leadership. Some power strategies may use authoritative power such as law or administrative policy; others may make use of more direct coercive power. The emphasis in these strategies is usually upon political and economic sanctions in the application of power. To illustrate, a law against

racial imbalance is applying coercive power for change--similarly, federal funding for science instruction is also an application of coercive influence for change.

The principal families of power-coercive change movements are as follows:

(1) Strategies of Nonviolence;

(2) Use of Political Institutions to Achieve Change;

(3) Changing through the Recomposition and Manipulation of Power Elites.

Among the theorists associated with these movements are Thoreau, Gandhi, Martin Luther King, Marx, C. W. Mills, and F. Hunter.

Turning at this point from an overview of planned change in general, let us look more specifically at the literature of organizational change. Philip M. Marcus (1976) provides a helpful categorization of organizational change literature. Marcus discusses four major categories of organizational change: (1) the Evolutionists and Neo-Evolutionists; (2) the Environmentalists; (3) Competition and Conflict; and (4) the Interventionists.

The Evolutionist and Neo-Evolutionist theory of organizational change, according to Marcus, focuses on the unfolding of social processes. The work of Weber (1947), Michels (1949), Troltsch (1932), Merton (1957), and Blau (1967) is offered as demonstrating this approach. Blau, for example, argues in a study of two government agencies

that the organization contains the seeds that will produce its new social forms: "Blau shows how anxiety on the job, created by conflict with clients or supervisors, leads to social relationships which create norms, and, ultimately, rules and organizational practices become modified" (p. 808). Similarly, Michels' Iron Law of Oligarchy studies a German workers' political party and postulates an evolution toward oligarchy. Leaders of the organization experienced pressures that led them to rely upon non-democratic measures. In spite of the organization's beginning point, participation by members was ultimately much reduced. Thus, "even in those organizations whose initial set of goals is to increase the impact of its members upon society, the nature of the leadership system engenders the development of an unresponsive oligarchy" (p. 806).

Most of the evolutionary literature has treated change factors which affect the entire organization. The revisionists, on the other hand, have looked at parts of the organization, seeking the means by which they can effect the accomplishment of organizational goals.

The Environmental approach to organizational change focuses on the relationship between organizational change and the larger social framework. The work of Bendix (1956), Stinchcombe (1965), and Hage and Aiken (1970) exemplifies this approach. Bendix, for example, shows the relationship between social ideologies and managerial techniques for

authority and control. He studies changes in managerial philosophies in England, Russia, and the United States, showing how organizational authority relationships changed to reflect the changes in the agricultural labor force, urbanization, and industrialization. Modern-day human relations approaches to supervisory-subordinate relationships simply mirror the larger social developments. In short, the work of Bendix and other Environmentalists looks outside the organization for causes of change. The causes for organizational change are to be located in the larger social environment.

The third type of organizational change approach which Marcus discusses is competition and conflict. This approach is that of economists such as Caves (1967) and Hirschman (1970) and political scientist James MacGregor Burns. Marcus explains that Caves examines the variety of factors that control market concentration: "product differentiation, barriers to entry, role of government, demand elasticity, etc." (p. 824). Caves postulates that competition among sellers is increased as product differentiation is increased. Thus, smaller organizations can compete more easily if their products are different from those of large organizations. The community hospital is offered as example of an organization that would not compete with other like organizations...instead, competition would take place among subunits.

"Market conduct" is organizational behavior as the organization competes and attempts to maintain a favorable position in the market. It increases prices to meet cost increases and theoretically gains greater profits. On the other hand, it lowers prices to capture more of the market; but the strategy fails if other sellers also lower prices. If all sellers lower prices, profits decline. Marcus discusses the organizational implications of price and profit as follows:

> For example, using the illustration of hospitals, one would expect relatively little change in an organizational structure which produces lowered costs to the patient (for example, fees, waiting time, deference to M.D.'s, compliance to directives) if other hospitals were to engage in similar behavior. According to this (Caves') theory, over-all profits to the medical profession would drop because patients would depreciate the value of the service, take it for granted, be less willing to pay other social costs, such as supporting medical research or providing high prestige to the occupation. In the long run, this line of reasoning contends that only low ability personnel would be attracted to the field and over-all service would be impaired (p. 825).

Thus, the Competition/Conflict approach to organizational change emphasizes the dependence of internal conditions in the organization upon competitive strategies and market conflicts. And efforts toward changing internal conditions would do well to give due consideration to this dependence.

The fourth category of organizational change, Intervention, Marcus described as growing from the work of Elton Mayo and Kurt Lewin. Later theorists listed are Coch and

French (1960), Likert (1961), Seashore and Bowers (1963), Mann (1960). "In effect," explains Marcus, "followers of Mayo and Lewin took the organizational leviathan as a given, and attempted to change perceptions and attitudes toward it. They assumed that modifications of behavior would follow changes in perception and contribute, ultimately, to new and desirable structual forms" (p. 810). He cites the work of Coch and French as the most obvious example of this approach. These authors examine resistance to organizational change and conclude that resistance was inversely related to participation in group decision-making. The intervention into the organization, therefore, was participation. Or, stated another way, good communication was the solution...all conflicts would be eliminated by good communication.

The tools used by the Interventionists, Marcus comments, have ranged from the T-groups (sensitivity groups) to surveys and problem-solving exercises. Using these methods they have sought "tension release, power redistribution, conflict resolution, and the development of new values. But irrespective of their techniques, targets of change, or over-all goals, the focus of investigation was the person, especially those at the lower echelons of the organization" (p. 811).

The following sections of this review will focus on the Interventionist approach. Specifically, the review

will deal with various approaches to organizational change utilized by the Interventionist. Stated as a question, "What are the principal change models used by the Interventionist to describe or conceptualize change?"

Among the principal models of organizational change is the Problem-Solving model. Lippitt, Watson, and Westley (1958)--depending heavily on John Dewey, How We Think (1910)--provide an early explanation of this model, describing it as containing seven phases:

1. Development of a need for change
2. Establishment of a change relationship
3. Clarification or diagnosis of the client system's problems
4. Examination of alternative routes and goals; establishment of goals and intentions of action
5. Transformation of intentions into actual change efforts
6. Generalization and stabilization of change
7. Termination of the relationship

Zaltman, Florio, and Sikorski (1977) emphasize that this model is built on the assumption that the organization does not contain the necessary resources for solving the problem; outside assistance--the external change agent--is necessary. Thus, the second phase, establishment of a change relationship, is termed by Zaltman the most crucial. "Communication channels must be opened and a mutual feeling of

trust and understanding must be developed between change planner and client system for the change process to evolve smoothly" (p. 70). Phase three of the process consists of data gathering, data analysis, and evaluation of the data in view of the newly acquired information. Alternatives are then considered; a plan is chosen; and the plan is implemented. A period is allowed for stabilization...then the agent-client relationship must be terminated. Zaltman emphasizes that dependence on the change agent may create a problem at this point. "Change planners should aid organization members in gaining the requisite skills to systematically solve their own problems--both those that are related and those that are unrelated to the newly adopted innovation" (p. 71).

Havelock (1973) explains that five points are generally stressed about the Problem-Solving Model:

> ...user need is the paramount consideration and only acceptable value-stance for the change agent; second, that diagnosis of need always has to be an integral part of the total process; third; that the outside change agent should be nondirective, rarely, if ever, violating the integrity of the user by placing himself in a directive or expert status; fourth, that the internal resources, i.e., those resources already existing and easily accessible within the client system, itself, should always be fully utilized; and fifth, that self-initiated and self-applied innovation will have the strongest user commitment and the best chances for long-term survival (pp. 8-9).

Lindquist (1978) points out that the Problem-Solving Model is heavily influenced by humanistic psychology.

"Essentially, applied behavioral science takes a clinical approach and applies it to groups and organizations" (p.7). Lindquist emphasizes this approach as one designed to deal with the non-rational aspects of organizations: the problems may be fears, resistance to change, etc. In such a case, the organization needs "intervention" in the form of the change agent who can help to locate and confront hidden problems.

Another of the principal models for organizational change is the Research-Development-and-Diffusion Model. Havelock (1973) expains that this model is based on at least five assumptions:

> First, it assumes that there should be a rational sequence in the evolution and application of an innovation. This sequence should include research, development, and packaging before mass dissemination takes place. Second, it assumes that there has to be planning, usually on a massive scale over a long time span. Third, it assumes that there has to be a division and coordination of labor to accord with the rational sequence and the planning. Fourth, it assumes a more-or-less passive but rational consumer who will accept and adopt the innovation if it is offered to him in the right place at the right time and in the right form. Fifth and finally, the proponents of this viewpoint accept the fact of a high initial development cost prior to any dissemination activity because of the anticipated long-term benefits in efficiency and quality of the innovation and its suitability for mass audience dissemination (p. 12).

The RD & D Model contains four main steps--research, development, diffusion, and adoption. E.G. Clark and D.L.

Guba (1967) subdivide these four steps into tasks, each with specific objectives, criteria, and relationships to the overall process of change. Development is divided into Innovation and Design; Diffusion is divided into Dissemination and Demonstration; Adoption into Trial, Installation, and Institutionalization.

The function of research in this model, according to Zaltman (1977, p. 67), is to secure knowledge, whether or not it is directly usable in the innovation. The research is judged on quality and validity, not on immediate usefulness. Evaluation is seen as a significant part of the research step as well as a part of each of the other three steps of the model.

Ivor Morrish (1976, p. 119) comments that the R D & D Model emphasizes the planning of change on a large scale. Laboratories, research agencies, etc. are required for such large scale research and evaluation. Thus, he explains, thorough R D & D rarely happens within education; prototypes are found in industry, agriculture, and medicine.

The R D & D Model is what Zaltman terms a "technocratic change phenomenon" (p. 69). It is a noncollaborative approach to change in that the earlier stages of the process (goal-setting) do not involve the client or consumer. In this model the change agent does not begin the relationship with the client until the diffusion stage,

whereas in the Problem-Solving Model this relationship is begun immediately after a need for change is developed.

A third model of organizational change is the Social-Interaction Model. With this model, the focus is on the individual within the organization and his response to information communicated to him. This model is built on the assumption that information can most effectively be disseminated through personal contact. The key to adoption of an innovation, Morrish (1976) comments, is the social interaction among group members. "Generally, researchers concentrate on an innovation that appears in a form that is both concrete and diffusable...they trace its flow through the social system of the adopters. In particular, they make a study of the effects of social structure and social relationships of innovations and their development" (p. 123).

Rogers and Shoemaker (1971, pp. 100-101) explain that the adoption process (for the S-I Model) was postulated in 1955 by a committee of rural sociologists. The stages in the process are as follows.

1. Awareness stage. The individual learns of the existence of the new idea but lacks information about it.
2. Interest stage. The individual develops interest in the innovation and seeks additional information about it.

3. Evaluation stage. The individual makes mental application of the new idea to his present and anticipated future situation and decides whether or not to try it.
4. Trial stage. The individual actually applies the new idea on a small scale in order to determine its utility in his own situation.
5. Adoption stage. The individual uses the new idea continuously on a full scale.

The Rogers and Shoemaker study identifies categories of potential adopters and specific stages in the adoption of innovations (pp. 184-92). First of all, there is in any organization a group of Innovators, venturesome individuals who are eager to try new ideas. Secondly, a group of Early Adopters has the greatest degree of opinion leadership in most organizations. These individuals are somewhat innovative, but not to the extent of those in the first category--and they are highly enough respected by peers to serve as role models. Next in the process is acceptance by the Early Majority, about one third of the organization or population. These are more cautious and deliberative followers of the Early Adopters. The Late Majority, a skeptical and cautious group, do not adopt until most others have done so. Peer pressure is essential to bring about change of the Late Majority. Finally, the Laggards are the last to accept an innovation. Their values are

extremely traditional: they judge a new idea in terms of what has been done in previous generations. By the time the Laggard adopts the innovation, the Innovator may have superseded it with another more recent idea.

S-I research shows that the source of information which is most influential in the adoption process will vary according to the stage in the process and the category of adopters affected. Media may play a major role early in the adoption with Innovators and Early Adopters. However, personal contacts are more important during the later stages of awareness and interest...and with those who adopt later in the process. The S-I research also points out that the most effective means of changing an organization is through Opinion Leaders, those to whom others look for advice. As Rogers states (p. 243), "Diffusion campaigns are more likely to be successful if change agents identify and mobilize opinion leaders" (p. 243). Rogers lists a series of generalizations which are well supported by empirical studies...Generalization 7-10 is as follows: "Change agent success is positively related to the extent that he works through opinion leaders." The opinion leaders can accelerate the adoption of an innovation because they are highly persuasive communicators to others in the population. They may have such high credibility that their acceptance may virtually make it impossible to stop the spread of an innovation.

Havelock provides a fourth organizational change model which is a combination of the Problem-Solving, R D & D, and S-I models. This model, the Linkage Model, is based on the assumption that each of the models, if used exclusively, will fail to address organizational needs. People are not consistently rational; and all organizational problems will not respond to skilled intervention which diagnoses human needs. Similarly, utilizing social interaction through opinion leaders will not meet all needs. Havelock contends that all are needed in a combined model.

Havelock's model (1973, pp. 23-32) begins with an emphasis on the client as a problem-solver. The client experiences "felt need," makes a diagnosis and forms a problem statement. He then moves through the search, retrieval, and solution stages to the application of the solution. Central to the Linkage Model, as Havelock explains, is that "the user must be meaningfully related to outside resources" (p. 23).

The outside resource is a group, R & D center, consultant organization, etc. also engaged in trying to solve similar problems, perhaps because of a relationship with the "user" organization or perhaps simply through having the same problems. The user and the outside resource then cooperate in the problem-solving process. Both utilize the rational planning of the R & D Model; both communicate solutions/messages through social networks; both would use

intervention as needed to identify human needs and barriers to change. The linking concept is designed to eliminate two primary deficiencies with other models:

(1) Other models tend to utilize only a few of the change approaches available;

(2) A solution which is arrived at either inside or outside the organization will be inadequate. If developed externally, it will not fit local needs. If developed internally, it will not utilize experience and expertise available elsewhere.

An additional model of organizational change is the Zaltman, Duncan, and Holbeck Model (1973). This model contains two basic stages, initiation and implementation, each in turn containing substages. Initiation is the first phase, consisting of knowledge-awareness, attitude formation, and decision. The second stage is implementation, consisting of initial implementation and continued-sustained implementation.

The most distinctive characteristic of the Zaltman, Duncan, and Holbeck model is its consideration of the effects of the internal environment of an organization on the change process. As Zaltman (1977, p. 57) explains,

> The authors of this model recognize, however, that the innovation process will not always follow [an] exact pattern. The process will vary according to the nature of the organization and the particular innovation in question. In

> fact, the process is probably not linear, with a clear-cut beginning and end, but rather circular. Each new decision or outcome is likely to affect one or more of the previous outcomes or stages. Five organizational characteristics may affect the two stages: complexity, formalization, centralization, interpersonal relations, and dealing with conflict.

Complexity refers to the variety of job specialties and task structures. Formalization indicates the emphasis given by the organization to establish rules, procedures, and guidelines. Centralization refers to the location of decision-making power--whether centralized or decentralized. Interpersonal relations affect change in that closer relationships facilitate both the initiation and implementation stages. Similarly, an organization's ability to deal with conflict affects its ability to change.

Through consideration of these five organizational characteristics, the Zaltman, Duncan, and Holbeck Model provides a highly useful analysis of the initiation and implementation processes. The model may assist the change agent significantly in deciding which change approaches will or will not succeed in a particular organization. For example, in the Zaltman model, the initiation of changes is more difficult than implementation if the organization is highly centralized. Thus, the change agent in such an organization may seek an approach that involves members in the "outlying" parts of the organization at the initiation stage in order to deal with the difficulty.

A variation of the Problem-Solving Model is discussed by Coughlan, Cooke, and Safer (1972). The Survey-Feedback-Problem Solving-Collective Decision Model is designed specifically as an organizational development approach to planned change. The emphasis in this model is on group process and problems. The seven stages are evaluation, stimulation, internal diffusion, legitimation, adoption, implementation, and routinization.

