A MARKETING APPROACH TO CONTINUING EDUCATION FOR FISHERIES AND WILDLIFE MANAGERS

By

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ABSTRACT

A MARKETING APPROACH TO CONTINUING EDUCATION FOR FISHERIES AND WILDLIFE MANAGERS

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Managers of fisheries and wildlife are facing tasks of increasing complexity because of increasing demands our society is placing on these natural resources. Responding to these changes necessitates continuous learning of new skills in several aspects of human dimensions. Continuing education for these skills can be developed and implemented for fisheries and wildlife managers using a marketing approach.

In this dissertation, marketing is applied to development of continuing education programs using the Application Strategies Package (ASP) of the Responsive Management Project as an example. The ASP is a system of 3 workshops covering the topics of marketing, responding to change, and communication and dispute resolution targeted at mid-level managers in state fisheries and wildlife agencies.

To develop the ASP, a situation assessment was conducted using a survey and a literature review to determine trends and current conditions in continuing education for managers. A strategy was then developed that targeted the content, cost, location, and promotion of the workshops to the chosen market segment of mid-level managers. Implementation of the

ASP was facilitated by providing state agencies that were members of Responsive Management the workshop participant's manuals, leader's guides, and leadership training developed as a result of the situation assessment and strategy aspects of marketing.

Evaluation information resulting from initial use of the ASP in state agencies supports the need for skill development in human dimensions areas for mid-level managers. A critical skill needed is the ability to work as a team member in groups that are addressing the increasingly complex management tasks of today and the future.

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Overview

Managers of fish and wildlife are facing tasks of increasing complexity because of increasing demands our society is placing on these resources (Gale, 1987). Changes occurring now in all areas of the management task necessitate continuous learning of new skills in areas such as communication, public involvement, dispute resolution, and responding to change (Hunter, 1984). Continuing education programs for public agency managers for these skills can be developed and implemented using a marketing approach (Beder, 1986).

In this chapter, marketing is described as a framework for the exchange that occurs between producers and consumers of products or services in both the private and public sectors of the economy. Chapters 2-4 then take the public sector marketing framework that has been presented and apply it to continuing education programs for public agency managers, specifically those in state fisheries and wildlife agencies.

The first phase of marketing, a comprehensive situation assessment, is completed in Chapter 2. Chapter 3 presents marketing strategy development, in which market segments of fisheries and wildlife managers are identified, described, and targeted for development of specific educational programs. Chapter 4 completes the marketing approach with recommendations for implementation of programs developed in the strategy phase.

Chapter 5 presents and interprets data resulting from initial implementation of the continuing education programs developed in chapter 3. Summary and conclusions of the entire marketing process used in this marketing approach to continuing education of fisheries and wildlife managers are in Chapter 6.

Dissertation Goal and Objectives

Dissertation Goal

The goal of this dissertation is to apply public sector marketing to development of continuing education programs for state agency fisheries and wildlife managers.

Dissertation Objectives

<u>Objective I</u>: Introduce principles of marketing, including situation assessment, strategy development, and implementation.

<u>Objective II</u>: Assess the situation for continuing education of fisheries and wildlife managers.

<u>Objective III</u>: Develop a strategy for continuing education of state agency fisheries and wildlife managers, based on the situation assessment in Objective II.

<u>Objective IV</u>: Implement the continuing education program developed in Objective III.

<u>Objective V</u>: Apply selected results of program implementation to refinement of continuing education needs of fisheries and wildlife managers.

Marketing Principles

The Marketing Model

"Marketing is the effective management by an organization of its exchange relations with its various publics. Marketing is not a peripheral activity of modern organizations, but one that grows out of the essential quest to effectively serve some area of human need." (Kotler, 1988). The word marketing comes from market, a place where an exchange occurs between a producer and a consumer. The marketing process can be thought of as a means to optimize benefits or satisfactions from the exchange to all parties (Rados, 1981).

Marketing as a process for determining and fulfilling needs with products or services has been fundamental to business and industry for at least the last 64 years (Converse, 1978). The effectiveness of marketing over the years is documented by many successful applications of marketing in American business. Several of these examples (DuPont, Apple, IBM, American Express, etc.) and the general attitude toward customers that pervade corporations that do marketing well can be found in Levitt (1986). Marketing as an orientation to consumers evolved from a selling orientation, which in turn evolved from a production orientation (Kotler, 1988).

A production oriented approach to the exchange between producers and consumers treats all customers alike. This is typified by a Henry Ford quote earlier this century: "You can have any color of Model T you want as long as it's black" (Rados, 1981). This approach works fine as long as competition is limited, and demand for a product or service exceeds supply. In the auto industry, supply eventually caught up with demand in cars, competition became keener, and there was more emphasis on selling (Kotler, 1988).

A selling orientation to the producer and consumer exchange is based on creating needs in consumers through advertising and salesmanship. The car industry in this country was very good at a selling orientation in the middle part of this century. For example, through the use of advertising, auto manufacturers created a need in consumers for an annual style change in car models. It became the "thing to do" to have the latest style of any particular model car (Fisher, et.al, 1969). This selling/advertising orientation is still extensively used today, but now advertising is usually applied within the larger context of a marketing orientation (Kotler, 1988).

A marketing orientation to the exchange between producers and consumers focuses on needs of the consumer, not of the producer or seller. In marketing, consumers are segmented into groups with similar needs using results of marketing research. The product (or service), price, location, and advertising are then developed to satisfy needs of a specific target segment. The proliferation of colors, styles, models, sizes, drive-trains, prices, dealerships, and advertising in the auto industry is an example of outcomes from a marketing orientation in the private sector (Kotler, 1988).

Figure 1 is a framework for marketing. Marketing steps for a product or service include a situation assessment, development of a strategy, and implementation of the strategy. In the strategy phase are 2 key sub-steps of marketing: segmentation and targeting. It is segmentation of the general public (consumers) into sub-groups on the basis of relevant variables, and then targeting specific products or services to specific sub-groups, that sets marketing apart from other forms of comprehensive planning (Kotler, 1988).

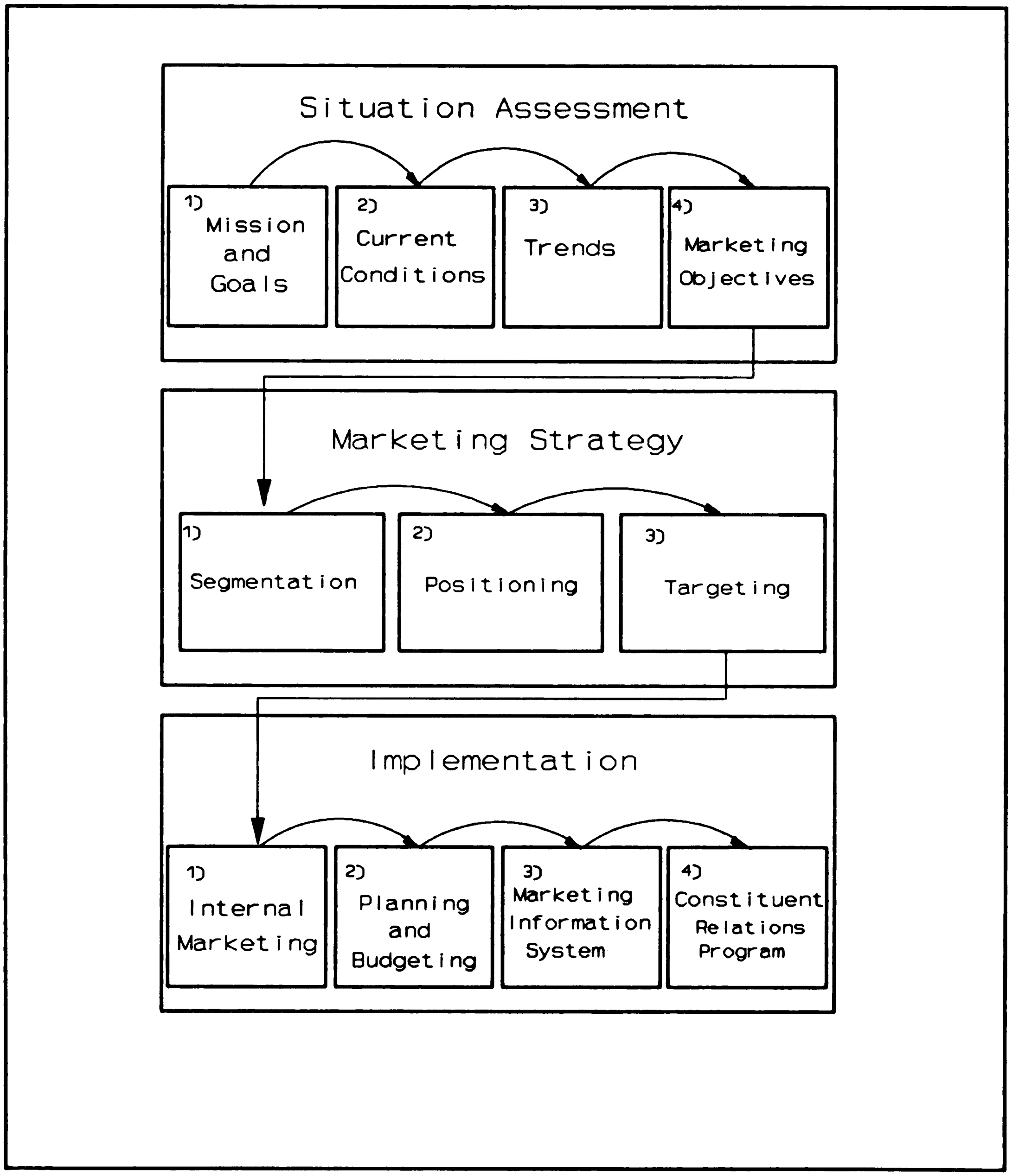

Figure 1: A Marketing Framework (Kotler, 1988)