Distinctive about this model is its beginning with "evaluation"...ordinarily a survey process. The focus is on identification of problems as seen by members of the organization. This information is then communicated to others in the organization who are affected; solutions are then presented to authorities for legitimation. The process is cyclical in that evaluation also follows at the end of the process and leads into a repetition of the cycle. Thus, final evaluation and feedback leads into a new cycle of problem-solving, implementation, and evaluation.

An Authority/Collective Innovative Decision change model is provided by Rogers and Shoemaker (1971). These authors offer a descriptive model which focuses on the process by which decisions are made. The "authority innovative decision" is an authoritative approach to change. Rogers explains it as follows: "Authority innovative decisions are those forced upon an individual...[who] is ordered by someone in a position of higher authority to adopt or

reject an innovation" (p. 301). The "collective innovative decision," on the other hand, is a participative approach. There are five stages in this approach: stimulation (awareness of need); initiation (the process by which the idea becomes familiar); legitimation (approval); decision (gaining agreement on the acceptance or rejection); and action (implementing if accepted).

This type of descriptive change model may assist the change agent in somewhat the same fashion as the Zaltman, Duncan, and Holbeck Model. That is, this model may enable the change agent to better conceptualize the organization and processes he is dealing with. By more fully understanding its environment and its typical means of accomplishing change, s/he can more successfully plan how to intervene--whether to act as "stimulator" or "initiator," whether to identify "legitimators," whether to plan decision-making sessions, etc.

Strategies and Tactics for Planned Organizational Change

A change strategy is an overall plan for facilitating acceptance of change. Stated in other terms, a strategy is a relatively broad set of policies which guide specific change activities. A number of the principal change strategies have been discussed earlier: R D & D, Problem-Solving, Social-Interaction, and the various other approaches might be utilized as models or as strategies, depending on the application. Lindquist, for example,

treats these as strategies, while Morrish describes them as models. Zaltman (1977, p. 71) helps to clarify the matter:

> Models of change describe or perhaps prescribe in a formal way the general process of change. When the planner begins to outline an approach for actually executing change, his mode becomes strategic. The notion of deliberate and conscious change implies that, at some point in the process, some means or strategy is selected or created for effecting change.

In short, an approach to planned change might function as "model" or "strategy" depending on its utility at a given time. If used in describing or prescribing change, it is ordinarily termed a "model." If used in planning the execution of change, it serves as "strategy." To illustrate, in describing or conceptualizing a change process, a researcher might utilize the Problem-Solving Model. On the other hand, if s/he were involved in executing organizational change, the problem-solving approach would serve as strategy for choosing interventions and specific change actions.

Zaltman (1977, p. 73) provides a useful categorization scheme for the strategies discussed earlier and for other such approaches to change. Zaltman lists three basic types of change strategies--power, manipulative, and rational: "Power strategies are based on the offer or application of basic rewards and punishments; manipulative strategies involve a deliberate arranging of messages and/or aspects of the environment; and rational strategies in-

volve transmitting high-fidelity messages that justify change."

Power strategies, according to Zaltman, are the easiest to apply because they involve the threat of punishment or the promise of meaningful reward. Compliance with power strategies is not related to the change itself, but to the reward/punishment system connected to the change. Examples of this type of strategy can be seen in Guba's economic, political, and authority strategies (1967); in Chin and Benne's power-coercive strategy (1976); or in the Rogers and Shoemaker "authority innovative decision" approach discussed earlier.

Manipulative strategies control either message or environment in order to influence the target group (Zaltman p. 74). Here, the target is persuaded--perhaps by a "biased message--that the change is worthwhile. Thus the motivation for change in this type of strategy, unlike that of the power strategy, is tied to the change itself. Organizational development strategies (such as the Survey-Feedback-Problem Solving-Collective Decision approach discussed earlier) exemplify the manipulative strategy. Similarly, the problem-solving and social-interaction approaches treated earlier are both manipulative.

Rational strategies attempt to communicate clear and accurate message about the change...messages which convince the target that change is in his best interest (p.

75). The motivating force in this strategy is directly linked to the change--as Zaltman puts it, "the motivating force is the change." The R D & D approach discussed above is a rational strategy. Other examples are the Chin and Benne (1969) empirical-rational strategy and Guba's value and rational strategies (1967).

Turning at this point from the topic of change strategy to that of the change tactic, the following question becomes pertinent: "What is the relation of tactic to strategy?" "Strategy" has been defined previously as a set of policies. "Tactic" is defined by Havelock (1973, p. 153) as "explicit sequences of action steps that make up... strategies." Thus, the relation of tactic to strategy is that of specific action to policy. As policy or overall plan, the strategy is comparatively broad and will likely require a variety of tactics for implementation. Zaltman (1977, p. 82) explains in these terms:

> Particular tactics might be employed to implement any of the broad strategies; and in fact it is likely that in studying different strategies we can observe the same tactics being used. Certain tactics may be more useful for one of the broad strategy types, but essentially they are the 'tools' the strategist has available regardless of the broad approach he decides to use.

Zaltman goes ahead to list five kinds of tactics for the change agent (p. 92)--Information/Linkage; Product-Development; User-Involvement; Training/Installation/Support; and Legal. (1) Information/Linkage tactics supply

additional information that may be necessary to create change. Such tactics may often be intended to open communication channels; thus the term "linkage." Mail, advertising, books, field agents, and workshops are Information/Linkage tactics. (2) The Product-Development tactic involves the use of a product or procedure to bring about change. Zaltman explains that change tactics of this type ordinarily involve providing the product for the user... perhaps through low-cost or free samples (p. 95). (3) User-Involvement tactics are based on the premise that change is facilitated when those involved are included in the implementation. Their approval or advice is not adequate--they must be actively involved. Thus, tactics of this type seek to involve users in decision-making, in field-testing, in training others, or in any collaborative effort connected with the change. (4) Training/Installation/Support tactics attempt to facilitate change by training, by assisting in installation, and by monitoring change (pp,95-96). The underlying assumption is that the user's ability to change is connected with factors such as skill level, job satisfaction, and adequate organizational resources (funding, etc.). Specific tactics of this type may be helping to generate finances, offering in-service classes, providing consultation, building networks, or providing a feedback/monitoring system. Such a monitoring system is useful in that it allows the user to react mean-

ingfully to progression of the change project, changing direction as necessary. (5) Legal tactics are those which command change or require it through legislation. Zaltman points out (p. 98) that caution should be used with such tactics because change may not be sustained over time if there is not some level of user commitment to the change itself.

Finally, Zaltman offers criteria for evaluating the usefulness of various tactics (pp. 100-101). The evaluation scheme lists numerous tactics of the five types discussed above. Each tactic is then rated as low, medium, or high according to sixteen criteria, from stability ("the extent to which the tactic, once implemented, is likely to operate in the manner predicted") to the cost to the user. The use of training manuals, for example, rates high in stability, low in personal contact, high in ease of use, medium in cost to user, etc. Using such an evaluation scheme, the change agent/planner can easily assess many of the possible tactics through considering which criteria are most important for the change situation in question.

Havelock (1973, pp. 153-186) approaches the categorization of tactics in a somewhat different manner. Under the headings of Problem-Solving, Social-Interaction, and R D & D strategies, he gives an extensive list of associated tactics. Each tactic is discussed in terms of its usefulness for implementing the given strategy. For

example, under Social-Interaction strategies is the "Prestige Suggestion" tactic:

> Most S-I strategies employ various forms of prestige suggestion. The potential adopter is told of the neighbors, peers, and local, regional, and national leaders who have adopted and endorsed the innovation. If these persons are perceived by the user as significant leaders and representatives of personally relevant reference groups, then presumably the suggestion will be effective. (pp. 160-161).

Under R D & D strategies--to offer a second example--is "User Need Surveys" (p. 164).

> The most sophisticated R D & D strategies include systematic data collection on the needs of the target population, and use this data in the design and development phases. By so doing they partially account for some of the factors stressed by the P-S strategies discussed earlier.

Havelock's list of tactics is less exhaustive than Zaltman's, and he does not include such precise evaluation criteria. On the other hand, as can be seen from these examples, the tactics which are discussed are treated in a highly useful, pragmatic manner.

Katz and Kahn (1966) provide still another perspective on change tactics--they discuss the following methods for bringing about organizational change: the direct use of information, skills training, individual counseling and therapy, the influence of the peer group, sensitivity training, group therapy, feedback on organizational functioning and direct structural or systemic alteration (p.

392). Although the writers discuss each of these tactics rather thoroughly in terms of strengths and weaknesses, the scheme of categorization is somewhat "loose" by comparison with those of both Zaltman and Havelock. The tactics are treated in random fashion, without the clear connections to overall strategies that both Zaltman and Havelock offer.

Guba's treatment of tactics (1967) is similar to that of Katz and Kahn in that he focuses on a relatively small number: telling, showing, helping, involving, training, and intervening. Guba does, however, clearly connect these "diffusion techniques" with broader strategies. His typology specifies how each tactic would or would not be used within a given strategy. The point emphasized is that the tactic should be consistent with the strategy chosen.

CHAPTER III

DESIGN AND METHODS

In this study interviews were conducted with the training managers in the data processing divisions of nine large corporations. This chapter treats the processes of (1) selecting the data processing organizations serving as population and sample; (2) collecting data; and (3) analyzing the data.

Selection of Population and Sample

The jury method was used to determine which data processing training programs would be used in the study. The jury--or panel of professionals--was made up of educational representatives for national training companies, people who deal regularly with many data processing organizations in such a way that they can make informed judgements based on the criteria specified. From the recommendations of this panel a sample of training programs was chosen.

The criteria used in the selection of training programs are as follows.

1. The data processing organizations had a minimum of 100 employees.

2. The organizations had implemented a new training department or program within recent years. Change projects which began more than four to five years ago were not considered because of the difficulty of obtaining accurate information about the early stages of the projects.
3. The training programs gave evidence of being of relative importance in the organizations--primarily through large investments in equipment, facilities, or employee time.
4. The training programs appeared to be representative of such programs in large data processing organizations in the southwestern region.

Data Collection Procedures

Information was collected in the data processing organizations through in-depth, minimally structured interviews. An extensive interview was conducted with the training manager in each organization. Each interview was conducted as an informal session beginning with and focusing on a very general question intended to elicit full discussion of issues, not brief answers chosen from a specified range of possibilities. The intention was to stimulate the respondent to offer pertinent data from his/her experiences rather than to choose an answer from a set of "expected" and appropriate answers.

The minimally structured interview was chosen as

more appropriate for this study than quantitative measures such as the survey because of the "phenomenological" nature of the study. Mishler (1979) and Carini (1975) offer useful discussions of phenomenology as an approach to research; both contrast the traditional quantitative method of research with the more qualitative phenomenological approach. They define phenomenology essentially as a method which seeks a fuller understanding of the meaning of the phenomenon as a unity through proper attention to context. Mishler contends that traditional research approaches in the social and behavioral sciences have too often ignored the importance of context.

> Our procedures are aimed at isolating variables from the personal and social contexts in which they operate. Through factor analysis and scaling procedures, we search for pure variables, for measures of unitary dimensions that will not be contaminated by other variables. Ideal measures are independent, free-standing, orthogonal -- that is, unrelated to measures of other variables. The history of psychometrics demonstrates that it is possible to do this or at least to create the illusion that independent and pure variables exist. It is much less evident that such variables have brought us any closer to the general laws they were intended to serve or to a deeper understanding of human action (pp. 2-3).

Carini (p. 19) offers a similar statement, focusing on evaluation research in education. She explains that,

> In logical inquiry, the function of observation is to predicate the properties of a phenomenon, while the function of recording is to objectify (numeralize) the properties. In order to organize the observations, experimental investigation is undertaken to analyze the causal relationships among the properties of the phenomenon.

On the other hand, she continues,

> the function of observing in phenomenological inquiry is to constitute the multiple meanings of the phenomenon, while the function of recording the phenomenon is to reflect those meanings for the contemplation of the observer.

It was the intention of this study to observe the phenomenon of the implementation of training programs as a unity... to understand the phenomenon within its context and thus to "constitute the multiple meanings of the phenomenon."

The minimally structured interview offers an effective tool for observing the complexity of such a phenomenon in that the interviewee is free to discuss any aspect of the environment s/he considers significant. The person being interviewed is not restricted in either type or length of answer. The significant issues may be raised by the respondent, and the discussion may lead anywhere that full explanation requires. The respondent is not restricted to certain questions nor by a range of answers... nor by a specified length for answers on a survey sheet. Many of the most important points may be offered as the respondent expands on initial points.

The assumption behind the minimally structured interview is that the best questions (and answers) are not known in advance. As Schwartz and Jacobs (1979, p. 37) explain, "Appropriate or relevant questions are seen to

emerge from the process of interaction that occurs between the interviewer and interviewee. Through this informal process of give and take the investigator becomes 'sensitized' to which questions constitute relevant and meaningful issues to the respondent (and others like him).

The minimally structured interview provides a greater degree of feedback from the respondent than other methods available...and, consequently, more accurate data for this kind of study. As Schwartz and Jacobs explain, there is always the possibility of a difference between a respondent's answer and what s/he thinks or means. However, "The informal interviewer in a face-to-face interaction has a greater degree of feedback than those using structured interviews or mailed questionnaires. This feedback can be used as a way of evaluating the status of respondents' accounts." They continue, "While one may be mistaken in his total assessment on the basis of interpretation and reinterpretation of what others say, how they say it, and nonverbal cues, the grounds for such an assessment are much stronger in face-to-face interactions than in survey research, where there is no direct basis for weighing and evaluating the words of others."

Each interview focused on the central question--"Tell me about the history of the project." That is, the respondent was asked to narrate in chronological order the important events of the change project: who started it (and

how)...what events helped it along...what problems occurred ...who were the actors in these events? The respondent was assured that all information would be treated as research data only and that neither his/her name nor that of the company would be revealed in the study.

Once the respondent began "telling the story" of the change project, the interviewer--as much as possible--allowed the respondent to proceed as s/he chose. Such a narration was intended to allow the respondent to focus on issues and events which s/he saw as significant. At the conclusion of this narration, the respondent was asked a number of specific questions in an attempt to cover any areas of particular concern which might have been omitted. These questions were placed at the end in order to avoid undue "contamination" of the interview itself (see Appendix A for the list of questions added at the end of the interview).

Preliminary ideas and reactions were recorded immediately after the sessions. Since most of the interviews were lengthy and quite involved, however, they were tape recorded for later transcription. Although the tape recordings could not record nonverbal communication and other subtleties of face-to-face interaction, they helped to preserve verbal details of the interviews.

Analysis Procedure

Throughout the process of conducting interviews, a

continuing analysis of data was carried out. Initial interviews suggested tentative hypotheses; these were then checked against accumulating data, revised, and, finally, either selected for additional study or rejected. This ongoing analysis established a number of "working hypotheses" by the time interviews were completed. To properly evaluate these, information was then systematically arranged and thoroughly examined.

In order to accomplish this, tape recorded interviews were transcribed and reviewed. The transcripts were then analyzed by use of (1) frequency tables that helped determine the topics/ideas which had received most emphasis; (2) a comparison chart which highlighted patterns, associations, and unusual amounts of emphasis (see Appendix B); and (3) brief summaries of the interviews. The summaries were based on eight topics that had been found to be recurrent and significant themes. These topics were the following:

1. Initiation/Early Development
2. Major Changes as the Project has Progressed
3. Resistance to Project
4. Acquiring Employee Support
5. Acquiring Management Support
6. Publicity/Communication Methods
7. Useful Roles or Personal Characteristics for Training Manager/Staff

8. Recommended Sequence of Steps for Implementation

After the tabulating and summarizing of data had been completed, major similarities, differences, patterns, and associations in the data were sought. The comparison chart and summaries facilitated a synthesis and evaluation of data. At this point, then, an evaluation of working hypotheses (earlier conclusions) was possible... and then formulation of final conclusions.