Marketing in the Private Sector

Marketing of the Ford Edsel can serve as an example of marketing in the private sector. This example is particularly useful because it illustrates the importance of several key steps in a marketing orientation, and what can result from leaving them out. The Edsel, introduced in 1957, was one of the most costly new product failures in the history of American business. The marketing plan for the Edsel was incomplete, and short-circuited in several aspects, leading to failure of the car's acceptance by consumers. Each step in the marketing framework from Figure 1 follows below, with the Edsel as example (Kotler, 1980).

Situation Assessment: Mission

The mission statement in marketing clearly defines what business a company is in, and therefore sets limits on the exchange that occurs with its customers. In the Edsel example, Ford was in the business of manufacturing and selling cars and trucks in the 1950's.

Situation Assessment: Current Conditions

Current conditions are those strengths or weaknesses that a business must assess before developing a new product or service. Ford Motor Company did a situation assessment of current conditions in the automobile market in the early 1950's. Consumers who were moving up from inexpensive basic Fords and Chevrolets were buying General Motor's Buicks, Oldsmobiles, and Pontiacs. Ford management realized a fundamental weakness in the lack of car priced mid-way between the Ford and the Lincoln. They needed a mid-priced car to compete with those of General Motors.

Situation Assessment: Trends

Trends in the marketplace that might affect future sales of a new product should be identified and accounted for in the situation assessment. Trends in the automotive markets in the middle part of this century were for increasing numbers of car owners, and proliferation of models, styles, and prices to meet increasing demand.

Situation Assessment: Objectives

The assessment of mission, current conditions, and trends should lead to development of marketing objectives for a new product or service. Ford's marketing objectives, based on the situation assessment, were to create a new division of Ford that would have its own dealerships, selling a mid-priced car competing with those of General Motors.

Strategy: Segmentation

Segmentation is dividing a market into groups based on meaningful differences. In developing a marketing strategy, Ford segmented the market of car buyers into sub-groups based on demographics such as income, age, and geographic location. The market segment chosen for the Edsel was middle class, middle aged buyers, living in metropolitan areas, and wanting to move up in style and price from basic car models.

Strategy: Positioning

Positioning is the step where competition is assessed and accounted for in planning. Information concerning buyers of Edsel competitors was readily available from sales data of the General Motors cars the new Ford product was to compete with. The upscale Edsel was positioned in price to compete directly with Pontiacs, Buicks, and Oldsmobiles, not with Cadillacs or Ford's own Lincolns.

Strategy: Targeting

Ford then targeted the market segment chosen with the 4 p's of targeting: product, price, place and promotion. The product was a completely new car with "distinctive" styling and a new name. In cars, the name is an important part of the product. Many possible names aimed at the chosen segment were suggested by professionals, but these were rejected in favor of the name Edsel, Henry Ford II's son. This proved to be the first major mistake in Edsel development. The price was set by the need to compete with General Motor's mid-priced cars. The place was exclusive Edsel dealerships in major metropolitan areas. The Edsel was not sold in regular Ford dealerships. This decision was to be the second major mistake for the Edsel. The promotion was aimed at creating need in the targeted segment for a new, different car. This was accomplished by heavy print and radio advertising about the coming introduction of a completely new car, but left all details in secrecy. When the car was unveiled in the fall of 1957, this promotion method led to an initial buying frenzy. Unfortunately, this was very short-lived.

Implementation: Internal Marketing

Generally, implementation is the phase where all elements of targeting (product production, pricing, placement, and promotion) are actually accomplished. This requires internal marketing, planning, budgeting, continuing research, and customer relations. With respect to internal marketing, Ford Motor Company established an entirely new division for the Edsel. This meant a great of marketing had to occur within the company to assess the situation, develop a strategy, and implement plans for a whole new internal division.

Implementation: Planning and Budgeting

Planning and budgeting for the product, pricing, dealerships, and advertising occur in this step. For the Edsel, a third important mistake was made here, because poor planning and inadequate budgeting for production of the new car led to a poor quality product due to rushing of manufacturing.

Implementation: Marketing Information Systems

During implementation of marketing plan, it is important to conduct market research. This on-going research effort ensures that the product, price, place, and promotion continue to be targeted at the chosen market segment. Information for this research can come from several sources. Word-of-mouth, internal company records, and formal consumer research are among the possibilities. For the Edsel, feedback from this marketing information system was negative, the car was a failure within months of its introduction, and it was taken off the market in 2 years.

Implementation: Customer Relations Program

Customer relations are critical to success of a new product or service in the private sector. Ford's customer relations program at the dealership level included warranties and customer service standards for regular service. At the factory level, there were customer relations for unusual problems that could not be resolved at dealers. Ford's customer relations programs for the Edsel could not overcome the deficiencies of the car in styling, naming, and quality.

Summary of Marketing in the Private Sector Example

The three problems listed in the example of marketing the Ford Edsel were fatal to the car's acceptance. The name Edsel did not appeal at all to the target market. Henry Ford's choice of a name was a reversion to the old production oriented management (to paraphrase an earlier quote from Ford: "You can have any name of car you want as long as it's Edsel."). Styling of the car was not attractive to the target market. Ford did not do enough marketing research on styling trends when its designers were working on the Edsel. Finally, the Edsel was poorly made due to the rushing of production that resulted from poor planning and budgeting. This led to very negative consumer attitudes toward the car, since the target market expected quality for its money and the Edsel did not deliver. Furthermore, the exclusive dealership system for the Edsel left dissatisfied customers with few options for repairs.

The above example of marketing in the private sector describing the failure of the Edsel illustrates not only the steps of marketing but also the importance of doing all of them well. A marketing plan can be circumvented and lead to failure of a product in the marketplace if part of the situation assessment is left out (trends in styling information in the case of the Edsel), if a marketing strategy is faulty (a limited number of exclusive dealerships in the Edsel example), or if implementation is not executed properly (poor planning and inadequate budgeting for quality control for the Edsel as an example).

A marketing orientation to consumers in the private sector has been credited over the years with many outstanding successes in business such as McDonalds Restaurants and Walt Disney Enterprises (Kotler, 1980). Virtually every business in the U.S. today uses marketing, with its associated segmentation and targeting of consumers, in its basic management efforts (Levitt, 1986). A marketing orientation brings a business closer to its customers, a characteristic of excellent companies.

> "The excellent companies really are close to their customers. That's it. Other companies talk about it, the excellent companies do it." (Peters and Waterman, 1982)

Modern marketing in corporate settings is sophisticated. Segmentation is very complex, with markets described by combination of interacting variables that are used to predict purchasing and other consumer behavior (Arbitron, 1992; Kamakura and Russell, 1989). Mail order companies especially, have developed market segmentation to a very high level. They can target small groups or even individual customers as a market segment with specialized catalogs or customized advertisements in magazines (ZEOS Computer, 1992).

Marketing in the Public Sector

A marketing orientation to publics (consumers) has now become well-established in the public sector (government agencies), as well as in non-profit businesses (Fine, 1987; Lovelock and Weinberg, 1984; Crompton and Lamb, 1986; Kotler, 1988; Rados, 1981). Marketing in the public sector can effectively use the same process of situation assessment, strategy development, and implementation as is found in profit-oriented businesses. Marketing in the public sector is still an exchange, where products, ideas, or services from an government agency are exchanged for money, time, or political support from publics. In the translation of a marketing orientation from the public to the private sector, "business" is equivalent to "agency" and "customer" is equivalent to "public" (Lovelock and Wienberg, 1978).

When marketing is operationalized in a public sector agency, there are some important differences with respect to private sector marketing. For example, government agencies operate within a set of laws and regulations that place limitations on certain aspects of marketing such as research, promotion, and budgeting. As another example of differences, public sector marketing outcomes are more difficult to measure. Public satisfaction and political support improvements as a result of marketing are not as easy to quantify as monetary profit improvements from marketing in the private sector

(Lovelock and Wienberg, 1978).

According to Brown, et. al. (1978), the effectiveness of marketing in the public sector comes from 4 major elements. First is the structure and discipline that a marketing framework gives to planning and implementation of public policy. This structure can be the foundation of accountability for public policy decisions. Second is the adoption of a public (consumer) rather than an agency viewpoint in public policy. This viewpoint makes it less likely that a single manager in an agency will impose his or her ideas on policy-making. Third is the use of segmentation of the public as a powerful means to understand what publics want and need. The resulting understanding of public's needs can lead not only to greater satisfactions among user groups of agency services, but also to discovery of new markets among currently non-user groups. Finally, marketing information systems set up as a integral part of the process can serve as channels of communication among user and non-user groups that leads to a reduction in disputes and conflicts.

Kotler (1988) identified three potential criticisms against public sector marketing:

-Advertising wastes the publics money.

-Marketing is manipulative.

-Marketing research is intrusive.

The first two criticisms stem from a view of marketing as only advertising and selling, with the attendant "creation of needs" in the public. As marketing is transferred more and more from the private sector to the public sector, public agencies should realize that when they use marketing, they are adopting a customer orientation to provision of their services, not just "doing advertising".

In a marketing oriented approach to publics, advertising and promotion are just a small part of the marketing process. This is an important point, since the public sees only the advertising or promotion part of a marketing plan, most assume that marketing=advertising. Furthermore, the public's perception of advertising is largely that of manipulation. This leads to public resistant to the idea of marketing in a public agency. These criticisms are greatly reduced if marketing is viewed as a method of planning for public policy from the public's point of view (Kotler, 1988).

The criticism that research is intrusive may be valid, especially if standards for research ethics are not upheld. Crawford (1970) discusses ethical perspectives and problems of marketing research. Kotler (1980) provides additional writings on the subject of marketing research ethics.

Marketing in the Public Sector Example

An example of marketing in the public sector can be found at Land Between the Lakes (LBL). This example is adapted from Paterson (1987) and (1988). LBL is a 170,000 acres outdoor recreation and natural resource management area operated by the Tennessee Valley Authority (TVA) in Kentucky and Tennessee. LBL was established in the early 1960's as a national demonstration area for multiple use resource management. Throughout the 1960's and 1970's, LBL enjoyed increasing financial support from the federal government through TVA. New facilities were built, such as an operating 1850's farm, a nature center, an operating modern farm, and numerous forestry, fisheries and wildlife management projects were undertaken. During this period LBL was managed with a production orientation to visitors and user groups. Management made decisions based on programs and facilities offered, not based on visitor needs. That made no difference because federal funding continued to grow regardless of visitor use patterns.

In the early 1980's, federal support for LBL dropped off sharply. Programs that had formerly been well-funded now had to start charging entrance fees or user fees. For example, in the mid 1980's, LBL started to charge for a permit to hunt small game and for entrance to some facilities.

These changes in financial support lead to a new strategic plan that emphasized the need to succeed in the missions by satisfying "market needs" of visitors. In 1985, LBL management pulled 5 people from various sections (visitor information, fisheries management, conservation education, public relations, and top management) to create a marketing team. This team was charged with changing LBL to a marketing orientation toward constituents.

A situation assessment for marketing LBL was conducted first. This assessment was based on the mission:

"To manage the resources of LBL for optimum yield of outdoor recreation and environmental education for the American people, to research, test and demonstrate innovative programs, to stimulate development of the surrounding region, and to extend the beneficial results as widely as possible".

For an assessment of trends in outdoor recreation, LBL used, among others, those found by the President's Commission on American Outdoors (President's Commission, 1987). This commission visited LBL, the only place on its itinerary where the entire commission was together. One trend identified by the commission that was especially relevant to LBL is that of increased accountability of institutions and leaders. This increased accountability was an integral part of a visitor-oriented marketing program at LBL.

As assessment of current conditions at LBL was conducted using internal records such as visitor registers, and camping and hunting permit records. LBL also participated in a national survey at this same time, the Public Area Recreation Visitor Survey (PARVS). Strengths and weaknesses of LBL were identified from these internal and external information sources. One outcome of this situation assessment was discovery that camping was an important activity at LBL (30% of visitor came primarily to camp), while LBL did not have any specific plans to develop camping. This led to one of many marketing **objectives:** to increase campground use in the off seasons by senior citizens, and have campgrounds self-supporting.

Information from the PARVS survey (N=1001) and camping permits were then used to **segment** the camping public into meaningful groups in order to develop the services, pricing, promotion, and locations that LBL would need accomplish the marketing objective. The segment chosen for this example was senior citizen campers who come during the fall and who stay in developed campgrounds. There was the greatest potential for an increase in numbers from this group.

LBL also had to consider **positioning** campgrounds with respect to private and state park campgrounds outside LBL.

LBL had to make sure its prices, program offerings, and camping services were at least on par with the outside campgrounds if camping was to increase.

LBL then **targeted** <u>services</u>, <u>prices</u>, <u>promotion</u>, and <u>location</u> to the target segment. Additional electrical outlets were installed for recreational vehicle campers, an information brochure specifically about the 3 developed campgrounds was developed, an LBL representative attended travel shows in major cities, better signage was installed to direct visitors, maintenance was improved, and off-season prices were set to attract the segment of campers chosen.

Within LBL, **internal marketing** with LBL personnel had to occur as these changes in visitor orientation were instituted. Initial resistance to marketing was overcome as more and more employees were added to the marketing team. Within about 3 years everyone considered themselves a member. This **planning** for marketing was integrated with employee's normal work, so that planning became synonymous with marketing. Management began to **budget** specifically for constituent needs assessments and constituent relations programs. This **constituent relations program** became the foundation of a new visitor-oriented approach at LBL.

Evaluation of the camping marketing strategy indicates that objectives were met after 3 years. Developed campgrounds at

LBL were close to self-supporting, and increased use from senior citizen campers in the off-seasons was occurring.

Summary of Public Sector Marketing Example

The marketing orientation to visitors instituted at LBL was based on the same marketing framework used in the private sector (See Figure 1). This orientation proved to be more useful to maintaining and improving programs and facilities at LBL than a production orientation. LBL is now a model of marketing for federal outdoor recreation agencies. All multiple-use aspects of LBL within its missions are integrated under a marketing orientation.

Chapter Summary

A marketing orientation to the exchange between producers and consumers is fundamental to the private sector. This orientation focuses on needs of the consumer by assessing the consumer's situation, segmenting consumers by needs, targeting specific products or services to those needs, and finally implementing the product or service exchanges that make up the private sector economy.

This marketing orientation used in private sector can be applied to public sector agencies. The "profit" in the public sector is the satisfaction of users of agency services and increased support for agency operations. The consumer focus of a marketing orientation has additional advantages for the public sector that include opportunities for: 1. increased agency accountability, 2. discovery of new markets for agency services, 3. reduction in conflict among user groups from the increased communication, and 4. increased satisfactions for current users of agency service.

MARKETING CONTINUING EDUCATION: SITUATION ASSESSMENT

Introduction

Public sector marketing will be applied to development of continuing education programs for state agency fisheries and wildlife managers in this and the next 2 chapters. This chapter will focus on a situation assessment for continuing education. A fisheries and wildlife management continuing education program, the Application Strategies Package (ASP) of the Responsive Management Project, will be used as an example throughout these 3 chapters (See Appendix J for a Project Description).

Continuing Education

Continuing education is defined as all relevant experiences after formal training and education for a profession. This initial formal training and education should be seen as "The beginning of an on-going phase of professional development that will span one's career." (Horner, 1987). With well designed and targeted educational programs, professionals can respond to rapid changes in social, economic, political and technical aspects of their work to benefit both the individuals and society. Not only does the need for various subjects vary over a professional career, but also the need for various delivery methods including courses, conferences, readings, self-development workshops, and sabbaticals (Horner, 1987).

A Marketing Approach to Continuing Education for Public Agency Managers

Marketing is a potentially useful framework for developing and implementing continuing education programs for professionals in any field. A marketing approach to continuing education, with its emphasis on situation assessment, market segmentation, description of segments, and targeting specific programs to specific segments, allows for program customization to meet a variety of learning needs. (Beder, 1981).

Figure 2 applies the basic framework of marketing from Figure 1 to continuing education for public agency fisheries and wildlife managers. This model integrates the basic steps of marketing with specific aspects of planning, development, and implementation of continuing education programs in public sector agencies.