The analysis process used in the study is well described by Carini (1975, p. 29); she calls the method "documenting." Documenting involves a "process of selecting and juxtaposing recorded observations and other records of phenomenal meaning in order to reveal reciprocities and therefore, to approach the integrity of a phenomenon." The reciprocities spoken of are sets of abstracted dimensions of the phenomenon. She continues,

> As observing and recording inform each other, and levels of the phenomenon under inquiry reveal themselves, the organization of observations both to intensify the observer's participation and to state the multiple reciprocities underlying the integrity of the phenomenon becomes critical. That is, in the accrual of recorded observations and other records of phenomenal meaning over time, patterns of meaning emerge both through the increasingly revealed complexity and interpenetration of the phenomena observed, and through the increasingly articulated thought of the observer. The process of selecting and juxtaposing recorded observations and other records of phenomenal meaning in order to reveal reciprocities and therefore to approach the integrity of a phenomenon, is called <u>documenting</u>.

The results of the data analyses described in this chapter are presented in the summaries in Chapter IV. Conclusions drawn from these results and various recommendations are presented in Chapter V.

CHAPTER IV

RESULTS OF DATA ANALYSIS

The data presented in this chapter were collected through interviews with training managers of large data processing departments. Interviews were informal and minimally structured, in accordance with the methodology described in Chapter III. The interviews were conducted so as to elicit full discussion of issues, not just provoke short "appropriate" answers. Thus, each interview focused on the request that the interviewee explain the history of the change project (beginning of project, important changes, problems, etc.). In addition, a number of specific questions (see Appendix A) were asked at the conclusion of each interview to insure that all essential topics had been treated. Interviews were tape recorded, transcribed, and systematically analyzed to provide the data summarized in this chapter.

The interviews were analyzed through use of eight topics that were found to be recurrent and significant themes. These topics were the following:

1. Initiation/Early Development
2. Major Changes as the Project Progressed

3. Resistance to Project
4. Acquiring Employee Support
5. Acquiring Management Support
6. Publicity/Communication Methods
7. Useful Roles or Personal Characteristics for Training Manager/Staff
8. Suggested Sequence of Steps for Implementation

The process of analysis involved identifying and grouping all statements in the interviews according to these eight categories. That is, for example, all interview statements which relatd to "Resistance to Project" were identified and collected; all statements relating to "Useful Roles" were collected...and so on.

This chapter presents brief summaries of all interviews, with the summaries being based on the eight categories listed above. A more comprehensive summary will be presented in Chapter V, along with a statement of the conclusions reached from this study.

The summaries in this chapter vary in length according to the length of the interviews. In other words, longer interviews are represented here by correspondingly longer summaries. The interviews varied from one hour to approximately two and one-half hours in length. Some of the training managers offered a great amount of detail in the interviews, particularly in response to the opening question about the history and development of the program.

The transcripts for these interviews are much longer than those for interviewees who treated this question in summary fashion.

The differences in interview length may perhaps be explained by the fact that the history and environment of the organizations varied widely. Thus, for example, some of the training departments had been required to "sell" to management; others had not. Some had met resistance; others had not. Those training managers who had enjoyed strong management support and who had not encountered resistance had less to say in response to interview questions.

INTERVIEW 1

Initiation/Early Development

The data processing organization in this case is a separate corporation owned by and serving a major bank. The training department provides training for new and experienced data processing personnel, primarily through individually paced multi-media courses. There were at least three unsuccessful attempts to begin a training program before the present program was initiated. In 1980 the present program began with the signing of a contract which provided multi-media courses from a large national training company. A part-time education coordinator was appointed at that time also. This person left the company in 1980 and the present training manager was hired. Apparently, management was much more supportive of training

at this point than during the earlier initiation attempts because the training manager emphasized that it has never been necessary to "sell" to management during her time with the company.

Major Changes as the Project Has Progressed

One of the initial projects undertaken by the present training manager was developing a tutoring system for courses, that is, securing experienced tutors/advisors for courses offered. As the department expanded, attention was turned away from this project (before it was completed) toward installing a computerized scheduling/record-keeping system. Only very recently has emphasis been turned back to the tutoring system. A group tutorial system has now been successfully developed and has been of notable value to the department. In terms of staff size and facilities, the training department has grown significantly. The training manager emphasized the need to be open to an evolution of the functions of the training department. "There have to be some facets of your program that, as it matures, will cease to exist...." She continued, "You want to drop the things that are no longer needed and add the new things that are." In particular, she discussed the evolution of the program away from dealing exclusively with technical training toward such topics as management training and personal development.

Resistance to Project

Initial resistance to the program was not strong, but some was encountered. Although there was, in general, good support from management, there was some misunderstanding of the processes and needs of the training department--so some of the middle-level managers did not cooperate fully. The training manager spoke in particular about resistance to the tutoring system. "So the verbal support was there from management, the belief in the program, but not the understanding of what it took in that area." The training manager dealt with this problem by "trying to have tutorial rap sessions on a monthly basis." She continued, "[I also] brought in some tutors from other shops where the program was going so they could talk to them of the value of being a tutor. I tried to talk to the tutors themselves as well as their individual managers about the value."

The training manager also discussed the cause of some of the resistance in a high-technology business: "When you come into an educational program in a data processing environment, you may have a lot more difficulty to overcome time constraints than in some other kinds of environments...because of the very tight production schedule...When a system or an application goes down, I mean it not only affects one or two people, it can affect a whole host of people." She concludes, "It may be more

difficult to sell a program and have one running [in this environment] than in what I guess you could say is a good, acceptable, stable state."

Acquiring Employee Support

Strong emphasis was given in the interview to considerate treatment of employees (as students/customers). "Because if there was any one thing that I felt like initially made the center successful was that we really tried to treat each individual, I guess you would say, royally. We had their own individual files; we had their own individual schedules laid out; we called them by name." She continued, "If you were going to overcome the unknowns that you knew they didn't know, then you had to do it through personal contact and through personal acceptance...." This tactic was clearly intended to develop effective communication about the program: "But I think that's what really made the difference in us because when the word spread that [the program] was 'OK' and 'You ought to go up and try it,' and the Learning Center was a good place to go--that was not because of where we were located or the good ventilation of the room and everything."

The training manager viewed the Training Department as having a broad, long-range effect on the organization: "Changing job skills is one of the lesser effects of training. The more important change in the organization is helping a person grow in it... [This creates] a more

effective organization." She explained that "Starting with a job discription, the Training Department can function as a career development agency by looking at prospects for an employee's career development over a period of the next few years." What they need to do, she continued, "is relative to the organization. If you know that the organization is going to expand and, say [implement some new technical changes]...OK, if you know that's on the drawing board, all right then as a trainer, or as an educator being interested in organizational development, you'd better be getting your fingers in the pie and say, 'What are we doing to get people ready?'"

Acquiring Management Support

Management support was obtained in the earlier stages of the program before the present training manager joined the company. There has been good management support at all levels during the time she has been in charge of the program. "But they belived in [the program], I mean they weren't just sold on it, and there's a difference," she explained. She felt that support had come from the fact that a number of people has come into top management positions from IBM, which was "a big user of in-house education...and employee development and organizational development, and I think they had seen the results of this." In addition, she felt that at the initiation of the program management had been convinced of the cost effect-

iveness of an in-house training department.

Not having to work to gain management support, she has focused on employee network strategies. She explained, however, that the special treatment of employees succeeded because it was coupled with management support: "The students probably wouldn't have come no matter how much we cared if the managers hadn't supported it."

In discussing the methods of maintaining management support, the training manager singled out (1) on-going personal contact with managers and (2) getting them to participate in planning/decision-making: "Probably the key to making anything work is to really be sincere and ask the people that are going to be involved what input they have, what they'd like the results to be, and not go in with a preconceived set of standards and procedures...but to actually, really listen." Summarizing these points, she stated that "When I came here and really asked a lot of people for their input, it really made a difference...so I think that's the key."

Publicity/Communication Methods

The Training Department had circulated listings of course offerings, but aside from this the emphasis was on face-to-face communication with students/employees and, consequently, communication through employee networks. If these techniques are properly employed, "You're really not going to need much else."

Useful Roles/Characteristics for Training Manager/Staff

The essential characteristics pointed out by the training manager was commitment...belief in the thing being sold: "You should never try to sell something you don't believe in, and you should make sure that you really do believe in what you're selling. Second on the list was sufficient familiarity with courses, system, etc. to become involved and make recommendations. Thirdly, the capacity to work as a team member with other training department people.

Recommended Sequence of Steps for Implementation

The following steps were recommended: (1) Establish the essential processes. In other words, organize the program; give it structure. (2) "[Get] management trained and aware of their needs and responsibilities." (3) Establish the tutorial program (for individually-paced courses). (4) "Go ahead and do your homework before you open it up to the whole company." This can be expedited by getting knowledgeable people involved in reviews and discussions of the planned program.

Interview 2

Initiation/Early Development

This data processing organization is a division of a major bank in a metropolitan area. The training department trains both new and experienced employees, but most of the training is providing new or enhanced skills to exper-

ienced employees. The program began approximately two years ago; the present training manager has been connected with the program since it began. She was involved in "selling" the program to management initially. The first attempt to sell the program failed, however, because it had been "too casual"; there had not been a clear and specific plan. She then surveyed other companies--gathering information about the results of training programs--and prepared a second proposal to management. This proposal was accepted, although with the requirement that they "start small and try it."

Major Changes as the Project Has Progressed

In its early stages the program had only part-time staffing; it also lacked an area dedicated specifically to training. The only visible commitment to the program was a small contract with a training company which provided individually paced multi-media courses on a rental basis. In the earlier stages, there were difficulties with scheduling students and obtaining tutors for courses, but these problems have been resolved. The program has expanded significantly, acquiring a training center with various types of facilities. In addition, the program now has a full-time training manager, a full-time tutor (a programmer analyst who works individually with students), and a secretary. Training is now offered to all three shifts daily (in a 24 hour-a-day operation) and is also

available on weekends.

Resistance to Project

Early in the program there was some resistance to the process of planning for the following year's training. The process was finally altered to one of planning for three to six months, and the organization has been much more responsive. The use of a curriculum committee also helped reduce resistance to curriculum planning and improved the accuracy of the process. The area of most resistance, according to the training manager, was the tutoring system: employees did not understand why tutoring sessions were necessary and managers who served as tutors felt "stuck" with tutoring. Compromises were worked out that allowed students a degree of latitude about attending tutoring sessions and also rotated the responsibility for tutoring enough that no one felt imposed on.

Acquiring Employee Support

The training manager discussed the effectiveness of written notification to students about their failure to attend class as scheduled. She pointed out the need to make training look advantageous to employees...to let them see the benefit of training if, for instance, they should want to transfer to another department or to seek a better job (even if that be outside the organization). She emphasized that, above all else, when managers start getting involved in a program, employees get involved.

Acquiring Management Support

The training manager talked extensively about tactics to gain management support. The principal tactics she described are as follows.

(1) Demonstrating the cost-effectiveness of in-house training (as opposed to sending personnel to "vendor supplied" training);

(2) Showing evidence of contributing to the improvement of morale in the organization;

(3) Keeping all levels of management involved by having them attend regular showings of "video journals," short videotapes on topics of special interest to management. As the interviewee put it, "When management begins to forget about us, we bring in video journals";

(4) Selling the need for improved facilities by educating management about the requirements for effective training--in particular, a quiet, private space free from interruption;

(5) Developing a charge-back system to departments that use the training center. The system notifies the manager of the amount of money wasted for each employee who missed a class;

(6) Going to management only with requests that are truly genuine...requests that you firmly believe in.

Being positioned near top management was singled

out by the interviewee as the most significant factor in the success of the program. Having easy access to top management--knowing corporate goals and being able to seek advice at that level--had been critical to the training department.

The interviewee talked at length about the need for top management support, from the initiation throughout the life of the program. As she stated it, "Executive management must be in on it in the beginning or you're in trouble." She continued, "[You] have to have top people say, 'Hey, this is something we fully back.' And they have to be firm. It's not good enough to just say, 'We back it,' but that '<u>You</u> will back it.' But not really threatening. It's just 'OK, this is what the bank wants to happen, and we're going to grow as a company; and as a data processing center, then, this is what we feel needs to happen.' And [top management] can do that a whole lot better than some of your line managers." She continued, "Management <u>motivates</u> directors, line management, etc." She also emphasized the need to keep top management active in the program in order to retain their support after it has been gained; one successful means of this had been keeping management informed through the use of a comprehensive computerized reporting system.

The program began, according to the training manager, with good management support at all levels, but

shortly after implementation of the program there had been an exceptionally high turnover among middle managers, leaving a vacuum of management awareness/support. For a time many positions were filled by acting managers, and employee training was given little attention. The training manager was faced with the task of rebuilding management support at this level. She discussed the following methods which had helped to rebuild support.

(1) Soon after the decline in management support she held a general meeting for managers and had a representative from the training company (the outside vendor) speak to the group. This was followed by monthly meetings with a number of the line managers, primarily to ask, "What are we doing wrong/right?" She explained, "Unless you keep in close contact with middle management, you will not be totally successful."

(2) Some new line managers seemed to be intimidated by the video equipment or the training procedures, not having used them before. The training manager scheduled these managers into some of the courses first (ahead of their employees). After becoming more familiar with the program, they began to send their employees to take courses.

(3) All managers were involved in a monthly course request process in order to keep them participating.

(4) When a sufficient number of line managers have become supportive of the program, they will "do a selling job" on the others. Contrasts in the performance of managers' groups become apparent.

(5) Middle managers were in some cases reached through employee support which had already been gained. Employees, frustrated by the gap in training, went to their managers asking for permission to take part in the program. This helped to rebuild middle level management support.

Publicity/Communication Methods

A variety of methods had been used to provide publicity for the program.

(1) A monthly publication was used to notify both managers and employees about the courses to be available.

(2) Monthly meetings with line managers kept line managers informed of the training department's activities. The interviewee explained, "You have to keep it in front of them or they do forget."

(3) Humorous little reminders were sent to employees, reminders about upcoming classes, missed classes, etc.

(4) Managers were given regular reports on attendance and "dollar use."

(5) Computer printout reports on quarterly and yearly attendance were distributed to managers. The training

manager felt that data processing personnel responded more favorably to reports in a computer printout form, that it was an appealing format to them, because of their background and environment.

Useful Roles/Characteristics for Training Manager/Staff

The training manager felt that a trainer must be a "people person." The trainer must be able to "talk to all levels at their level." That is, the trainer must be able to understand people well enough to reach each one in the necessary way. One manager, she explained, may need to be joked with; another may need to be treated seriously.

The role that had worked best for the interviewee had been that of advisor or resource person, helping with such matters as course selection, finding a technical expert for further assistance, etc. The title of "training coordinator" was perhaps the most descriptive, she felt.

Recommended Sequence of Steps for Implementation

The interviewee discussed a cyclical sequence of steps for successful implementation. First of all, she explained, the training manager should begin by gaining the support of top management. Secondly, the support of the middle level managers should be secured. Next, employees should be "sold" on the program and involved in it. Finally, the cycle is completed by the feedback from employees upward to management about the success of the program. Continuous positive feedback about the program is essential

in order to retain top management support.

Interview 3

Initiation/Early Development

The company is a large petroleum business located in a small town several hours distant from any large city. The training program is primarily an intensive training program for new data processing employees. From all available evidence, the project began with management support. The isolated location of the company made it difficult to hire experienced data processing people from outside, so training "in-house" people or new college graduates was necessary. The present training manager joined the company in 1980 and found the training program well established. Rapidly growing numbers of trainees have caused the company to hire him to manage the program.

Major Changes as the Project Has Progressed

Beginning as it did, growth of the program was comparatively easy. The early program had one training person and "borrowed" tutors for short periods of time. It has endured to the point that it has three full-time tutors, in addition to the two instructors and the training manager. The department has also acquired very large and well-located facilities.