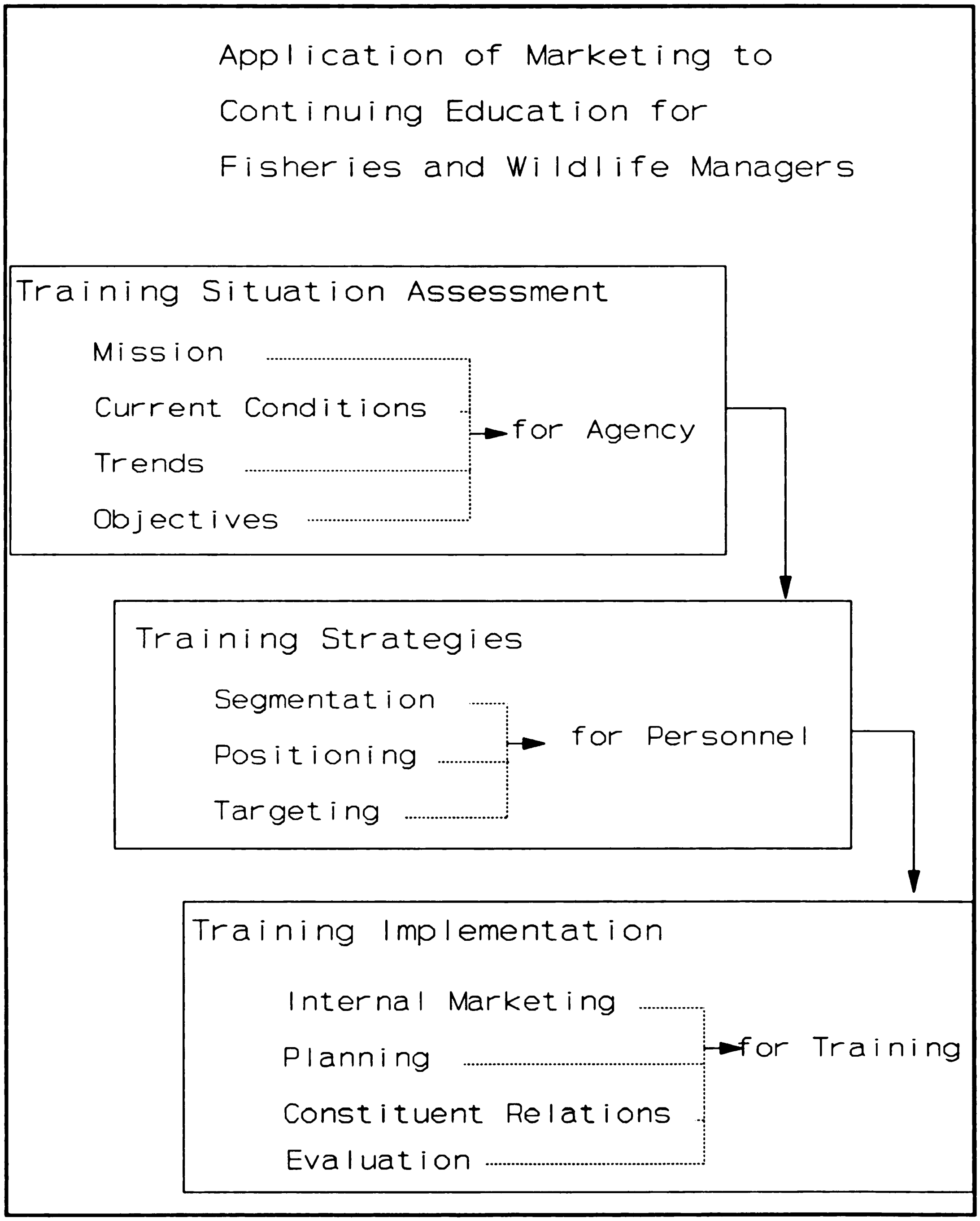

Figure 2: Model for Applying Marketing to Continuing Education of Fisheries and Wildlife Managers

Situation Assessment: Continuing Education

A situation assessment of continuing education for public agency managers focusses on the agency and consists of:

-An agency mission statement for continuing education.

-An examination of trends affecting the agency.

-A discussion of current conditions affecting the agency and its managers.

-A statement of objectives for continuing education developed from the mission, trends, and current conditions.

Each of these elements will be applied to development of the Application Strategies Package as a continuing education program for fisheries and wildlife management in the sections that follow.

Mission Statement

A mission statement serves to guide professional continuing education program content and delivery and ensure that these are relevant to intended audiences. A clear sense of mission for these programs in a government agency is also necessary if the programs are to enhance the agency as a whole and receive administrative support (Beder, 1986).

The mission of the Application Strategies Package is to provide continuing education opportunities in human dimensions subjects for state agency fisheries and wildlife managers.

Trends

Willard and Warren (1986) have identified key elements of trend analysis in marketing continuing education. These elements are an analysis of societal trends that affect an organization from without, and internal trends that affect and organization from within. These trends are then projected into the future to assess how these changes will affect needs for continuing education in the organization.

Societal Trends Affecting Fish and Wildlife Managers

The next millennium will be the Age of Biology according to Naisbitt and Aburdene (1990). The Age of Biology will be characterized by words such as adaptive, holistic, information-intensive, micro, and inner-directed. This contrasts with the recent Age of Physics that was characterized by energy-intensive, macro, outer-directed, linear, deterministic, and mechanistic. This fundamental change in how we view our world will be driven in part by bio-technology primarily at the genetic level. Although we are a long way from sequencing the human genome and being able to make humans, plant and animal cloning has been successful. We may have the ability in the future to technologically "save" endangered species through advances in genetics. This biological technology has major issues looming on the horizon related to ethics and how science is practiced.

One effect of biotechnology on fisheries and wildlife managers will be increased debate with various publics about what scientists (including wildlife and fisheries scientists) are doing. This increased debate is at a very early stage, but reflects even now on fisheries and wildlife management in areas such as aquaculture. For example, genetic manipulation of animal species such as carp and catfish to increase growth rates for human food production can be controversial. The future is sure to bring more intense debate as more possibilities for applying biotechnology to fish and wildlife management become available (Naisbett and Aburdene, 1990).

There are other more immediate trends that will affect management in the coming decade. The President's Commission on Americans Outdoors (1987) documented and reported on several national trends in society, 5 of which affect fish and wildlife managers.

1. Shifts in political power closer to the people. State and local governments have shown initiatives in problem solving and have assumed more responsibilities while the Federal Government has reduced its regulatory and financial assistance roles. Impacts of these shifts documented for fisheries and wildlife management in Colorado are reported

in Duke and Schultz (1987). They include the necessity of broadening the base of funding for wildlife management activities and taking on more endangered species management responsibility.

2. Concern for the environment. Public interest and involvement with environmental protection issues remain high, with more emphasis now being placed on threats to personal environmental health and safety than on threats to nature. Duda (1987) conducted research in Florida that supports this trend. In Florida, water issues such as quality, wetlands, groundwater quantity, and coastal estuary development dominate much of the resources of state agency environmental action. The Florida Game and Freshwater Fish Commission is often affected by these issues.

3. Creation of innovative partnerships. Cooperative efforts between and among public and private sectors are developing to more efficiently meet public demand for recreation and other services. An example that supports this trend in fisheries management is the U.S.D.A. Forest Service's and Bureau of Land Management's "Fishing Partnerships Program" (Robertson and Jameson, 1990).

4. Increased accountability of institutions and leaders. People are increasingly participating in public processes to plan programs and formulate policies. Public institutions

are required to make more information available on products and plans. An example can be found in the marketing work being done at Land Between the Lakes (LBL), used as an illustration earlier. LBL changed from a production orientation toward its publics to a marketing orientation over a 2 year period from 1986 to 1988. This shift allowed for greatly increased public involvement and agency accountability in management decisions at LBL (Paterson, 1988).

5. Changing social and demographic composition. The population is aging, increasing in its ethnic mix and education level, retiring younger, changing work patterns, and moving to the South and West. Household size is declining. Recreation is becoming more and more a means to socialize with others. Hamilton (1988) has written about this trend related to fisheries and wildlife management using Oregon as an example state. The Oregon Game and Fish Department's traditional offerings of consumptive fisheries and wildlife recreation opportunities are more and more in competition with many other forms of recreation in which a younger, more mobile and affluent population participates.

In addition to the President's Commission, trends affecting managers can be found in the U.S. Fish and Wildlife Service National Survey on Hunting, Fishing, and Non-Consumptive Wildlife Use. Four of these overall trends documented in the

1985 survey (USFWS, 1985) are:

1. More private lands are being leased or posted or both.

2. Hunting overall is on a slight decline nationally.

3. Fishing overall is on a slight increase nationally.

4. There is an increase in the number of people nationally using fish and wildlife for non-consumptive recreational benefits.

These trends related to fisheries have been extensively documented and supported by Murdock (et al, 1992). The decrease in the number of people hunting and the slight increase in fishing (less than the rate of population increase) is particularly troublesome for fisheries and wildlife managers for more than just the obvious effects of declining license revenues. This is because fisheries and wildlife agencies get more from the public than money. Declines in hunting and fishing participation (in either absolute numbers or numbers relative to population increases) lose political support for programs, increase competition for public money, increase competition for constituent's time with other outdoor recreation opportunities, and lower recruitment of future hunters. These and the other trends listed above have profound effects on management tasks and make skills in managing for change a necessity (Hamilton, 1987; Murdock, et al, 1992).

Managing for Change

Responding to these societal trends and changing technology will take well-trained fish and wildlife managers who are willing to continue their education to adapt to societal change. Learning skills to take advantage of opportunities found in the above trends will pay, not cost, in the long run. To a large extent, this means managers will have to learn more about managing for change instead of the more traditional role of managing for equilibrium or static conditions. Managers need to realize that change is permanent and constant, and continuous education related to changes is part of the job of fish and wildlife management (Goulden, 1989).

This need for skills in managing for change is driven by both biological and sociological paradigm shifts that are occurring. Natural resource managers have historically been trained in managing for biological equilibrium with its underlying assumption of long-term static conditions. The concept of equilibrium as a biological paradigm is found in most resource management disciplines. For example, in ecology, the "balance of nature" was a key concept for a whole generation of biologists (Krebs, 1972). However, current ecological research shows that natural ecosystem processes are not balanced with respect to a long term time scale (Meyer, 1990). Change is essential to long-term productivity in ecosystems (Hart, 1990). Therefore, static management is no longer the concept of choice for most ecosystems, because they depend on changes for long-term productivity (Haney and Apfelbaum, 1990; Knopf and Scott, 1990; Ryan, 1990; Haufler, 1990).

Equilibrium has also been a fundamental concept in many sociological sciences. An example of a sociological paradigm shift relating to this can be found in economics. Equilibrium is an integral part of explanations about fluctuating supply and demand of products and services (Sorg and Loomis, 1985). While equilibrium may be useful for models with fairly short-term time scales, in the long term those models break down and demonstrate elements of chaos. Economists are now exploring dynamic models using chaos as a paradigm, not equilibrium (Gleik, 1987).

In addition to paradigm shifts in biological and sociological scientific disciplines, there is also the important element of changing public needs and changing public involvement paradigms to consider. Fish and wildlife managers can no longer manage resources as if people and society stay the same (Witter, 1990; Carrier, 1988; Slack and Silvy, 1990; Knuth, 1987). It is difficult to dynamically manage the human aspect, but it can and must be done (Peyton, 1990). Einsiedel, et al (1992) blends biological and sociological paradigm shifts in a discussion about how managers of protected natural areas need to take an integrated ecosystem approach to managing both the resources and the people affected by that management.

One of the most difficult tasks that a manager must deal with in managing for change is policy changes that often come with political changes in state or federal governments (Lyons and Franklin, 1987; Knickerbocker, 1991). Fish and wildlife managers have difficulty keeping up with not only changes in public demands or policy, but also with the rapidity of those changes, especially when some early successes are publicized and the public expects more (Gale, 1987).

With respect to human dimensions of the fish and wildlife management profession, Streeter (1987) has listed 7 trends that affect the management environment:

-Increasing use of information
-Increasing human resource management needs
-Increasing international management
-Shifts in human attitudes and population distributions
-Increasing economic competition for private and public lands

-Increasing environmental contaminants complexity

-Increasing small unit management requirements

Each of these trends affecting the job of fisheries and wildlife management require managing for change, according to Streeter (1987). Many solutions to the problem of responding to these changes in society build on an individualist view, by suggesting that individual managers obtain more education, more subjects in school, and so in effect, do more as individuals (Wagner, 1989; Adelman, 1990). This works fine as long as problems and tasks are relatively simple. Few simple problems exist anymore. The amount of information necessary to manage natural resources today is enormous (Teer, et.al. 1990).

Managing for change rather than equilibrium requires major paradigm shifts in several areas. An example of a paradigm shift that has already occurred can be found in the new emphasis placed on teamwork approaches to problem solving. With respect to the private sector, Peters and Waterman (1982) stressed the need for all aspects of a business to work together to solve problems and get the product or service to the customer at a profit price. This emphasis on teamwork is continues today in business consultant work related to management tasks (Peters, 1987).

Several studies have indicated that natural resource managers are well aware of the need for team-work skills in their education (Kennedy, 1985; Flynn, 1986; Cutler, 1982). An individual can no longer do it all in fisheries and wildlife management. Today's management reality is that the complexity of projects undertaken by fish and wildlife managers makes it essential for people to work together in teams, combining knowledge and experience in a synergistic way. Cutler (1982) discussed this in relation to interdisciplinary teams working on resource management problems.

Teamwork is now essential not only between resource managers and other professionals, but also among resource managers themselves. Increasing emphasis on teamwork, networking, and consensus-building requires managers to examine who they are, how they work with other people, and how to combine their individual skills into an effective team at many levels of operation (Clark, 1988).

One way for individual managers to manage for change or build team-work skills is by changing through educating themselves (Royce, 1987; Slack and Silvy, 1990; Noble and Silvy, 1990; Kennedy, 1984; Wagner, 1989). It is important to realize that changes to be undertaken are not one-time, but actually continuous. Wagner's (1989) article in particular seems to assume that if managers would just change this once, and get over this "crossroads" (in his words) everything will be alright.

Much of the foregoing argument in this dissertation suggests that is not the case and that change is continuous and life-long. There will be more and more "crossroads", and more and more choices for managers in the future. One way to make informed choices about managing for change is to become educated about alternatives through continuing education.

Current Conditions for Continuing Education

Assessing current conditions for continuing education of a potential audience includes 5 major areas (Smith, 1986). These assessments are for:

-the necessity of continuing education.
-constraints for continuing education programs.
-current educational background.
-need for program content.
-need for program delivery.

The Necessity of Professional Continuing Education

Continuing education is one method of catalyzing paradigm shifts. This is an important point, because historically organisms that have been unable to "shift paradigms" and adapt to changes have gone extinct. Managing in turbulent times requires flexibility and adaptability. The ability to anticipate paradigm shifts and manage pro-actively is a crucial part of being an effective manager (Barker, 1987).

Continuing education is a necessity for all professionals. No area of our society is so untouched by changes that a person providing a product or service to others can expect to do exactly the same thing for a life-time (Peters, 1987). Historically, it has been assumed that professionals accept responsibility for keeping up in their fields. For example, we expect lawyers to keep up with changes in case law, doctors to learn about new medicines (AOA, 1989), teachers to use new curriculum materials, and natural resource managers to keep track of current research in their specialty. In the book, The Learning Industry: Education for Adult Workers, Eurich writes:

> "Now, however, the explosion in knowledge and information and the constantly changing specializations complicate the process and confuse the effort. It is no longer possible to assume that on their own initiative professional practitioners can keep up to date. They-like managers and skilled technicians-need continual access to learning" (Eurich, 1990).

This continual education effort across all disciplines often focuses on human relations skills to enable highly trained specialists to work together in teams for solving complex problems. Again from Eurich's book:

> "Corporate training officers suggest that continuing education should concentrate on sorely needed human resource development. As the president of Lockheed Engineering and Management Systems says 'We have no trouble hiring and training top-notch technical personnel, but we find that these people often have

trouble working as part of a group'" (Eurich, 1990).

The Necessity of Continuing Education for Fisheries and Wildlife Managers

Thomas (1985) connects this need for continuing education directly to fish and wildlife managers when he wrote:

> "The professional is always in the process of education. ....and yet this is where we fail most grievously".

The situation assessment to this point has indicated a number of trends in society that fisheries and wildlife managers must adapt to, often requiring new skills in order to be able to do so effectively. This need to adapt, primarily through learning new skills, is applicable to fish and wildlife managers now more than ever before. The more fish and wildlife managers learn about alternatives for managing resources, the more likely will be the possibility of adapting to change (Cross, 1990).

Several papers in the last 15 years have specifically summarized various aspects of the importance of continuing education for fish and wildlife managers (George, et al, 1974; Graf, 1976; Donaldson, 1979; Hester, 1979; Krausman, 1979; Hampton and Stauffer, 1981; Know, 1983; Hunter, 1984;

Kennedy and Roper, 1990). Several other papers have suggested the need for more research on the role of continuing education in career development (Kennedy and Roper, 1989; Cross, 1990). As an example of a specific need to surface recently regarding continuing education, many fisheries and wildlife managers are faced now with a need to learn conflict resolution skills as the animal rights movement affects management activities (Race, et al, 1991; Wywialoski and Reese, 1991).

A few of these changes may require at least some change of identity for fisheries and wildlife managers. Clark (1988) details ideas about professional identity and the need for a "map" to follow in professional development. Broadening our concept of professionalism to include legitimate self-examination is one element of developing a map. This map becomes clearer, and has more paths and pitfalls marked, if continuing education is pursued throughout professional career.

This set of reports from the literature, when integrated with trends information, build a strong case for the need of fisheries and wildlife managers to continue their professional education.