Resistance to Project

The project encountered minimal resistance. There was some resistance, however, to new methods of teaching,

primarily because the isolated location and low turnover rate do not allow much exposure to outside methods: "They are less exposed to the way the rest of the world does things...." There was also resistance to allowing tutors to spend longer periods assigned to the training department. This was overcome by slowly allowing managers to see the ineffectiveness of the older system and by "evolving into being bold enough to say 'This [new system] is what we want.'"

Acquiring Employee Support

Because of the level of management support, the program had for some time been well established as a requirement for new employees. Therefore, working to gain student participation/support has not been required.

Acquiring Management Support

One of the best methods has been the use of an advisory committee made up of mid-level managers who were "up and comers." These managers were beneficially used to help formulate the expanding program, and then, for the most part, they supported it. These were people who were respected by both upper management and employees. In addition, the training manager discussed another company where he had been employed, a company where there was little management support. "I think the major thing in any change process in a company/organization is to get the approval and backing of the people at the top. If you

have management backing, then approval seems to run downhill." In order to gain this backing, "You have to learn their 'buying habits'...what is their 'hot button'? What happens to turn them on?" Once the trainer knows this, s/he may have to sell training by use of an "artificial" or "political" need in order to be able to begin addressing real training needs.

Publicity/Communication Methods

The advisory committee mentioned above served as an advertising medium for the training department. Also the department publishes a yearly course booklet as a means of advertising. The need for this advertising has grown since the department has begun to serve more of the organization in addition to data processing (through offering "user" training).

Useful Roles/Characteristics for Training Manager/Staff

Training responsibilities within the department need to be clearly defined in order to avoid conflicts. The training manager emphasized that previous experience as a data processing trainer was necessary to give him credibility. He felt that being "person-oriented" helped in getting the cooperation he needed from the organization.

Suggested Sequence of Steps for Implementation

First, "...find out what the climate is like; whether they have accepted the change already or whether you have to sell the change." If the change has not been

accepted, "you want to emphasize more than otherwise going to management and gathering acceptance for [the project]. Then selling at lower levels follows, but this will be much easier having first gained top management support."

Interview 4

Initiation/Early Development

The data processing organization in this case is a division of a department store chain in a larger city. The training department serves both new and experienced employees, but most of the training is enhancing skills of more experienced personnel. The training program was initiated four years ago with the signing of a contract with a large training company to furnish rental courses on data processing. For approximately two to three years a person in staff support directed the training program as a part-time project. The present training manager came into the position one to two years ago. The following were listed as her job responsibilities: (1) Define positions; (2) Define skills of positions; (3) Determine what level people need to be in order to fill those positions; (4) Write training plans for people now in those positions according to their skill levels; and (5) Write performance objectives for positions. In the earlier stages, the program had operated on a small scale-- essentially as a project in which the "early requirements were simply to get [rental courses] in and out." During the last one to two

years, however, the program has changed significantly. And a principal factor in that change has been selling to management a different concept of training--training as a necessary component of the business process. A successful business organization must, in this view, include a skills planning component. And skills planning leads to skills development.

Major Changes as the Project Has Progressed

The training manager discussed the significant stages in the development of the program. The first stage was creation of an awareness of the possibilities of in-house education through the offering of self-study texts, multi-media courses, etc. The second stage involved the growing organizational awareness that even in-house training must be carefully managed or the cost will be enormous. This led to the establishment of an organized process of skills planning. A computerized task analysis system was useful at this point in defining the data processing tasks in the organization. The third (and present) stage has been further educating the organization in what training should be--a necessary part of the successful functioning of a business. This has finally led to the writing of performance objectives for data processing positions; this is currently what the training manager is involved in.

Resistance to Project

"You'll have resistance from people that don't

understand how training and education are supposed to work," commented the interviewee, "but once you explain what you want to do as a trainer...which is to support the business work that they have to do...then that will help overcome their resistance." She continued, "As long as they have an attitude that training is nice to have and do if you have extra money and extra time, then, you know, without reeducating them on what it should do, then you could have a lot of unexpected resistance."

Acquiring Employee Support

The principal tactic used to gain employee participation has been making them accountable to their managers for acquiring needed training. The training department provides a process by which a manager draws up a training plan for each employee. The employee is then responsible for enrolling in and taking the required training. Proper participation thus becomes a part of the employee's performance evaluation. "And that," the training manager explained, "can cause a student to be motivated in a class better than anything else."

Acquiring Management Support

An extensive list of tactics for gaining management support was discussed. The emphasis throughout was on the necessity for the training to be a business need; otherwise, she felt, it probably will not succeed.

The cost-effectiveness of in-house training was

touched on as a selling feature. The training manager also pointed out the need to justify existence of a program through demonstrating the behavioral change produced by in-house courses. She advised avoiding any parallel between in-house courses and the vendor (IBM, etc.) courses that acquire a "bad name" because they are not appropriately fitted to the needs of the person. She also discussed the need for training to report at a high level in the organization. "You must be able to work with the strategic people in DP systems development and DP delivery or the production area operations side. So wherever you are placed, you must be able to function as a peer with those people and be involved in their planning, so that skills planning can go right along with machine planning, hardware planning, software planning. And that is essential, and I think if the company is bringing in a formal skills planning program, to put that skills program anywhere else is going to cause it to fail."

She spoke several times of the importance of beginning a program small and then expanding. Focus on a high priority need (like skills planning). Then begin the program as a "project" (a smaller-scale effort with more limited goals). Evolve with the project, evaluate it, and prove it cost-beneficial. Ultimately, if successful, the project is grown into a "process"--something recognized as necessary to the functioning of the business.

The tactic that received most emphasis was selling the skills planning process to management: "[The best method is] for business to see skills planning as a business process that is necessary for performance requirements to be met." She explained her method of gaining acceptance as follows. "The methods I used, first, were to educate executives on the need for training to be, you know, an integral part of their business. And I think the first tool that I used to deal in that was to introduce the cycle of performance planning...that is, with MBO training or a number of other techniques that maybe I've called MBO but they really are methods of performance planning." She continued, "And then second was the work we've done with IBM on the management system approach for information systems, and I've worked with them on this for about a year." She explained that IBM provides a model for organizational change containing 42 processes essential for successful business operation. And these 42 include the skills planning/skills development processes. Within this environment, the fact that the system comes from an outside source like IBM gives a high level of credibility. The training manager pointed out that this helps take the trainer out of the "begging position"--the automatic credibility greatly reduces the amount of selling required.

Implementing skills planning as a business process involved the following steps: (1) Start by writing job

descriptions; (2) Complete a skills analysis for each job, determining the skills necessary to do the tasks; (3) Conduct an individual training needs analysis to determine the deficiencies of each person; (4) Monitor progress to see that proper training is taken to provide skills; and (5) Complete a performance evaluation on each person... including an appraisal of the person's progress toward acquiring the prescribed skills. It is important, the interviewee stated, that these steps not be carried out by the training department alone, but that they be treated as projects approved of and participated in by "line" personnel... "and built into the way they do their work." And of course the last step, performance appraisal, is carried out by the employee's manager. When asked "Who are the most important people to the success of such a program," the training manager replied, "In our situation, it would be the chief executive of information systems and then the line executives in development and delivery. They will be the ones that will help you define the skills development area as a business process and ones that will be able to pass the message on down to their people so they will understand the business reason for them to be in class."

Publicity/Communication Methods

When asked about the use of brochures or printed publications, the training manager responded, "No, I

haven't done that and I feel strongly against doing that. I think you have to incorporate it again into the business as a business process that is critical to the growing concern of the company." She expressed opposition to "just trying to gain any kind of emotional support or excitement. I think a trainer and a person that is managing skills development is going to have much more than they ever can do by just answering business needs."

Useful Roles/Characteristics for Training Manager/Staff

The interviewee felt that a trainer should have backgrounds in both training and business. "[The trainer] needs to be as sharp in business skills as they are in education skills. They need to be able to relate to what profit is to the company, what costs are to the company, what the economy is doing to the company, and they need to be able to think very quickly in a business sense." She suggested that the MBA degree might be good additional preparation for an educator. Other skills needed are as follows: (1) The trainer should be a results-oriented project planner; (2) The trainer should be a problem-solver; (3) The trainer should be analytical enough to properly diagnose training needs.

In summary, she stated that "...what business really needs is [for] educators to come out of a program like that that are top-flight business people...[who] understand the economy; who understand the lean years coming up

for finding skilled people...who can predict that; who can say when an organization is too fat and tell a fat organization how to become lean again; and educators who are really geared to performance monitoring."

Recommended Sequence of Steps for Implementation

The training manager recommended the following steps: "I would look first at education of the executives, the strategic people in the business process of skills planning...and gain acceptance for that...and then start skills planning as a project to grow into a process. Or, if I have the resources, I would start it initially as a business process staffed to meet the needs of the entire division. I think it's sort of unlikely that a company will buy that right off, but those are the steps I would take."

Interview 5

Initiation/Early Development

The corporation served by this data processing organization is a large oil field drilling equipment company located several hours' drive away from any large city. The corporation is part of a diversified international company. The data processing training department functions primarily to train newly hired programming employees--providing basic programming language training and other essentials before they move to the programming department. The training program began about six years ago

when a rental contract was signed with a large training company to provide individually paced multi-media courses. Up to that point, a programming supervisor had been responsible for training, but increasing numbers of new trainees brought about the hiring of a full-time person for the program. The first training manager began with a training needs analysis and created an entry-level curriculum; earlier training had been exclusively in COBOL. The present training manager joined the company about two years ago. A second full-time person, a training analyst, was recently added to the staff because of continued growth in class size.

Major Changes as the Project Has Progressed

The program began with tutors who were loaned for short periods by the programming department. Larger class size has led to the use of "full-time" tutors--technical people assigned to assist in training for six months or so. The largest change in the program, the training manager explained, has been the reduction in the length of time an entry-level person spends in training. Previously, trainees had been in training for as much as six months; but the program now lasts two months. Students are thus released to their assigned section much sooner. "They wanted those people to become productive as soon as possible." Two additional changes were pointed out: (1) evolving from entry-level training toward more advanced,

professional-level training and "user" training (training of people who use the services of data processing); (2) evolving more toward "stand-up" (lecture) training than earlier in the program.

Resistance to Project

There had been strong management support for the program from the initiation through the present. Within such an environment, the training program had not encountered resistance of any kind.

Acquiring Employee Support

The training manager relied primarily on "word of mouth" to create employee awareness of the program. A training needs analysis was also circulated to inform employees of what was available to them. Participation in the program is mandatory for new employees, so the training department has not been required to attract students or induce them to participate.

Acquiring Management Support

Management support has been strong from the beginning, primarily because of the location of the company. Being located in a small city that is distant from any metropolitan area, the company had difficulty attracting experienced people. The necessity for training inexperienced college graduates has been clear from the beginning --so management "selling" has not been required. Furthermore, an in-house training department has furnished a much

less expensive means of acquiring training than sending employees to IBM schools held in other parts of the country.

The training manager had "sold" to management to the extent that she had used training statistics (number of requests, etc.) to justify the addition of the second full-time training person and the use of "full-time" tutors.

Publicity/Communication Methods

The training manager has depended primarily on "word of mouth" to familiarize personnel with the training program. Employees see others using new skills they would like to have, she explained, and they ask, "How do I do that?" Consequently, they are referred to the training department.

Useful Roles/Characteristics for Training Manager/Staff

The training manager had found the role of educator/technical expert most helpful. Knowledge of technical standards and methods of doing things made it possible to advise and instruct more effectively. Ideally the trainer would have both teaching and technical backgrounds. The trainer should also be able to communicate easily with other people and should possess the patience to allow the student time to do the task him/herself.

Recommended Sequence of Steps for Implementation

No specific implementation sequence was recommended.

Interview 6

Initiation/Early Development

The data processing installation where this interview took place is a division of a large metropolitan bank. The training department's principal function for data processing is to enhance skills of experienced technical personnel and provide training on new "products," although some training of new employees is also provided. The training program began three to four years ago with the hiring of a training director and the signing of a rental contract with a large training company for individually paced multi-media courses. Several years before the program was initiated, a project leader had recommended that a training program be implemented, but the "crisis management" of that period of time had prevented any steps toward initiation. The top management of the data center later changed: "We finally got a very insightful and foresightful manager there at work that for the first time we had someone who actually had enough sense and judgement to be able to relax and see what was going on and then methodically, systematically begin to solve the problems." In addition, the project leader who had sought to initiate training was promoted to a department manager's position. In this new position--and with a better top management climate--he was successful at initiating the training program. It began with good support by top management and

the middle level management. One of the principal tactics at this point was "to make the training program not necessarily what we ultimately wanted it to become, but to be sure that it was something that could be accepted by the organization in its present state of disrepair. It's kind of like helping a sick patient to recover, you know. Do you take him out, feed him a steak dinner? You know, you may give him chicken broth and a piece of dry toast. And that's what we did; we gave them chicken broth for about a year. So finally they said 'Help! We have to have something with more substance!'"

Major Changes as the Project Has Progressed

The training program began with one full-time person and a small training room. It later expanded to the point that it had several people and better facilities... and it began developing training courses for other divisions of the corporation. At present it has expanded significantly and assumed formal responsibility for training all other parts of the company, although it retains essentially the same relationship with data processing as at the beginning. Whereas it began with individually paced courses provided by an outside company, the department now produces courses also and offers both workshop and individually paced courses. A computerized record-keeping/reporting system has been implemented within the last year. During that same period of time increasing

emphasis has been given to providing tutoring sessions for individually paced courses, although this project has not been highly successful. The tutors are technical data processing personnel who assist in the program voluntarily.

Resistance to Project

The training manager discussed early resistance from an influential manager...resistance that had contributed to the failure of the first effort at initiating a training program. The manager, a "very powerful personality," had argued in a critical planning session that "I agree with all of this [training] stuff and it all needs to be done, but we've got to focus on the types of things that can be done right now, today, to get the work out the door. There's got to be some things we can do immediately." The argument helped abort further efforts at that point toward training. This kind of thinking, the interviewee explained, has continued to be the major source of resistance throughout the program: "It's getting supervisors to realize that they can do without that person long enough to let them train. There's kind of a chicken and egg situation there that if people aren't training, they aren't doing their job as well; if they're not doing their job as well, then things are messed up and they don't have the time to train. So I think that's a constant battle that you have to fight in the lower levels of the organization.. just awareness that it's worth the time and that you need

to do it."

Another type of problem which was pointed out was the disruption created by great amounts of change. At one point the entire data center was being moved to another location and much of the computer hardware and equipment was being changed. "You're talking about a lot of time spent by a lot of people," the training manager commented. "You're talking about lots of change and these things tend to disrupt the normal routine. The result for us was that attendance in the courses began to drop off. We began having more and more difficulty getting people into the training room to complete series [of courses]."

Acquiring Employee Support

The interviewee pointed out a variety of tactics which had been used to gain employee support and participation.

(1) The program began with training that was initially acceptable to the organization, even though that was something quite different from the ultimate goal for the program.

(2) One of the basic strategies has been to "...use the expertise that existed in the data center." He continued, "We wanted to use what we called 'grass roots training' wherever we could...." Thus data processing personnel were involved in writing courses, recording audio segments of courses, etc. The intend-

ed result was increased participation for the employees actually working on the courses and, secondly, increased credibility/acceptance of the program for employees in general.

(3) Students were kept informed of classes by a monthly course listing which also contained a form to be used in enrolling.

(4) Supervisors and managers were asked to meet with their employees to draw up individual training plans.

(5) Brochures were used to keep employees informed of courses of special interest.

(6) Emphasis was given to the helpfulness of "the personal element" in obtaining and keeping employee participation. The training center administrator, according to the training manager, has been very successful at making employees feel well treated. She calls them to remind them of courses, checks on them if they miss classes, and, in general, communicates a positive regard for employees who use the training center.

Acquiring Management Support

The training manager discussed two unsuccessful attempts to initiate training programs, one where he is presently employed and one at a data center where he had previously been employed. Both experiences--as well as the successful effort which led to the existing program--have

demonstrated the importance of top management support. Speaking of the present program, he commented, "In the initial establishment of the program, the primary ingredient was top management support. This was active support; it was the kind of support where the managers would sit down with the people and say, 'We are establishing a training program and we expect you to take advantage of it.'"

The interviewee talked at some length about the various methods employed to gain or maintain management support; methods receiving most emphasis are as follows.

(1) At the critical growth/expansion points, numerous planning sessions were held within the training department. The sessions defined the philosophy of the organization and planned means of gaining needed support in order to implement the program.

(2) Meetings were held with managers to discuss training needs.

(3) Early in the program, special effort was made to see that video courses which might be viewed by a number of managers were particularly well done. In such cases, the educational value of the courses was not necessarily enhanced by the extra time spent on them, but they were more impressive to management. "Before very long," the training manager explained, "some of the enterprising managers of other bank

departments began to come by and ask to see some of these programs. And I've got to confess that we did a little bit to help some of them to know about them so that they would ask to see them, because we had already figured out that we would prosper as a training department the better known we were. And the better our work was, and the better known we were, the more apt we were to get the kind of equipment and support we needed."

(4) "We also, then, as part of our plan or idea about utilizing training as a planned change strategy initiated a series of management training sessions, whereby we hired a consultant from the University of Oklahoma to come in and conduct a series of programs for the management of the data center." He continued, "The objective was to list problems that existed in the data center that should be solved and develop a means of working on these problems as a group...it was kind of a first effort at a team-building approach, also."

(5) A "Dog and Pony Show" was held for a managers' forum, a meeting of data processing managers, supervisors, and influential visitors from other areas of the company. This was a multi-media presentation demonstrating the capabilities of the training department. The presentation was so successful that it

was later repeated for a carefully chosen group from top management. It was probably, he explained, one of the most influential factors in acquiring the acceptance of top management.

(6) Much of top management support, the interviewee explained, has come from acquiring important "champions": "...it has come about through actually showing them examples of what we have done and by encouraging people who are well pleased with our work to let others know about it by getting several champions of our cause who we pat on the head every-time they are vociferous about how great we are and so they just keep on doing it. It's just kind of a PR effort."

(7) "What won it for us," the training manager explained, "was the starting small with a trial area, building on steps that were easy to work with and then highly publicizing our successes so that we finally had a body of evidence so that we could go right to the very top and give them our irrefutable evidence of what we were able to do. In other words, we didn't sell futures; we sold present fact. We were already successful and gave them an opportunity to share it."

Publicity/Communication Methods

Publicity/communication devices which had been used

were as follows.

(1) Catalogs of "rental" courses available were circulated among managers.

(2) Brochures were circulated to advertise special courses.

(3) A training manual describing all aspects of the program was prepared and circulated to managers and supervisors.

(4) Monthly listings of courses were circulated throughout the organization.

(5) Promotional programs were presented to managers.

(6) Word-of-mouth communication by people who are favorably impressed by the program has been important to its success.

(7) An open house of the training center is planned for the near future.

Useful Roles/Characteristics for Training Manager/Staff

The interviewee felt that commitment--believing in what was being done--is the vital characteristic for the trainer. In addition, the trainer needs the energy and determination to do the job right...not to settle for less than the best.

Recommended Sequence of Steps for Implementation

The training manager suggested five steps for implementing a program.

(1) "You need to do your homework to know exactly

what you want."

(2) "Secondly, you'd have to sell that to the highest possible level of management that you can get to." Management should be involved in determining how to implement and whether the means are available.

(3) "You then have to do more planning based on those meetings [with management]."

(4) "And then you have to do lots and lots of communication with all the people involved." He explained, "Of course you have to involve the people at the grass roots level of the organization very much in terms of understanding what you're offering or what you're wanting and in securing their help in order that it will ultimately be able to be in many ways their project also."

(5) "You need to start small in an area where you can test it and make sure that what you're doing works; and then let it just kind of grow."

Interview 7

Initiation/Early Development

The company which this data processing department serves is a large, highly diversified company (metals, real estate, etc.) located in a larger city. The data processing training manager is a part of the technical systems area, which assumes the principal responsibility for training of new data processing personnel, users of data

processing services, and data processing personnel who need new skills. The program began in about 1978 in a very disorganized way, depending on voluntary, unscheduled use of a library of audiovisual courses. The present training manager came to the company in 1980 and began by organizing the library and publicizing offerings. In addition, a strong new programming director came to the organization and gave the training project a new momentum. Support from the company vice-president also began to be utilized. Little "selling" of management has taken place.

Major Changes as the Project Has Progressed

The new programming director was instrumental in converting training from multi-media, individually-paced to lecture. The program is now based on a 10-12 week programer training class (for new personnel), with classes taught by various data processing personnel. There is an increasing amount of user training, and there is an emphasis on a "continuing education" program in which the person responsible for a new product does training for the data processing organization. Also, a process has been implemented in which skill levels are examined for each employee; from this determination a list of needed classes is made.

Resistance to Project

Resistance to more recently implemented programs has been slight. Some personnel serving as instructors were reluctant about the amount of time required, but the

success of classes is serving as a means of reducing that resistance.

Acquiring Employee Support

Participation by employees has not been a problem since the shift from use of video courses. Classes fill very quickly when notices are sent around the department. The emphasis is on meeting training needs in the programming area, where "there is always something new coming along they have to learn."

Acquiring Management Support

The most effective tactic has been membership (as chairman) of a committee appointed by the company vice-president. The committee met over a period of four months to study the contribution of education to productivity of the company. "A number of ideas generated out of that committee," he explained, "and they are now beginning to fall into place and be utilized." He felt that getting himself appointed chairman of the productivity committee was the most successful single event in the growth of the training program. An implicit strategy that emerged from the discussions--one perhaps not even consciously formulated--was to be sufficiently aware of management attitudes toward training to adapt the program if necessary. For example, the training program had abandoned video courses.. at first against the best judgement of the training manager. However, the programming director, a significant

force for effective change in data processing, had pushed strongly toward use of lecture classes. By "bending with the wind," the program has been able to make significant progress in a new direction--a direction for which there is management support.

Publicity/Communication Methods

One of the central findings of the advisory committee on which the training manager served was the need for improved communications within data processing. He explained that "Communications has always been a problem with data processing people. They tend to hoard what they know and don't want to share. They are very introverted. And part of [the training department's process] is to give people an opportunity to get a little personal skills training." Attempts at improving communications have included preparation of a new employee orientation program, weekly reminders of classes, a monthly newsletter that emphasizes upcoming classes, and the "continuing education" program which shares new information about projects.

Useful Roles/Characteristics for Training Manager/Staff

The most important characteristics "would be the ability to speak on the level of the people you are dealing with...and not to be impatient with them if they don't understand at first." He continues, "Don't talk down to them, and use good, solid, plain English so that people can understand what you are talking about."

Recommended Sequence of Steps for Implementation

The first step should be to organize the new program...to eliminate existing difficulties and establish a workable system. The second step is to publicize the fact that these changes have been made.

Interview 8

Initiation/Early Development

The corporation served by this data processing organization is a large manufacturing company located in a metropolitan area. The data processing training department functions in a wide variety of ways: providing skills training, providing management development, and even performing general personnel functions (such as salary administration, for instance). The program began four years ago when the present training manager joined the company and a contract was signed with an outside training company to furnish individually paced data processing courses. Before that time, no organized training had existed in the company. The program apparently began with reasonably strong management support and has continued to enhance that support through the success of its projects and through effective communication about its successes. The department has been especially successful at getting top management to make clear to middle managers their responsibility for the training of their employees. In recounting one example, the training manager explained, "I ran out a

report that showed all the no-shows and passed that straight on to the vice president. Well, that took one month because the vice president went directly to the managers here and said, 'What happened here? You had ten no-shows. Do you want to explain to me why you had ten no-shows?' Well, that was the end of that."

Major Changes as the Project Has Progressed

Approximately the first year was devoted primarily to organizing the program, to establishing process and structure. One of the first projects was a comprehensive needs analysis process that included individual training plans for employees; this consumed about six months. Somewhat later the department completed installation of a computerized record-keeping/reporting system. Another major project had been to establish effective communication within the company about the training department: "They had no communication. Nobody knew what was going on in training and that kind of thing." Better communication was established through various meetings with managers, lunch hour sessions for all employees, executive seminars for managers outside of data processing, etc. In general, the program has been highly successful; it has expanded to include a staff of training personnel and, as evidenced by company records, has had a significant impact on training within the corporation.

Resistance to Project

The interviewee discussed at length the problem of resistance caused by constant technological change. She pointed out that various high technology industries share this problem--industries such as aerospace, "big scientific companies," and data processing. "They're going through constant flux," she explained, "and they're under, you know, high time pressures...on their projects. And, boy, those priorities can change like that." This constant change can create a great deal of anxiety, a "really high pressure situation." As change continues and pressure builds, tolerance for more change diminishes until finally people reach a limit at which "one little change can just absolutely bend them out of shape." Finally, the interviewee continued, "One project will come along and, again, it will be the last straw. They'll finally say, 'This is it; we're not going to do it.' They may even think it's a good thing; but they just do it for the sake of resisting." And, significantly, this last straw is often the "optional" change, the training program or some such related project.

The problems with technological change are worsened, moreover, by the lack of communication characteristic of data processing. As the training manager explained, "You hear that very often from the lower level of people below the first-line managers...that they don't know what's going on. Nobody tells them, you know, and everything is a big surprise all the time; and they get kind of tired of

that." She continued, "They have a lot of change to contend with. So, I mean, it's just like icing on the cake, you know; like Friday they just got told they're going to be on a new project and everything's changed and then Monday morning they come in and their office is moved. I mean, it's just like it's the last straw. And sometimes it really, you know, can bend them out of shape too far." Sometimes entire groups will resist "just for the sake of resisting." She commented, "I've seen groups do that to managers literally because they haven't been told enough ahead of time about things."

The training manager placed strong emphasis on the need for the organization to communicate change down through the management to all affected levels. In other words, top management announces change to middle management; middle management spreads awareness through staff meetings, etc. The training manager's expression for this process was "managing of expectations." When change is taking place, she said, the organization must manage expectations about the change--that is, it must allow employees to know enough about the change to remove the threat. Otherwise, communication passes through the "rumor mill," and "The rumor mill is the worst way for those people to find out, you know."

Another form of resistance discussed in the interview was that of managers who "didn't want to have training

or didn't want to bother with it." Various means of dealing with such managers were (1) to identify the resistant managers; (2) "beat down their doors" with constant attention; (3) get them on training committees if they are particularly resistant; and (4) get them generally involved by seeking their opinions, asking them questions, etc.

A helpful attitude toward resistance which the interviewee suggested was "to assume that nobody likes training." She continued, "If you go in assuming everybody loves you and training, it's not good. I think it's better to come from the angle that you have to keep rejustifying what you're doing."

Acquiring Employee Support

Active support by the lower levels of the organization was pointed out as being essential to a program. As the interviewee explained, "If you have a whole area of people who are really turned off about it, you could be in real, severe trouble because they could effectively, you know, make it real hard on all the managers and everybody involved if they really balk against it." A project may fail, even with management support, if it has not been well enough communicated down through all staff levels. The organization must "manage their expectations": "Go in and show them the benefits, you know. 'This is why we're setting up the training program the way we're doing. If we do this, you know, these are the benefits we are going to

benefit from it... So we need your support.'" In addition, communication with employees should take place through brochures and advertisements of various kinds and through special brown bag lunch sessions. And the need to communicate does not end; she stated: "I think you still have to keep selling... It's a continual process. It's not a one-time selling deal." For example, she said, "Everytime you see people in the hallways, you know, anytime you can get to them, stop them. Ask them a few questions to see what's on their mind; see what they think about this."

Acquiring Management Support

The most critical factor in getting a program accepted, according to the interviewee, is top management support: "Top management support. That's 98% of the battle. I really think it is because, again, you can, you know, have the greatest program in the world, but if you're implementing it from the staff or even just the first-line managers, you know, the upper management come in and say, 'Well, we've got this top project.' Everybody drops everything." Therefore, in presenting a proposal for a program, it is vital to go as high in the organization as possible. Once support is gained here, the proposal should be communicated down through middle level management. Top management involvement may not need to be extensive at this point; "They may sometimes come into a staff meeting and say, well...all you have to do is say a few words." The

training manager commented that, "It's amazing what one top manager, you know, a vice president, can do for you. In two minutes he can effectively make or break the whole thing."

A variety of other methods were discussed as having been useful in gaining management support.

(1) Just as with employees, explain the benefits to be gained to the managers.

(2) Convince managers that the final responsibility for training an employee is shared by that employee and his/her manager. The training department serves as a resource to help obtain needed training.

(3) Secure from top management the agreement that the responsibility for employee training is a part of each manager's job description. A manager's effectiveness at training his/her employees thus becomes a part of the manager's own review.

(4) "Get an executive to follow through and to check back and to hold his managers accountable for that process."

(5) Deal with each manager as an individual: "You really need to have a lot of methods in mind because every manager and every upper management person you talk to, everybody deals a different way."

(6) Set up a training advisory committee to get managers involved and help change the attitudes of

those who are not supportive initially.

(7) Hold regular "interviews" with managers to find out what they're thinking and to keep them informed.

(8) Present executive seminars on topics such as basic data processing to gain the support of top management outside of the data center.

(9) Just as with employees, continue to sell. "You've always got to be out in front and being positive and selling, and, you know, promoting and going for it."

(10) Use a reporting system to keep managers informed and involved. Evaluate the program and disseminate that information: "Show them what you've been doing."

Publicity/Communication Methods

Tactics for communicating about the training program were described as follows.

(1) Manage the expectations of the organization by disseminating as much accurate information about the project as possible. Communicate down from top management to inform all employees affected. Much resistance is created by failure to communicate in this way.

(2) Utilize a comprehensive evaluating and reporting system, keeping the organization informed of what the training department is doing.

(3) Hold periodic meetings with managers to find out their needs and to keep them informed about the train-

ing program.

(4) Distribute brochures and printed advertisements on courses and special projects.

(5) Hold special noon hour sessions to discuss the training program and show new products or courses.

(6) Take advantage of word-of-mouth communication by the "positive, outgoing people" who are supportive of the program and will be convincing to others in the organization.

(7) Hold seminars for managers outside of data processing in order to disseminate knowledge about the data processing organization and the training program as well.

Useful Roles/Characteristics for Training Manager/Staff

Persistence and the ability to communicate were offered as the characteristics most needed by the trainer. The most helpful role for the trainer, according to the interviewee, is that of internal consultant. As a consultant, the trainer does not force change or demand it, but evaluates need and recommends change, involving the organization in goal setting and implementation of change.

Recommended Sequence of Steps for Implementation

The training manager suggested the following sequence of steps for implementing a new program:

(1) "The first step is getting [top management] support before you do anything. I mean, you can't

implement anything without their support."

(2) "Go communicate what's going to happen to everybody." Ideally, this would involve top management's communicating first of all to middle level management; then communication spreads downward through managers' staff meetings.

(3) "Then back it up by doing [what has been announced]." Begin organizing and implementing, in other words.

(4) "Continue to communicate and report back on it and show what happened.

Interview 9

Initiation/Early Development

The data processing organization is a division of a major national airline. Located in a metropolitan area, it is one of the largest data processing shops in the country. The training department functions to provide both intensive training for new employees and more advanced training for experienced employees. The first effort at establishing the program occurred in 1976 when a senior programming analyst presented a proposal for a staff of six to eight technical training people to form a training department. A very similar proposal succeeded some time later. The second proposal also came from a senior programming analyst, but it apparently succeeded because it was taken on as a "pet project" by the vice president of

data processing. At this point, four non-technical people were hired, people with educational backgrounds. In addition, several people with data processing backgrounds were hired as trainers. The design was to create a complementary combination of technical and educational skills. The present training manager was one of the four educators hired at that time. "When we first started," she explained, "it was like, we have people power but there were no deliverable products ready yet. So that start-up time, I think, was probably the hardest. Having to get to the point where we could say, 'We will have this class ready for offering on this day.'"