Individual Constraints for Professional Continuing Education

Continuing education is subject to many constraints arising from individual variability. Continuing education takes many different forms; some of it occurs in formal job-related education sessions, some accrues as experience, and some occurs as a result of attendance at professional conferences and reading professional publications. The form education takes at any one time is determined by situational and dispositional constraints on individuals. Any education program must recognize and address these constraints (Cross, 1988).

Situational constraints include such considerations as cost, time, transportation, location, other responsibilities, education availability information, scheduling, and red tape. Dispositional constraints are those related to individual barriers to learning such as fear of failure, perceived poor study habits, not enough personal energy, ability to assimilate new information, dislike of "school", and not wanting to learn new things (Cross, 1988). Once a person is in a continuing education program, some of the dispositional constraints can be reduced by using effective teaching strategies. Some practical ideas for these strategies can be found in the Handbook for Teachers (Fuhrmann and Grasha, 1983). These dispositional constraints are further dealt with at a more theoretical level in the next section on continuing education audience variability. Situational constraints are addressed more fully in the section on institutional constraints later in this chapter.

All of the constraints discussed above can apply to continuing education for fisheries and wildlife managers. As an example, information available in print has constraints related to quantity, quality, and timeliness. In recent years there has been an increase in the number of journals, magazines, and books that have important information for fish and wildlife managers. There is some question about how effectively the "main" journals of reference are keeping up with advances and changes in their fields (Slack and Silvy, 1990). Quality is also an issue, especially with symposia proceedings (Scott and Ralph, 1988). Finally, there is the timeliness issue. Most professional publications take months, or even more than a year, to publish results of research or commentary. This time-lag will become more and more unacceptable as the information age evolves. In the corporate world, the new watch-phrase is "speed is life" (Peters, 1990).

Audience Variability for Professional Continuing Education

Research into adult education has shown that adults share some characteristics regarding learning. Adult learners usually have a self-directing personality and internal motivation for the education. They learn based on their experiences and needs, typically using a problem-centered approach. (Brookfield, 1988; Levine, 1991). One of the most important constraints for professional continuing education is the variability of individuals in their learning styles, because it is important to match continuing education delivery to the audience (Sweeny, 1988; Jarvis, 1987). There are many ways to perceive these differences in individual learning style preferences (Sternberg, 1990; Wilkin, 1977; Renzulli and Smith, 1978).

One of these differences in learning styles is that of field independence versus field dependence. Field independence is expressed as a preferences for inductive learning, differentiation and detail. People with a preference for this learning style learn best by starting with details and progressing to general concepts or rules. Field dependence is the opposite, with a preference for learning general concepts first, then progressing to details with deductive thinking. Field independent people tend to be individualists, working best with discrete pieces of information they can put together sequentially to solve a problem. Field dependent people tend to be good at group interaction and understanding spatial, global problems (Vasquez, 1991).

This difference in learning styles has been applied to problem solving in group situations by expanding the general principles above to include more specific individual information processing preferences such as the characteristics of concrete, abstract, active and reflective thinking. Figure 3 shows these categories of thinking, derived from 4 different learning styles.

	Active Experimentation	Reflective Observation
Concrete Experience	Accommodator	Diverger
Abstract Conceptualization	Converger	Assimilator

Figure 3: Four Different Thinking Styles Derived from 4 Different Learning Styles (Fickeisen, 1991).

Each of the 4 different style types (accommodators, divergers, convergers, and assimilators) can contribute to group problem-solving and skills related to team-work. Convergers are able to draw discussions to completion and bring closure to an issue. Assimilators are good at planning and creating models and value details and sequential thinking. Divergers are creative thinkers that do well at recognizing problems and understanding people. Finally, accommodators accept risk well and provide leadership

(Fickeisen, 1991). These learning style differences were applied directly to fish and wildlife managers in relation to connections between universities and management agencies by Nielsen, et al (1989).

Planning for continuing education programs targeted at fish and wildlife managers should take into account learning styles. This is especially true since much of the additional education they need is in the area of group interactions and teamwork (Cutler, 1982).

Institutional Constraints for Professional Continuing Education

Education should become part of the core value of an institution. Making it a core value aids in overcoming many constraints now on continuing education (Peters, 1987). As such, this need goes far beyond standard staff development found in fish and wildlife agencies today (Nielsen, 1989). In his book, Thriving on Chaos, Peters (1987) lists 10 elements of good corporate continuing education programs:

1. Extensive entry-level education that focuses on exactly the skills that make your department unique
2. All employees are treated as potential career employees, with commensurate investment in their education
3. Regular re-education is required

4. Both time and money are generously expended
5. On-the-job education counts too
6. There are no limits to the skills that can profitably be taught to everyone
7. Education is used to herald a commitment to a new strategic thrust
8. Education is emphasized at a time of crisis
9. All education is employee driven
10. Education is used to teach the organization's vision and values.

Every one of the points could be applied to a continuing education program in a fish and wildlife agency since basic management skills such as managing tasks, managing people, managing conflicts, and leading others are universally applicable to both public and private sector situations. These 10 points assume excellence at overcoming situational constraints within an institution, such as lack of funds or lack of administrative support for continuing education. (Block and Marcotte, 1988).

Perhaps the three points that need the most additional attention in fisheries and wildlife management are (3), (7), and (8). These emphasize the need to provide and require education in times of change. Changes that are occurring now in fish and wildlife management require reeducation of employees, and also of institutions. If agencies expect managers to keep up with changes, they ought to make commensurate investments in education (Shanks, 1989).

All of the above points (situational constraints, dispositional constraints, audience variability, and institutional constraints) in this overview should be taken into consideration in strategy and implementation of continuing education programs for professionals and technicians. The ability to gather and assimilate new information results from overcoming a combination of these situational and dispositional constraints.

In addition to these constraints, 2 other aspects related to continuing education need be examined in this current conditions section. First is pre-service education that managers receive in their profession. Second is current needs of practicing managers for content and delivery of continuing education.

Fisheries and Wildlife Education: Pre-Service

Pre-service education for fish and wildlife managers consists of undergraduate and graduate academic work, plus internships or experience-based learning that occurs prior to a full-time career oriented position. Each of these aspects has a unique contribution to overall education of a professional, and impacts on needs for continuing education to the extent that they do not meet all needs for on-the-job skills.

Pre-Service Education: Undergraduate

Undergraduate fish and wildlife education is typified by general education, general biological principles, and the beginning of fish or wildlife specialization. Fisheries or wildlife majors choose general education courses as freshmen and sophomores and then fish or wildlife management tracks for courses in their junior and senior years (Schmidly, et al, 1990). This specialization is often guided by certification requirements of the 2 major professional societies, The American Fisheries Society (AFS), and The Wildlife Society (TWS). Requirements are in Appendix B. A typical curriculum focuses on the biology of fish or wildlife management. Examples can be found in Chapman (1979), who lists detailed curricula for undergraduate fisheries programs at 6 universities, in Neilsen (1984) who lists undergraduate curricula at inland fisheries schools, and in Kelso and Murphy (1988) who discuss curricula in schools in 44 states. The AFS has published criteria for evaluating undergraduate fisheries programs (Adelman, et al, 1990).

There is controversy about the amount of specialization that is beneficial at the undergraduate level (Oglesbey and

Krueger, 1989; Adelman, 1990; Teer, et al, 1990). This controversy reflects differences of opinion on what fish and wildlife managers should be able to do when leaving the undergraduate setting. One of the main reasons why continuing education is crucial to fish and wildlife managers stems from this difference in undergraduate education. For example, managers who received a fairly specialized, biologically oriented undergraduate degree may very well need a great deal of human dimensions education once they are on the job (Hunter, 1984). Kelso and Murphy (1988) found that out of 15 categories in university fisheries programs, the second most important perceived deficiency reported by 45 fisheries programs was in sociological and administrative/policy skills related to fisheries management.

Pre-service Education: Graduate

Graduate level education is important for even entry-level employment in fish and wildlife management positions as a result of at least 2 factors. One is that it is difficult as an undergraduate to achieve enough credits in all areas to satisfy professional society certification requirements. Only 22% of graduates from fisheries programs met AFS requirements at the end of their undergraduate program (Kelso and Murphy, 1988). The other factor is competition for jobs. Graduate degrees are more competitive, and over twice as many new full-time hirings were filled by people with graduate degrees compared to undergraduate degrees in the wildlife profession in 1986 (Hodgdon, 1988). A similar situation was found in the fisheries profession in 1985 (Adelman, 1987).

Graduate education in fish and wildlife management has historically concentrated on research skills (McCabe, 1954). Further specialization and research emphasis is still the norm for graduate work, with research being applied and problem-solving in nature (Hunter, 1984). Partly because of this, the same concept of importance of continuing education due to high variability in content of graduate work applies here as it did to undergraduate preparation. In other words, a graduate degree of specialized learning does not exempt a person from the need for life-long professional continuing education. In fact, it often increases the need for education in team-work skills (Cutler, 1982; Eurich, 1990).

Surveys of Fish and Wildlife Managers for Current Continuing Education Needs

Results of 5 selected empirical studies (Kennedy and Mincolla, 1985; Hooper, 1986; Flynn, 1986; Greene and Schmidly, 1991; ASP Survey, 1988) of entry-level and mid-level natural resource managers that have been conducted within the past 5 years are summarized here to provide input for the current conditions section of this situation assessment. These studies have focused on subject matter and presentation for continuing education programs. Results can be related back to previous sections of this situation assessment, including individual and institutional constraints.

Study 1: "Career Development and Training Needs of Entry-Level Wildlife/Fisheries Managers in the U.S.D.A. Forest Service" (Kennedy and Mincolla, 1985)

Entry level wildlife and fisheries managers in the U.S.D.A. Forest Service were surveyed to determine how well they were prepared for their first position, and to determine the quality and quantity of in-service education they received from the Forest Service. 61% of the managers surveyed had a Master's degree when first employed with the Forest Service, and 85% had previous temporary work experience (N=99).

When asked to describe the most important skill to be a successful wildlife/fisheries manager in the Forest Service, 52% responded "Be able to get along with people and teams". When asked what college trained them best in, 53% responded "Species/population management". As a result of this dichotomy, only 33% said that they felt "well prepared" for their first Forest Service position by the college education they received.

Entry-level fisheries and wildlife managers in the Forest Service experience an average of about 2 formal education sessions or workshops per year for the first 4 years of employment. 45% were satisfied with amount of education received, and 48% were satisfied with the quality.

They were much more satisfied with the quality and quantity of informal education received. The primary informal education mentioned was "people interaction and communication skills". This informal education fills the gap left in the college education of these entry level managers for the people skills. Informal education tends to be hit or miss with respect to both subjects and personnel. Employees must first understand the need and then seek out appropriate education opportunities to become successful managers in the Forest Service. Those that developed a long-term mentor relationship with an more experienced employee were more likely to have more informal education than those that tried to do it on their own. Kennedy and Roper (1990) discuss more fully the role of mentoring in career development.

The top 3 needs for additional formal education programs in the Forest Service were:

-more and better habitat management education (as opposed to species management education)

-better team and coordination skills with other disciplines

-understanding how to adapt to Forest Service culture.

Study 2: "Training Wildlife Biologists for the Future: A Survey of Continuing Education Needs" (Hooper, 1986)

Mid-level associate and certified wildlife biologists in the Western Section of the Wildlife Society were surveyed in 1986 to determine their current continuing education activities and their future education needs. 95% of the 108 respondents felt continuing education was important to their careers. Education workshops, professional meetings, journals, technical reports, and professional colleagues were the 5 most important sources of information for the continuing education they had received to date.

For past in-service education sessions they had attended in the last 5 years, the 3 most beneficial programs were related to habitat assessment and management. For future education sessions, although habitat assessment was still first, the next 2 categories were computer applications and conflict resolution. When asked what areas recent university graduates were most deficient in, the top 6 categories were all people related skills: writing, interpersonal communication, public relations, conflict resolution, political processes, and public speaking.

With regard to situational constraints, February and March were the best months to attend education programs. The preferred length was 3 days. Most (68%) of education was paid for by the current employer and this was by far the most important limitation to attending education courses of any type anywhere. Even so, over 90% of respondents had attended a formal education program of some type in the last 5 years. Only 50% of the agencies represented by the respondents had an education officer, and that the officer was rated last ("not valuable") as a source of information about upcoming in-service training sessions.

Study 3: "Training Needs Assessment" (Flynn, 1986)

A state level study was conducted in Montana in 1986 that surveyed 204 Department of Fish, Wildlife and Parks personnel across 5 work responsibility categories of administration, management, technical, office and service. Communication, public speaking, conflict management, public relations, and time management were the top subjects indicated as needed for continuing education. Writing and management supervision were also listed as needed subjects. As a result of this in-agency survey, Montana developed and presented an education program for employees titled: "Leadership: Developing Professional Communication Skills".

Study 4: "An Assessment of Interaction Between Natural Resource Agencies and University Fisheries and Wildlife Programs" (Greene and Schmidly, 1991)

Greene and Schmidly surveyed 56 state and federal agencies and 83 university programs to determine the role of universities in continuing education of fish and wildlife managers. Less than half of agencies require any continuing education of personnel. Most of the ones that do require it develop programs in-house, rather than in cooperation with a university.

Study 5: "A Survey of State Fisheries and Wildlife Managers for the Application Strategies Package of the Responsive Management Project" (ASP Survey, 1988)

Survey Introduction

Development of the Application Strategies Package of the Responsive Management Project at Michigan State University was facilitated by conducting a needs survey of mid-level state fish and wildlife agencies that had indicated interest in participating in the project. This survey provided specific directions in the areas of content, implementation and development of the Application Strategies Package. The survey was completed within 3 months of start of work on the Application Strategies Package, and early input from results guided many aspects of development.

The survey was based on elements of the situation assessment presented so far in this chapter, including societal trends, present continuing education efforts in agencies, and research regarding expressed needs of current agency personnel.

The survey is divided into 5 sections:

1. liaison information
2. agency information
3. current education efforts for agency staff
4. agency staff education needs-content
5. agency staff education needs-implementation

Twenty-six state fish and wildlife agencies that were initially part of planning for the Responsive Management Project identified a liaison for the project within the agency. This liaison functioned as the agency contact for project development needs. They also gathered and provided information for the liaison survey.

Survey Methods

An 8 page phone survey (see Appendix C) was developed and sent to the project liaisons in each state (see Appendix A). Since much information on the survey required some research, liaisons were given a month to collect data requested from both the fish and wildlife divisions in their agency. Liaisons were called at their convenience, and information from the surveys was collected.

The sample from which data were collected was not random, in that the 26 respondents were either chosen or volunteered to be a state liaison. There was a great deal of variation in quantity of information provided. Some liaisons provided detailed information that took over 2 hours to collect by phone. Others gathered summary information that took just a few minutes to collect. Data were tabulated using percentages for each category and summarized in narrative form.

Survey Results

Following is a summary of results by survey section.

1. Liaison information

Project liaisons were primarily from middle management and represented about equally fisheries or wildlife divisions within their agency. Responsibilities covered information and education, planning, and administration.

2. Agency information

Fisheries and wildlife divisions were organized similarly both from staffing and from geographical unit standpoints.

Budgeting and programming were separate for fisheries and wildlife, as were continuing education programs for staff. The only shared elements were top level administrators, except in states that had completely separate programs such as Pennsylvania. The geography and large size of some states had an important influence on availability of training for field staff due to travel distances.

3. Current education efforts for agency staff

Most states did not have an organized, regular education program of any sort for fisheries and wildlife staff, except for new employees and law enforcement. Agencies recognized a need for this, but did not know how to go about fitting education into long term goals, organizing an education effort, finding resource material, evaluating education, finding out what employees know in relation to what they need to know, or communicating education opportunities that are available.

There was currently little evaluation of the education that is done. Most evaluation was workshop specific, and did not evaluate long term changes that occur as a result of the investment.

Most agencies budgeted a relatively small amount to in-service education, and most of that went to biological/technical skill development or law enforcement. Many states budgeted money for regional or national conference attendance by staff, and considered that the education budget.

4. Agency staff education needs: Content

Figure 4 is a summary of workshop content matrices on pages 5-6 of the liaison survey (Appendix C). Agencies made a distinction between fisheries and wildlife when collecting the data, but there was no difference in the results, so they are combined here. Percentages were not based on polling of agency staff, but on general indications of managers.

Public Relations	
Mass Media Communications	medium
Public Involvement	high
Conflict Resolution	high
Marketing	
Understanding Resource Users (Sociology, Needs Assessments, etc.)	high
Managing Resources to Meet User Needs	high
Identifying Trends	high
Media Use	high
Management Skills	
Interpersonal Communication	medium
Critical Thinking	high
Planning	low
Biological	low
Coping with Agency Change	high
Coping with Constituency Change	high

Low = 0-25% Medium = 25-50% High = 50-75%

Figure 4: Percent of Staff of 26 Fisheries and Wildlife Agencies that Needed Continuing Education in 13 Content Areas

Marketing, coping with change, and conflict resolution skills were highly ranked content areas that support results of the first 4 empirical studies cited in this section. The low need for biological education likely reflects the quality and quantity of education that was available as documented by Kennedy (1985) and Hooper (1986). The low need for education about planning may have represented work of the Organization of Wildlife Planners and the fact that most states involved with Responsive Management were involved in strategic planning (Helinski, 1988).