Major Changes as the Project Has Progressed

The program, which began as an experiment, has stabilized and apparently has been a strong success. The educators have proved successful at learning data processing well enough to design and teach courses on the subject --and openings have continued to be filled with educators. The number of people in the training department has fluctuated to a degree, but is now at about the number with which the program began. One new person has recently been added--at a time when much of the company was "cutting back"--because of the carefully documented need for more training. A wide variety of data processing courses are developed and presented by the instructors. Individually paced multi-media courses are also available.

Resistance to Project

The program has encountered very little resistance. The training manager did discuss minor difficulties with managers who called their employees out of classes because of problems which they needed help with.

Acquiring Employee Support

The principal means of maintaining participation has been a class announcement form which is circulated throughout the organization. Most managers circulate these in order to give employees a chance to sign up. The form goes back to the manager for his/her approval, and then to the training department. The training manager also discussed "word of mouth" as an important part of maintaining participation. "You've got word of mouth, the personal touch. I'll go over to Operations or I'll go down to the second floor, and people will say, 'I need this class; let me know when you are going to have it.' So I keep a follow-up file."

Acquiring Management Support

The training manager discussed two reasons for the program's having been initiated when it was (that is, after having failed at the earlier attempt). The principal reason was the vice president's feeling that the training program would be his "pet project." In addition, the program was a less expensive means of providing training than alternative methods. With this strong a beginning,

the training department has never been faced with the need to struggle for acceptance. The training manager did talk extensively, however, about methods of maintaining support and methods of accomplishing needed growth. First of all, she pointed out the need for the training department to be properly positioned in the organizational structure--positioned so as to have access to company planning, goal-setting, etc. "Training in this environment," she explained, "means that we need to know what the future plan is as soon as anybody else knows so that we can start making arrangements to be ready when the installation takes place."

A training needs survey was discussed as one of the most successful methods used. The survey involved all managers in projecting the training needs for the following year. A critical part of the process was "validating" all the numbers requested by managers. Each manager was contacted and asked about the number requested. "[They were] asked to identify what the reason for the training was. And then we also had them identify what the impact would be to them if they didn't have the training." She continued, "The burden wasn't really with us to prove [the need]; it was with each individual manager in data processing." With this data the training department determined the number of people needed to do training for the next year; the staffing need was then presented to the vice

president, and finally to all the managers, in a meeting where the results were discussed. The needs analysis, she commented, is not only a "selling" device for management; it is also a planning tool. "You know in advance what is needed, roughly when it's needed, and who needs it." The needs analysis was successful in justifying the addition of another full-time training person, and at a time when most of the data processing department was "tightening their belt." The needs analysis also proved to be a way of selling the concept of in-house training to the vice president. He had long experience in another company which had always bought training from an outside vendor. The needs analysis led to a cost comparison of the two approaches, in-house and outside vendor. The result helped convert the vice president--it was cheaper to hire the proposed staff and do in-house training than to have a vendor do the training.

Publicity/Communication Methods

The training department has published a class schedule as a way of letting employees know that courses are available for the quarter. Similarly, a packet of forms was prepared to establish enrollment procedures that would become familiar to employees. Then two weeks before a class, class announcements are circulated. Three days before the class, a confirmation of enrollment is sent to each person.

One of the more helpful methods of this type has been a comprehensive catalog provided to all managers. The catalog contains courses offered, course descriptions, objectives, outlines, and prerequisites. The training manager commented, "To me, that was a significant milestone, a visible token of our existence. Again, each manager, director, and above in data processing has one of these documents so the manager can use it, his people can come in his office and get it... So it becomes a working tool for everybody in data processing."

The training manager also discussed the use of key contact personnel throughout data processing: "What we try to do is establish a key contact in each one of the organizations in data processing. So, I'd say, examine your audience; pick out the contact; and then start developing your relationships there." She explained the process of selecting the key contact as follows. "Somebody good to work with; somebody who's demonstrated some organizational skills. And if that person's interested, sometimes a little initiative shown by that person makes them a training coordinator."

Useful Roles/Characteristics for Training Manager/Staff

The training manager discussed at length the two possible choices in hiring a trainer: educator or technician? "You've really got two options. You can choose someone who knows how to teach and give them data process-

ing experience and then hope that now they can put the two together and be an instructor. Or you can take a technical person that has an ability to communicate well with others and hope that you can make a teacher out of them." Her preference was to "take an educator and teach them data processing." Several reasons for this preference were offered. The educator, first of all, has a research background, whereas the technician has "learned by doing" and will perhaps not be as disposed to gather needed course information from all the possible sources. Secondly, the person trained as an educator can better make decisions about curriculum: "Because people that are trained educationally are trained to look for stepping stones to learning. Building by doing. And all of those skills then enable you to develop a curriculum and to develop components within a curriculum...." Also, she explained, the educator has more flexibility about change, "...not for the sake of change, but for the sake of having a better [effect] on your audience."

The characteristics of the ideal training professional were listed as follows. This person (1) enjoys teaching others; (2) possesses interpersonal skills; (3) is able to "keep up technically with what's going on"; and (4) is able to communicate well.

The training manager saw her own role as being "somewhat of a PR person for the department." She has

worked to build credibility for the department by establishing an awareness that the department does careful research and preparation for courses. "The training department is continually soliciting and receiving technical expertise from key technical people." In summing up these matters, however, she defined her role as that of consultant, as facilitator for the learning process...." as somebody that will use all the resources they have to try to help you find the answers...." This posture, she explained, leads to the necessity of integrating a great variety of different roles into one.

Recommended Sequence of Steps for Implementation

A specific sequence of steps was not suggested in the interview. The training manager did talk in some detail, however, about factors that affect and perhaps alter a sequence of implementation steps. First of all, she addressed the influence of "outside factors": "Like I say, the company grows...the need to hire new employees... the need to produce data processing resources. To a degree, that part of the sequence you can't control. But I'd say the chances of getting training programs started are going to be a whole lot better during a time when the company has made a decision to expand." She continued, "I'd say that's the most fertile ground; if you want to consider keeping a training proposal in your bottom drawer, and when that time comes in the company, then pull out the

proposal and say, 'OK, what we ought to do then is go out and hire somebody who knows how to organize training programs....'"

The interviewee emphasized the need for experience with the environment and the project. She explained that "learning as you go" may be best with parts of the program --that the need for some things may evolve as the program grows. She offered the catalog published by the training department as an example. Early in the program the catalog would not have been as beneficial, but the need evolved. Consequently, timing is "probably the biggest key." It is critical to be aware of the changing needs of the organization and then introduce changes at the right time... when they have the best chance of being adopted.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

Summary of Procedures

The purpose of this study was to acquire information concerning the implementation of training programs in data processing organizations in order (1) to identify the change strategies/tactics which are most/least successful within the technology-driven organizations; and (2) to formulate a change model for the successful implementation of people change within such an organization.

Training programs examined in this study were training programs in large data processing organizations (having a minimum of 100 employees). The training programs, or at least significant components of the programs, have been implemented within the last few years. Furthermore, the programs gave evidence of being of relative importance in the organizations. Eleven training programs were chosen from programs recommended by a panel of training experts...educational representatives for national training companies. Of the eleven training managers who were contacted about participating, two were

unable to be interviewed.

In-depth minimally structured interviews were conducted with the training managers from the nine data processing organizations. The interviews were initiated with a request that the interviewee explain the history of the change project. That is, the interviewee was asked to narrate in chronological order the important events, problems, and successes of the program. At the conclusion of this narration, the interviewee was asked a number of specific questions in an attempt to cover any areas of particular concern which might have been omitted (see Appendix A).

The interviews were tape recorded and then transcribed. The transcripts were then analyzed by use of (1) frequency tables that helped determine the topics/ideas which had received most emphasis; (2) a comparison chart which highlighted patterns, associations, and unusual amounts of emphasis; and (3) brief summaries of the interviews. This process allowed an evaluation and synthesis of data and led to the formulation of final conclusions. The results of the data analysis were presented in the interview summaries in Chapter IV. Conclusions based on those results are presented in this chapter, along with recommendations for training program implementation and recommendations for further research.

Conclusions

Conclusions are arranged in this chapter to correspond as much as possible with the sequence of topics presented in the summaries in Chapter IV. Thus, conclusions are presented in the following order:

1. Types of Resistance Encountered in the Programs
2. Acquiring Employee Support
3. Acquiring Management Support
4. Publicity/Communication Methods
5. Useful Roles/Characteristics for the Trainer
6. A Model for Implementing Training Programs
7. Top Management Support
8. Staff-Initiated and Management-Initiated Programs

Finally, the recommendations offered are as follows.

1. Proposal Recommendations
2. Initiation Recommendations
3. Recommendations for Later Stages of Implementation
4. Recommendations for Further Research

Types of Resistance Encountered in the Programs

Three of the training programs had met essentially no resistance. In the six programs where resistance had been encountered, there were three major types: employee, management, and environmental.

Employee resistance was discussed by three of the training managers, but this type of resistance had been minimal. There was slight resistance to such things as

teaching methods, tutoring sessions, or serving as intructor.

A good deal more comment was made about management resistance. This was emphasized as the principal source of resistance in the programs; six of the training managers discussed this problem to some degree. The major kinds of management resistance mentioned were as follows.

(1) Generalized middle management resistance because of lack of understanding of the program.

(2) Resistance to curriculum planning. This was effectively reduced in one instance through creation of a curriculum committee.

(3) Resistance to allowing employees to serve for adequate lengths of time as tutors. In one example, this problem was resolved by a slow "education" process.

(4) Resistance by managers who simply "didn't want training." This situation was improved by giving these managers "constant attention" and getting them involved in the program.

(5) Resistance on the part of managers to serving regularly as tutors. A system of rotating tutor assignments helped to resolve this problem.

(6) Resistance because of lack of time for training.

The last item listed received the most emphasis. Two of the interviewees addressed this problem during the

interviews; a third training manager raised the issue in a later conversation. In one of the data processing shops, "crisis management"--a preoccupation with finding immediate solutions to immediate problems--had defeated the first attempt at initiating a program. A manager had argued in a critical planning session that "I agree with all of this [training] stuff and it all needs to be done, but we've got to focus on the types of things that can be done right now, today, to get the work out the door. There's got to be some things we can do immediately." The training manager explained that this kind of thinking has continued to be the major source of resistance throughout the present program: "It's getting supervisors to realize that they can do without that person long enough to let them train. There's kind of a chicken and egg situation there that if people aren't training, they aren't doing their job as well; if they're not doing their job as well, then things are messed up and they don't have the time to train. So I think that's a constant battle that you have to fight in the lower levels of the organization...just awareness that it's worth the time and that you need to do it."

Another of the training managers who discussed the "lack of time" problem stated, "As long as they have an attitude that training is nice to have and do if you have extra money and time, then, you know, without reeducating

them on what it should do, then you could have a lot of unexpected resistance." She offered this solution: "Once you explain what you want to do as a trainer...which is to support the business work that they have to do...then that will help overcome their resistance."

Three of the training managers discussed resistance or problems which were produced by the environment of the data processing shops. One interviewee discussed the disruption created by the moving of the entire data center to another location. Much of the computer hardware and equipment was being changed. "You're talking about lots of change, and these things tend to disrupt the normal routine. The result for us was that attendance in the courses began to drop off. We began having more and more difficulty getting people into the training room to complete sesries [of course]." Another of the interviewees who discussed this type of problem emphasized the unusual interrelatedness and instability of the environment: "When a system or an application goes down, I mean it not only affects one or two people, it can affect a whole host of people." She continued, "It may be more difficult to sell a program and have one running [in this environment] than in what I guess you could say is a good, acceptable, stable state."

The fullest discussion of environment was offered by the data processing training manager from the manu-

facturing company. She commented that various high technology industries share this problem--industries such as aerospace , "big scientific companies," and data processing. "They're going through constant flux," she explained, "and they're under, you know, high time pressures...on their projects. And, boy, those priorities can change like that." This constant change can create a great deal of anxiety, a "really high pressure situation." As change continues and pressure builds, tolerance for more change diminishes until finally people reach a limit at which "one little change can just absolutely bend them out of shape." The interviewee continued, "[Finally], one project will come along and, again, it will be the last straw. They'll finally say, 'This is it; we're not going to do it.' They may even think it's a good thing; but they just do it for the sake of resisting." And, she pointed out, this last straw will often be an "optional" project such as a training program.

Moreover, the interviewee explained, the resistance created by technological change is worsened by the lack of communication within data processing. Not only are personnel subjected to great amounts of change, they are not communicated with...and they do not know what to expect. Unfortunately, the problem is self-reinforcing: as there is increasing technological change, there is increasing need for communication; but as change

accelerates, the organization may be forced to focus more and more on planning and implementing the change--and, consequently, it may be less and less able to communicate about the change. The interviewee recommended that the organization communicate change down from management through all affected levels. Her expression for this process was "managing expectations." When change is taking place, she said, the organization must manage expectations about the change; it must remove threat and assist in the adaptation to change.

There is some evidence in the interviews which discuss environmental problems that the environment of the high technology business may offer peculiar difficulties to implementation of people-directed change. Resistance caused by rapid technological change and poor communication may hinder the implementation of training programs. The training program may at times be "the last straw," as one of the training managers expressed it...the last straw which creates unusually strong resistance. Technological or "machine" change is not only rapid in this environment, it is essential; and personnel must, for the most part, simply "live with" such change. Consequently, when tolerance for change drops to the bottom limit, the "optional" people-directed change may be rejected.

Acquiring Employee Support

Tactics used to gain employee support received less

emphasis in the interviews than did management tactics and tactics for communicating/publicizing. One of the interviewees, however, gave employee tactics primary emphasis in her training program. And two of the other training managers pointed out employee tactics as a major concern.

The training manager who rated employee tactics above other categories explained that "...if there was any one thing that I felt like initially made the center successful, it was that we really tried to treat each individual, I guess you would say, royally." She continued, "If you were going to overcome the unknowns that you knew they didn't know, then you had to do it through personal contact and through personal acceptance...." The strategy depends essentially on spreading positive communication about the program through employee networks.

Another of the interviewees who considered these tactics highly significant gave special emphasis to three particular tactics:

(1) The program began with types of training that were initially acceptable to the organization, even though that meant offering training that was quite different from what was ultimately intended for the program.

(2) The program used "grass roots" training as much as possible. Data processing personnel were involved in writing and creating courses, recording audio programs, etc. The desired results were increased

participation for the employees directly involved and, secondly, increased credibility/acceptance of the program for employees in general.

(3) "The personal touch" was seen as important in obtaining and keeping employee participation. Personal attention by the training center administrator was singled out as a key factor in the program's success.

Still another interviewee who emphasized employee tactics felt that active support at the employee level is essential to a program. The interviewee explained that a project may fail even with management support, if it has not been well enough communicated down through all staff levels. Thus, the organization must "manage their expectations": "Go in and show them benefits, you know. 'This is why we're setting up the training program the way we're doing. If we do this, you know, these are the benefits we are going to benefit from it...So we need your support.'" Communication with employees should also take place, she stated, through brochures and advertisements of various kinds and through special brown bag lunch sessions. And the need to communicate does not end; she said, "I think you still have to keep selling...It's a continual process. It's not a one-time selling deal."

Various other tactics offered in the interviews are as follows.

(1) Get managers involved; then employees will get involved.

(2) Send notices of class enrollments, failures to attend classes, etc. to employees.

(3) Make the employee accountable to his/her manager for acquiring assigned training.

(4) Perform a training needs analysis that includes an individual training plan for the employee.

(5) Distribute listings of available courses and brochures on special courses.

(6) Circulate a class announcement through the organization some time before a class is scheduled to begin. Include an enrollment form which the employee fills out, has signed by his/her manager, and then returns to the training department.

Acquiring Management Support

Of the three major types of strategies examined, gaining management support received the most emphasis. Six of the training managers discussed this strategy at some length. The principal tactics used to gain management support are listed below. The tactics are arranged in a loosely chronological fashion, beginning with those appropriate for the earlier stages of a program and moving toward those which are more useful in maintaining a program.

(1) Plan thoroughly.

Several of the interviewees discussed the need for

careful planning at the beginning of a program and also at critical expansion points later on in the program. One training manager pointed out that such planning sessions should be used to define the philosophy of the program and determine the means of acquiring management support.

(2) Secure a Strategic Position in the Company.

Three of the training managers pointed out the importance of being properly positioned in the company. One of the interviewees explained, "You must be able to work with the strategic people in data processing systems development and data processing delivery or the production area operations side. So wherever you are placed, you must be able to function as a peer with those people and be involved in their planning, so that skills planning can go right along with machine planning, hardware planning, software planning." Another of the training managers felt that being positioned near top management had been the most significant factor in the success of her program. This had allowed her easy access to top management; she was able to stay informed about corporate goals and was able to seek management's advice on problems.

(3) Learn the "Buying Habits" of Management.

The training manager from the petroleum company felt that in order to gain management backing "You have to

learn their 'buying habits'... What is their 'hot button'? What happens to turn them on?" Once the trainer knows this, s/he may even have to sell training by use of an artificial or political need in order to be able to begin addressing real training needs.

(4) Use "Outside Credibility" When Possible.

The training manager from the department store chain explained the advantages of using outside consultants/ expertise in order to give credibility to projects. The credibility of IBM's recommendations had helped to sell a concept that was central to her program.

(5) Have Top Management Speak During the Initiation.

It is vital, one interviewee commented, to go as high in the organization as possible with the proposal for a training program. Once support is gained here, top management should communicate the change to middle management, ideally by speaking to middle management groups.

(6) Sell Training as a Business Need.

The management tactic that was given most emphasis by one of the interviewees was selling the skills planning process to management: "[The best method is] for business to see skills planning as a business process that is necessary for performance requirements to be met." She had accomplished this by educating executives through introducing the "cycle of perform-

ance planning" with MBO and related techniques.

(7) Explain the Benefits of Training.

Early in the process of selling training to management, it is especially important to communicate the benefits of training. The benefit pointed out most often by five of the training managers was the much lower cost of in-house training as compared with the cost of outside seminars.

(8) Place the Responsibility for Training with Management.

Secure from top management the agreement that the responsibility for employee training is a part of each manager's job description. A manager's effectiveness at training employees thus becomes a part of the manager's own review. Within this context, the training department serves as a resource to help in acquiring needed training.

(9) Begin Small with a Trial Area.

"What won it for us," one training manager explained, "was the starting small with a trial area, building on steps that were easy to work with and then highly publicizing our successes so that we finally had a body of evidence so that we could go right to the very top and give them our irrefutable evidence of what we were able to do. In other words, we didn't sell futures; we sold present fact. We were already

successful and gave them an opportunity to share it." Another interviewee spoke in terms of beginning a program as a "project" (a smaller-scale effort with more limited goals.) Then evolve with the project, evaluate it, and prove it to be cost-beneficial. Ultimately, if successful, the project is grown into a "process"---something recognized as a necessary component to the functioning of the business.

(10) Involve Managers in Planning/Decision-Making/ Training Processes.

One interviewee explained the importance of getting managers to participate in planning/decision-making: "Probably the key to making anything work is to really be sincere and ask the people that are going to be involved what input they have, what they'd like the results to be, and not go in with a preconceived set of standards and procedures...but to actually, really listen." Other interviewees discussed securing management participation (1) in the monthly course request process, (2) in management training courses, and (3) in taking some of the technical courses.

(11) Maintain Individual Contact with Managers.

Four of the interviewees commented on the value of frequent personal contact with managers. They pointed out the need to meet with them often to discuss their training needs, to find out what they're thinking

about the training program, and to keep them informed of developments in the program. One of the training managers found a yearly needs assessment with individual managers one of her most useful devices. After receiving the needs assessments from managers, she met with each one to "validate" the requests...to discuss requests in detail and also discuss specifically the effects of not providing any of the requested training. This gave her (1) individual contact, (2) a planning tool for the next year, and (3) a selling tool to request additional staff/facilities as needed to provide training. Another of the interviewees commented that it is necessary to treat each manager as an individual: "You really need to have a lot of methods in mind because every manager and every upper management person you talk to, everybody deals a different way."

(12) Meeting with Management Groups.

One of the most heavily emphasized needs was meeting with management groups. A wide variety of examples were offered.

--Holding general management meetings with outsiders (consultants, vendors, etc.) with high credibility;

--Holding training advisory committee meetings. One training manager talked about this as being

among the most beneficial things he had done. Early in the program the committee of "up and coming" middle level managers had helped significantly with formulating the program and then building support for it. Another training manager had "won over" resisters by having them appointed to a training advisory committee;

--Showing special video programs for management groups. Several training managers had acquired "video journal" programs for such showings. One had used especially good programs produced by the training department at these meetings. This training manager had also held multi-media "dog and pony" shows for managers in order to demonstrate the capabilities of the training department;

--Conducting executive "seminars" on such topics as the basics of data processing in order to build management support outside of the data processing division;

--Participating in special management committees functioning as task forces. One of the training managers considered his participation in a productivity committee one of his most significant successes. It had given him good communication with a number of managers and had genera-

ted especially good ideas for his training program.

(13) Acquire "Champions" in Top Management.

"Much of top management support," one interviewee explained, "has come from acquiring important 'champions'... It has come about through actually showing them examples of what we have done and by encouraging people who are well pleased with our work to let others know about it by getting several champions of our cause who we pat on the head every time they are vociferous about how great we are and so they just keep on doing it. It's just kind of a PR effort."

(14) Develop a Thorough Reporting System for Management.

Four of the training managers talked about the benefit of a thorough reporting system for management. Principal points made were the need (1) to demonstrate through reports a "behavioral change" in employees, that is, an improvement in job performance; (2) to use a reporting system to keep managers informed and involved; (3) to use training statistics (number of requests, courses taken, etc.) to justify staffing level; (4) to develop a charge-back system, indicating to managers the "amount wasted" when their employees have cancelled courses or failed to attend; and

(5) to evaluate the program and then disseminate information to managers.

(15) Continue to Sell to Management.

In the words of the interviewee from the manufacturing company, "You've always got to be out in front and being positive and selling, and, you know, promoting and going for it." Selling is not done once and then forgotten; it is a continuing need.

Publicity/Communication Methods

The third major type of strategy, publicity/communications, "cuts across" both of the other categories. That is, many of the items discussed under "employee tactics" and "management tactics" are essentially communication tactics and appear here also. It is often difficult to make the distinction between employee or management tactic, on the one hand, and communication tactic, on the other. A tactic may be either or both, depending on the emphasis given.

This category is treated here separately to reflect the discussion by some of the interviewees of communication as process--aside from the kind of audience for the communication. The audiences--both employee and management-- have already been treated; the focus here is the need for effective means of communication with the organization. In six of the nine organizations, there was moderate to heavy dependence on publicity/communications

methods.

One training manager felt that the problems related to rapid technological change are worsened by the lack of communication characteristic of data processing. Personnel are not kept informed about changes, and this increases the threat and the anxiety connected with change. The interviewee placed strong emphasis on the need for the organization to communicate change down through all levels of management to all affected employee levels. In other words, top management announces change to middle management; middle management spreads awareness through staff meetings, etc. Thus, the organization "manages expectations" during change. It is vital, she stated, that communication be handled in this way rather than through the "rumor mill" which may magnify anxiety about change.

Another of the interviewees explained that a central finding of a productivity comittee on which he had served was the need for improved communications in data processing. Thus a basic goal in his training program had been to help provide improved communications. Several components of the program were designed specifically to accomplish this goal.

The principal communications tactics discussed in the interviews are as follows.

(1) Word of Mouth Communication.

Effective word of mouth communication was said to have

been the most important factor to the success of one of the programs. Employees were treated "royally" at the training center, and positive communication spread through the organization by word of mouth. The importance of this method was pointed out in three other interviews.

(2) Personal Communication Between Training Staff Members and Other Personnel.

As one interviewee stated, "Every time you see people in the hallways, you know, anytime you can get them, stop them. Ask them a few questions to see what's on their mind; see what they think about this." She explained that the trainer must keep up a constant communicating and selling process.

(3) Communication through Group Meetings.

Four of the training managers spoke about meetings as an important means of communicating, both with employees and managers. Types of meetings recommended were "brown bag" lunch meetings, promotional multi-media meetings, advisory committee meetings, and monthly management meetings to report on training program progress.

(4) Communication in the Classroom.

Two of the training managers discussed the classroom as a communications vehicle. Three types of classes were suggested: employee orientation programs, "con-

tinuing education" programs to share new product information, and seminars on data processing for managers outside of data processing.

(5) Communication through Contact People.

One interviewee explained, "What we try to do is establish a key contact; examine your audience; pick out the contact; and then start developing your relationships there." She explained the process of selecting the key contact as follows. "Somebody good to work with; somebody who's demonstrated some organizational skills. And if that person's interested, sometimes a little initiative shown by that person makes them a training coordinator."

(6) Printed Publicity/Communications.

The interviews revealed a wide variety of printed publicity/communications devices.

--Reports in computer print-out form

--A comprehensive catalog of all courses, course descriptions, and course outlines

--Monthly publications about upcoming courses

--Reminders about courses scheduled or classes missed

--Reports to managers on course attendance and "dollar use"

--A yearly "course booklet"

--A quarterly class schedule

--Catalogs of rental courses available for order

--Brochures on special courses

--A training manual explaining program procedures

--A monthly newsletter highlighting special classes

--A packet of forms to establish enrollment procedures

It should be pointed out that one of the interviewees was opposed to the use of printed communication devices such as brochures or course listings. She explained that this method of communicating placed the training department in the unfavorable position of requesting participation. The proper position, she stated, was that of incorporating training into the essential functioning of the business in such a way that training is no more an option than any other aspect of the business.

Useful Roles/Characteristics for the Trainer

A variety of roles were discussed as being appropriate for the trainer. Two of the interviewees saw themselves in the role of "resource person." In this role they facilitate the learning process by using the resources available to them to solve problems and to find answers to training questions. They help with course selection, enrollment, and they assist in finding technical assistance as needed.

One of the training managers considered herself a "PR person" for the training department. Her function in that role is to establish credibility for the training department by demonstrating that the department does care-

ful research and preparation for its courses.

Three of the interviewees spoke of themselves in the role of change agent. One said the trainer needs to be a person who can tell the organization when it is "too fat" and tell it how to become lean again.

Another of the three considered herself an internal consultant who carefully recommends change but does not force or demand it. She saw the trainer as being the person to involve the organization in goal-setting and the implementation of change. The third interviewee discussed the trainer as being involved in long-range organizational change through career development efforts...through personal growth and organizational change.

One interviewee had found the role of technical expert/educator most useful. She explained that knowledge of technical standards and methods of doing things made it possible to advise and instruct more effectively.

In a similar discussion, another training manager explained her preference for a person with an educational background (as opposed to a technical background) in hiring a trainer. The educator, she stated, has a research background and will make better use of possible sources in preparation of a course. In addition, the educator is trained to think in terms of arranging components to build a curriculum or a course; the educator is thus more likely to be flexible about changes in a course or curriculum.

Interviewees discussed a variety of characteristics needed by the trainer:

--Commitment

--Familiarity with courses

--Capacity to be a team member

--The characteristics of a "people person"

--The ability to talk to all levels of people, and at their own levels

--Adequate previous experience to give needed credibility

--Strong business skills

--"Results-orientation"

--The ability to solve problems

--An analytical nature for diagnosing training needs

--Knowledge of technical standards and methods

--Both teaching and technical backgrounds

--Patience

--Determination and enough energy to "do the job right"

--A desire to teach others

A Model for Implementing Training Programs

Analysis of the interviews reveals a good deal of similarity regarding the steps to be followed in successfully implementing a training program. Seven of the training managers suggested sequences of steps--and there are significant similarities. Two training managers did

not recommend a particular sequence of steps, but one of these did discuss important outside factors that affect implementation.

The following is a consolidation of the various recommendations in the interviews. This suggested sequence of steps provides a model for implementing a training program in the kind of organization examined in this study.

(1) Complete a thorough training needs analysis of the organization in order to plan the program. At the same time, determine what the management attitude is toward such a program...whether it is already accepted or will need to be sold.

(2) Get the program "adopted" by top management. This is, in part, a matter of getting top management involved in planning the implementation and in determining whether adequate resources are available. In addition, it may be necessary to learn the "buying habits" of top management.

(3) Communicate the change down from top management through middle management to all affected levels. Manage the expectations of the organization to remove as much resistance as possible.

(4) Organize thoroughly; then initiate the program. If management support is extremely strong, it is possible to implement the complete program. Otherwise, begin the program small with a trial area and build

with incremental steps that are easy to take. Evaluate results at each stage in the program and modify development as required. In short, begin the program as a "project" and grow it into a "process."

(5) Continue to communicate with both management and employees about the program. Keep the program "visible" through all the means of communication possible.

(6) Provide feedback to top management through reporting systems, word-of-mouth communication that moves up from employees through management, and through "champions" among upper management.

Top Management Support

One of the most striking conclusions to be drawn from analysis of the interviews is the great importance assigned to top management support by the interviewees. Seven of the nine training managers who were interviewed emphasized that top management support is essential for successful implementation of a training program. Considering both (1) the number of training managers who made this point and (2) the amount of emphasis given, this emerged as the interviewees' principal concern in implementing a training program...and it is a concern at all points from initiation throughout the lifetime of the program.

One of the training managers explained, "I think the major thing in any change process in a company or organization is to get the approval and backing of the people at

the top. If you have management backing, then approval seems to run downhill." He made this statement within the context of an organization which has strong management support, but he had previously been in another company where support did not exist--and he spoke with conviction about the difference between the two training programs. Another training manager with similar experience in several organizations commented, "In the initial establishment of the program, the primary ingredient was top management support. This was active support; it was the kind of support where the managers would sit down with the people and say, 'We are establishing a training program and we expect you to take advantage of it."

The point was made even more emphatically by an interviewee from a manufacturing company: "Top management support...that's 98% of the battle. I really think it is because, again, you can, you know, have the greatest program in the world, but if you're implementing it from the staff or even just the first line managers...the upper management come in and say, 'Well, we've got this top project.' Everybody drops everything." Therefore, she explained, it is vital to go as high as possible in the organization when presenting a proposal for a program.

Support must be gained at the top management level before proceeding on with other parts of the implementation. In the words of a training manager from the data processing

division of a large bank, "Executive management must be in on it in the beginning or you're in trouble." She continued, "[You] have to have top people say, 'Hey, this is something we fully back.' And they have to be firm. It's not good enough to just say, 'We back it,' but that 'You will back it!' But not really threatening. It's just, 'OK, this is what the bank wants to happen, and we're going to grow as a company and as a data processing center; then, this is what we feel needs to happen.'" Another interviewee pointed out that top management involvement at this point may not need to be extensive: "They may sometimes come into a staff meeting and say, well...all you have to do is say a few words." She continued, "It's amazing what one top manager, you know, a vice president can do for you. In two minutes he can effectively make or break the whole thing."

The training manager for the data processing division of a major airline offered one of the clearest examples of the importance of top management support. An innovative training program had been proposed by a senior programming analyst, but it had not been accepted or initiated. The proposal called for the hiring of several technical data processing personnel and several non-technical educators, the two groups together making up a new training department. The two groups would complement each other and provide the right mix of needed skills; the groups would

train each other. Some time after the failure of the proposal, an almost identical program had been proposed by a person at the same level in the organization. This time, however, the program was initiated, primarily because the vice president of the organization had adopted it as his "pet project." Not only was the highly innovative program initiated, it has succeeded at acquiring a large staff and impressive facilities and has also, by all evidence, had a significant impact on the organization. A similar example came from one of the bank data processing "shops." Here, a training proposal failed because of the "crisis management" (a preoccupation with immediate solutions to immediate problems) characterizing top management at the time. Some time later, a "very insightful and foresightful" vice president joined the organization, and the management climate changed significantly. The new data processing manager was successfully sold on the same proposal--consequently, the program was initiated. Although continued selling has been necessary, the program has apparently been highly successful.

Staff-Initiated and Management-Initiated Programs

The two examples above (the airline and bank data processing organizations) appear quite similar in that top management support essential for program implementation was acquired in both cases. An important distinction should be made, however, between the two situations. In the first

example, management "adopted" the project at the time it was proposed. From that time on, the project belonged to management; it had, in effect, started with management and, therefore, received nearly absolute support. In the second situation, management also accepted and supported the proposal; the program was initiated and has succeeded. But in this case the program remained a "staff-initiated" program. The project manager who had sold the proposal continued to be responsible for the program. Management did not "adopt" it to the extent that they owned it. The continuing perception of top management was that the project leader had initiated the program. Thus, it was "staff-initiated," in contrast with the "management-initiated" program in the other data processing organization.

Systematic analysis of the information in the interviews (through tabulation and charting) reveals that these two characteristics of the training programs--management initiation and staff initiation--appear to be closely associated with various other program characteristics. In other words, management initiation appears to be connected with and to help predict a particular set of characteristics; similarly, staff initiation is connected with another set of characteristics. These relationships are as follows.

(1) Previous Unsuccessful Attempts at Initiation.

The staff-initiated programs studied are closely asso-

ciated with earlier, unsuccessful efforts to implement programs; the management-initiated programs are not. Four of the five staff-initiated programs were preceded by unsuccessful attempts at initiating programs (one of the four is included because of an initial period of one to two years of unsuccessful initiation that led the organization to abandon that type of program). Only one of the four management-initiated programs (the "pet project" program discussed above) had an earlier, unsuccessful attempt at initiation.

(2) Resistance During Initiation/Implementation.
The staff-initiated programs studied are closely associated with organizational resistance to initiation/implementation; the management-initiated programs are not. In the staff-initiated programs, four of the five had met with at least moderate resistance. This was true for only one of the four management-initiated programs.

(3) Amount of Management "Selling" Required.
The staff-initiated programs studied are closely associated with the need for extensive selling of management during initiation/implementation; the management-initiated programs are moderately associated with this characteristic. Four of the five staff-initiated programs had required moderate to strong selling by the training manager. Two of the management-initiated

programs had required moderate selling by the training manager.

(4) Management Support.

The staff-initiated programs are not associated with management support at initiation. The management-initiated programs, however, show a close connection with management support during initiation. Four of the five staff-initiated programs had less than adequate support at initiation, while all four of the management-initiated programs had enjoyed strong management support. Although all programs seemed to have developed management support at the time of the interviews, two of the training managers from staff-initiated programs later explained (in "off-the-record" discussions not formally linked to their interviews) various problems indicating possible lack of solid management support.

The data analysis above leads to significant findings about the implementation of "people-related" change projects in organizations like those studied. A change program which is initiated by line/staff personnel is more likely to have difficulty succeeding than the management-initiated program. The program proposal coming from line/staff may not even be approved for initiation. Even if approved, this program will not be as likely to receive adequate management support during initiation. It

will be more likely to encounter organizational resistance throughout the lifetime of the project. And it will, perhaps, require more management selling at all stages, even late in the program when management support seems to have been gained.

On the other hand, the change program which is management-initiated--which is conceived by management or immediately adopted by management--is likely to fare considerably better than one "championed" by line/staff personnel. The management-initiated program will have a greater likelihood of strong support from initiation throughout the implementation. Extensive management selling is less likely to be required later in the program to maintain management support. And it will be less likely to meet organizational resistance during initiation/implementation.

Quite obviously, staff-initiated training programs can and do succeed. They can ultimately be very successful. But the data analysis produces two conclusions about these programs that should be considered: (1) staff-initiated program proposals often "die aborning" and never lead to initiation at all; (2) those programs which are initiated will be likely to face a more difficult struggle for their existence. This may mean, for one thing, that daily concerns in the staff-initiated program will be quite different than in the other type of program. It may be

necessary to be involved on a daily (or at least a more regular) basis with overcoming resistance, with maintaining management support, and with "advertising" to the organization. In short, common concerns in this environment are "survival" issues. Considerable time and energy can thus be expended on the justification of existence, rather than in focusing on the reason for existence...providing training and career development opportunities for the organization. The interviews revealed that the more common concerns in the management-initiated programs are those more basic issues: "What training or change program is needed? How can that need best be met? How well are we meeting that need now?" One might speculate (though the study did not measure this) that more effective use of resources, more effective training, and more significant impact on the organization would come from such an environment.

One of the principal conclusions to be drawn from the research, then, is that the change agent in the kind of organization examined should focus on gaining management support for a program. In particular, the change agent should seek early management adoption of a program if it is being submitted to management as a proposal. Specific recommendations for presenting the proposal will be offered later in this chapter. The matter might be summarized in the partly humorous remark of one of the training managers (one who had implemented programs of both

types discussed): "So the important thing is--whatever change is to take place--to gain approval, not just tacit approval, but backing from the very top. If you don't have that, you almost ought to give up and reconsider making whatever change you want to happen."

Recommendations for Implementation

Proposal Recommendations

The following list of recommendations is a compilation of a variety of tactics drawn from the interviews. The recommendations are intended to offer guidelines for the process of drawing up and submitting a proposal to top management for the implementation of a training program.

As indicated in the previous section of this chapter, early management acceptance can be extremely important to the success of a program. Ideally, top management would adopt the proposal...would "own" it so completely at this point that adequate support would be given during the initiation and throughout the lifetime of the project. If the proposal is successfully prepared and presented, the program may be perceived as having begun with management. As was pointed out earlier, management-initiated programs are less likely to require selling to management during implementation; and they are more likely to have management support during initiation. Thus, careful planning and preparation at this early stage are vital.

(1) Complete a thorough needs analysis to determine train-

ing needs of the organization.

(2) Take a sounding of management climate. Is there already support for a training program, or would it have to be sold to management? Also, to what degree does "crisis management" exist in top management? If management is operating in this fashion, a proposal might have little chance of being accepted. It is probably advisable in this case to wait for a time when the organization is more stable.

(3) Assess the economic climate of the organization. The company is more likely to accept a proposal and implement a training program when economic conditions are good.

(4) Make the proposal thorough, perhaps including a review of similar training programs in other companies.

(5) Submit the proposal as high in the organization as is possible (and appropriate).

(6) Attempt to have top management "adopt" the program at this point (after review of the proposal). If top management does not adopt it here, the program may be much more difficult to implement. There will probably be greater resistance to the program; and growth will probably not be as rapid.

(7) Find out the "buying habits" of management. This may help to get the program fully accepted. In some cases, it may even be necessary to sell the program at

this stage, as one training manager put it, "for the wrong reasons"--that is, with an artificial or political benefit rather than the real benefits to the organization. Hopefully, however, a business need can be used...a business need such as the necessity of the skills planning/development process for the company to be able to meet its performance requirements.

(8) Get top management involved in planning the implementation and in determining whether adequate resources are available. This may assist in getting the program fully adopted.

(9) If possible, propose a strategic reporting position for the training department/program. The training manager will need access to the company goals and plans in order to do the people-change planning which should accompany "machine planning." Being located close to top management will do much to help assure the success of the program.

Initiation Recommendations

The following list of recommendations is a compilation of a variety of tactics drawn from the interviews. The recommendations are intended to offer guidelines for the process of initiating a training program (that is, for carrying out the first steps in implementation).

Having the proposal for the program accepted does not, of course, guarantee a successful initiation.

Even having acquired good top management support does not eliminate the need for patient and persistent work throughout the organization. Most of the organization is still unaware of the project at this point...and the task now becomes one of communicating and selling throughout the organization. The training manager's role will become that of public relations agent during this stage of the project. Early in the initiation the participation and support of middle management must be acquired. Middle managers must become involved enough in the program to take an active and continuing part in the training of their employees. The ultimate measure of the success of the program will be the degree to which middle managers continue to require their employees to attend training sessions.

(1) If top management support is strong, it is possible for the organization to initiate a full-scale program. Otherwise, it is advisable to begin small with a trial area and grow the program by incremental steps, evaluating the program at each stage and modifying as necessary.

(2) Design the program to fit the present environment and needs of the company, even if that means offering training that is quite different from what is intended for the program later on.

(3) Have top management communicate the change down through middle management to all affected levels of

employees. If possible, have someone in upper management speak to management groups, explaining the program and the reasons for supporting it. Manage the expectations of the organization by communicating the change as thoroughly as possible.

(4) Sell the benefits of training to the organization. Use available communication channels to make both management and employees aware of the advantages of the new program. Employees will very likely be interested in career development provided by the program. Management, on the other hand, will often be highly interested in the cost-benefit of the training program. Another useful possibility is selling skills planning/development as a business process that is necessary for performance requirements to be met. Of course, if top management has fully adopted the program, its advantages will be communicated to middle management by top management; and the need for further selling will be greatly diminished.

(5) Place the responsibility for training with middle management. Secure from top management the agreement that the responsibility for employee training will be a part of each manager's job description. A manager's effectiveness at training his/her own employees thus becomes a part of the manager's own review. Within this context, the training department serves as a re-

source to help in acquiring needed training.

(6) Acquire "champions" among upper management. Design a few of the early projects to be especially pleasing to some of upper management--perhaps effective training for their areas of critical concern. They may then be outspoken enough about the program to help spread positive communication through the organization very quickly.

(7) Involve middle management in the initiation. A training advisory committee may be highly useful for gaining their participation. Other effective means may be (a) involving them in a needs analysis/curriculum-planning project; (b) involving them in "piloting" some of the technical courses; and (c) enrolling them in management training courses. The essential ingredient, whichever means is used, is to communicate with them regularly about what they need from the program.

Recommendations for Later Stages of Implementation

The following list of recommendations is a compilation of a variety of tactics drawn from the interviews. The recommendations are intended to offer guidelines for the later stages of the implementation process.

Even the well-established, successful program will require continued effort at communicating and selling. In addition, the training manager must monitor any changes in the project and in the organization which could create

surprises if left unwatched. Finally, retaining management involvement and support is essential if the program is to endure as an effective part of the organization.

(1) Establish methods of evaluating the progress of the program and reporting the results to management. Whether by printed reports, meetings, or other means, keep management informed of what is happening to the program. Report on courses offered, number of employees who have attended courses, problems with poor attendance, and other such matters.

(2) Watch for any significant change among middle management that might affect the support for the training program. In one of the organizations studied, an exceptionally large turnover of middle managers destroyed much of the support that had been gained and seriously disrupted the program. Similarly, in another organization, signs of deteriorating middle management support began to appear, suggesting that more selling should have been taking place. Thus, even after a program has been successfully initiated, it is necessary to watch all "vital signs" to see that support remains intact.

(3) Keep middle management actively participating in the program by the showing of special management programs, by involving them in a monthly course request procedure, or by whatever means are appropriate in the

organization.

(4) Continue to communicate and sell to all levels of the organization. As one training manager emphasized, "It is not a one-time selling deal." The need continues as long as the program continues.

(5) Hold planning sessions at critical expansion points in the program. Assess changes that have already taken place in the program. Then determine what the program should be if expanded or changed further. Finally, determine the strategies to be used to successfully bring about the change.

(6) Expect that the program will evolve in some unforeseen directions. Some of the most beneficial developments may be unplanned and unexpected. Furthermore, the experience gained in each stage of the program may lead to modification of the program. The trainer must be flexible enough to take advantage of this evolutionary process.

Recommendations for Further Research

This research has revealed a remarkable awareness on the part of the training managers interviewed of the "academic" process of planned change. Almost all of the training managers were obviously applying the tools of the change agent. Strategies for implementing and maintaining change programs were among their basic concerns. There appear to be two principal explanations for this phenomen-

on: 1) a number of the respondents had examined planned change literature or had attended workshops on organization development/planned change; and 2) most of the respondents had acquired an understanding of planned change through the process of working to bring about change in their organizations. Their jobs had proved much broader than simply providing training: first of all, they had to change attitudes in order to have the chance to train; furthermore, carrying out the training emerged as a planned change process. Although they were not appointed change agents in their organizations, that role had evolved for most of them. During the interviews they offered planned change strategies derived from their observations and experiences as change agents. For the most part, therefore, the interviews contained discussion of situations in which theory and practice had functioned together inseparably...each supporting and reinforcing the other. Such cases serve to dispute the frequent stereotype of theory and practice as being widely separated opposites.

If further research can make effective change agent tools more accessible, it would seem likely that the tools would be put to good use in planned change "laboratories" like those examined in this study. Ultimately this would help create organizations that are not only more profitable but also more aware of people-needs during the process of change.

The following are specific recommendations for further research.

(1) Further research is justified regarding the background/preparation needed by the trainer. The interviews raised the question of the appropriate mixture of education, business, and technical skills. This, of course, has implications for the curricula of the graduate schools which assist in the preparation of the students to fill such positions.

(2) Further research could well be conducted to focus more specifically on the process of "adoption" of a program by top management. This is a fundamental concern to the change agent who is submitting a proposal for a training program in an organization such as those studied.

(3) Further research could well be justified regarding the effect of the high-technology environment on the implementation of people-change programs, specifically on the problem created by what appears to be an inverse correlation between technological change and the amount of communication done about that change.

(4) To further test the conclusions of this study--that is, to see if similar results are obtained from similar populations--additional studies which replicate the procedures would be in order.

(5) Further research would be in order to test the conclu-

sions of this study with a wider population of high-technology organizations than was possible here.

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APPENDIX A

INTERVIEW QUESTIONS

The following questions were derived from heuristic observation in large data processing organizations prior to this study.

1. What proved to be the best methods for gaining student participation in the program?
2. What were the best methods of gaining management support and cooperation as you introduced the new program?
3. Did you depend very heavily on "advertising" the program through brochures, etc.?
4. What problems did you encounter in the earlier stages of introducing the new program?
5. Were there things you tried which did not work out well--methods you would not use again?
6. What types of people in the organization prove to be the most help in getting a new program underway? How can you recognize these people?
7. Was there any unexpected resistance to the program that surprised you? How did you deal with it?
8. Did you discover any especially good methods for making the program appear advantageous to the organization?
9. What "promotional" methods worked best for the program?
10. What was the best thing you yourself did in getting the program accepted?
11. What was the most critical factor in getting the program accepted? What finally "won it" for you?
12. Did you discover any sequence of steps for introducing

a new program?

13. What groups within the organization should be involved in a new program first in order for it to succeed?
14. In terms of your own identity within the organization, what role worked best for you in this project (that is, administrator, educator, expert, media producer, etc.)?
15. Considering yourself and other training department members, what proved to be the most important personal characteristics for getting the job done (the program accepted, that is)?
16. Does management request training programs or do you diagnose needs?
17. Were the requirements for the early stages of the project different from those later in the project?

APPENDIX B

COMPARISON CHART

Organizational Characteristics	Organization								
	1	2	3	4	5	6	7	8	9
Initiation/Support									
Initiated by management			x		x			x	o
Initiated by staff	x	x		x		x	x		x
Strong support at origin			x		x			x	x
Strong support at initiation	o		x		x	x	o	x	x
Strong continuing support	x	x	x	o	x	x	o	x	x
Unsuccessful earlier efforts	x	x				x	o		x
Need for Proper Positioning		x		x					x
Extensive selling required		x		x		x			
Moderate selling required	x							x	x
Emphasis on employee strategies	x					x		x	
Emphasis on management strategies		x		x	x	x		x	x
Early resistance		x				x	x		
Management resistance	x	x		x	o	x		x	
Employee resistance		x						x	
Resistance from hi-tech environment	x					x		x	
Role as change agent, PR person	x			x		x		x	x
Role as technical person/instructor			x				x		x
Heavy use of publicity		x				x	x	x	x
Moderate use of publicity	x								
Computerized mgt. reporting	x	x				x		x	
Use of printed publicity	x	x			x	x	x	x	x
Word-of-mouth publicity	x		x			x		x	
"Personal touch" communications	x					x		x	x
Meetings with managers	x	x			x	x		x	x
Classroom as vehicle for com.							x		
Employee to manager communications		x							
Use of contact people					x	x		x	x

x -- Indicates the organizational characteristic is present.
o -- Indicates the organizational characteristic is present but to a limited degree.