5. Agency staff education needs: Delivery

With 2 exceptions, agencies wanted outside consultants to do education of all relevant staff. The 2 exceptions wanted to send a core team to a training session, then have them train agency staff. Reasons for using consultants were: high credibility compared to current employees, lower long term costs, higher motivation for employees to learn compared to self-instructional material, and all employees receiving the same education, which was not true if the material was "filtered" through employees or self-paced instruction.

The filtering process regarding use of agency staff to do workshops that was mentioned by some liaisons is an important point concerning continuing education implementation. This filtering occurred if a staff member was sent to an education program, then returned to the agency to teach other staff. Typically, only those parts of the program learned and practiced by the staff member was subsequently taught others. This lead to distortion or even incorrect ideas and techniques being taught. If agency personnel were used as teachers, they needed to be well-trained in the content area and already be good workshop leaders and teachers.

Most state fish and wildlife agencies used and preferred a 1-4 day workshop format for continuing education. The best time of year for a workshop was the winter, the worst time was the fall.

Summary of the Situation Assessment: Mission, Trends, and Current Conditions

Each of the elements of a situation assessment presented to this point for continuing education of fisheries and wildlife managers (mission, trends, and current conditions) contributes to preparation of marketing objectives (See Figure 2 at the beginning of this chapter). The assessment began by establishing that continuing education programs should enhance manager's abilities to foster their agency mission.

The trend analysis in this chapter established that trends affecting fisheries and wildlife management originate from both outside and inside the profession. Outside trends are those societal forces that affect management policies, whereas inside trends are those changes in practices initiated as more is learned about the biology and sociology of management. The foregoing assessment of trends supports the need for fisheries and wildlife managers to continue professional education to respond to changes in society and the profession. These trends will be addressed in development of a marketing strategy for the Application Strategies Package education program by providing managers the opportunity to acquire skills in managing for change.

The current conditions assessment in this chapter focussed on constraints of continuing education and needs for specific subjects and delivery methods for that education. Both individual and institutional constraints are included in the assessment. Constraints such as variability in learning styles will be addressed as the marketing strategy for the Application Strategies Package is developed.

The surveys of continuing education needs reviewed in the current conditions section (Kennedy and Mincolla, Hooper, Flynn, Greene and Schmidly, ASP Survey) supported the need for continuing education in fisheries and wildlife agencies and gave guidance to content and delivery of ASP education programs. Within human dimensions, communications, conflict resolution, and several other aspects of public involvement were the top 3 areas for needed content.

Delivery needs were for programs offered during the off-season, of short (less than 3 days) duration, and close (or easily accessible) to participants. Delivery systems can be flexible, but the preferred arrangement for continuing education was a workshop. Development of programs at universities as well as within agencies could be strengthened. These subjects and delivery methods will be developed in the marketing strategy section for a specific target segment.

Marketing Objective

Marketing objectives provide guidance for strategy development. Objectives should describe who will participate in the marketing exchange, when it will occur, and the nature of the exchange that is desired (Walshok, 1982).

Marketing Objective for the Application Strategies Package

Develop the Application Strategies Package of the Responsive Management Project into a continuing education program that addresses needs state agency fisheries and wildlife managers have for skills in human dimensions areas. This objective will be accomplished within 2 years.

MARKETING CONTINUING EDUCATION: STRATEGY

Introduction

A marketing strategy for continuing education consists of segmentation, positioning, and targeting. Dividing the overall market, as stated in the marketing objective, into smaller groups and then choosing one as the audience of the educational program is segmentation. An important part of segmentation is a description of the chosen segment. Other educational programs offered for the segment are considered in positioning. Programs are then targeted to the chosen segment with optimum considerations for curriculum, location, cost, and promotion. Developing a marketing strategy based on segmentation and targeting is one way to efficiently and equitably allocate limited resources to accomplish education program objectives (Smith, 1986).

Market Segmentation

The Bases for Market Segmentation

The best segmentation plans take into account several criteria and define a segment very carefully. Audiences for continuing education can be segmented according to knowledge of a subject, demographics, interests, or activity profiles (Frank and Massey, 1972).

Knowledge or experience is often a basis for segmentation in continuing education because programs typically are aimed at those individuals who need additional education in a subject area. Formal education background or years of experience with the organization can be used for this type of segmentation (Smith, 1986).

Demographic segmentation is also often used because segments for continuing education can be defined easily by location or organizational level, and the information is typically easy to obtain. Demographics includes such things as job title, work location, and organizational level (Smith, 1986).

Interest level is more difficult to use than experience or demographics because it is difficult to assess. Some type of response must be obtained from potential publics about a continuing education subject if interest level is to be determined. For that reason, it is not often used for segmentation. That creates a problem, because audiences with a variety of interest levels in the subject of the education program can lead to difficulties for the program leaders (Smith, 1986).

Activity profiles of potential continuing education participants can be easy to use for segmentation if based on recorded or public information such as job descriptions. However, this type of segmentation can include things much more difficult to measure such as work relationships, personality, and behavioral considerations. Activity profile segmentation is often used in conjunction with demographics, experience, and interest to complete an accurate description of a segment (Frank and Massey, 1972).

<u>Bases for Segmentation: Application Strategies Package</u>

The overall <u>market</u> for the Application Strategies Package as stated in the marketing objectives was state fisheries and wildlife agency managers. The <u>market segment</u> chosen for the Application Strategies Package continuing education program was <u>mid-level managers</u> in those agencies. The bases for segmenting the market were demographics and knowledge. Demographic segmentation for the Application Strategies Package was based on agency managerial level. Knowledge segmentation was based on needs of these managers determined in the current conditions assessment of the previous chapter.

Description of Market Segments

Market research is conducted in this step to gather information about the segment. In corporate marketing, this information is often in the form of extensive databases on past behavior of a segment. This information is used to predict future purchasing behavior of consumers (Novak and MacEvoy, 1990). For continuing education programs, data describing segments on the basis of chosen characteristics can be collected and provides information necessary to target specific programs to meet segment needs (Smith, 1986).

Description of Market Segments: Application Strategies Package

The segment chosen for the Application Strategies Package can first be described by one aspect of demographics; responsibility within the agency. Mid-level managers are defined as those with supervisory, budgetary, planning, and public involvement responsibilities (Allen, 1988). They have held their position in the agency an average of about 5 years, average about 40 years in age, and have a median of

23 subordinates. Most of their time (78%) is spent on administrative tasks and managing people. About 15% is spent on natural resource management and about 3% is spent on continuing education (Hunter, 1984).

Knowledge characteristics of this segment can be described by its needs for content of continuing education programs as well as by their current education level. Needs for specific subjects in continuing education are presented in the current conditions section of the situation assessment. These needs were summarized in results of the survey of mid-level managers conducted for the Application Strategies Package (See Figure 4).

This is a well-educated segment, with almost 100% holding a bachelor's degree, and about 70% holding a master's degree. Ninety-eight percent of these mid-level managers had no formal education in managerial skills (Hunter, 1984).

In the example of the Application Strategies Package, these descriptions of level of management, level of education, and continuing education needs for the chosen segment were adequate for developing the project programs. The descriptions form a bases for targeting content, delivery, cost, promotion, and location for Application Strategies Package programs to the segment.

Market Positioning

Positioning is developing and emphasizing differences between new products or services and those that already serve the same segment. In corporate marketing, a great deal of research focuses on positioning a product or service relative to competition. This positioning is often based on creating a perceived differentiation among products in the market to encourage purchases. In public-sector and non-profit marketing, positioning can be less important because government or the non-profit organization is often the only source of a product or service. Services provided in these cases are generally those that private sector businesses do not provide because of the lack of profit potential (Kotler, 1988).

Positioning for continuing education programs examines other programs that are aimed at the same market segment. Once this examination is complete, decisions are made about differentiating programs to be offered with those already available on the basis of content, cost, availability, and/or promotion (Willard and Warren, 1986). Positioning for the Application Strategies Package examines informal experiences, the role of professional societies, and example programs from state agencies, federal agencies, public schools and private schools.

Fish and Wildlife Education: Informal In-Service Experiences

Several aspects of a fisheries and wildlife manager's work are typically expected to be learned "on-the-job". Skills learned on-the-job after beginning full-time employment are in-service education. Among these are often personnel skills such as hiring, evaluation, and firing; budgeting skills such as budget development and expenditure tracking; and public involvement skills such as marketing, public relations, and public hearing conduct (Noble and Silvy, 1990; Kennedy and Roper, 1990; Hunter, 1984). Informal mentoring of new personnel by established personnel is an important informal education method of in-service training (Kennedy and Roper, 1990).

Results from the Application Strategies Package survey of state fisheries and wildlife agency Responsive Management Project liaisons in the situation assessment indicated that in-service education for fish and wildlife managers often consists of new employee orientation, infrequent attendance at professional conferences, and learning-by-doing as tasks are assigned and completed. These, combined with occasional training programs offered by the employing agency when new procedures are instituted, such as installation of a computer system, are usually the main education received. Hunter (1984) found that less than 38% of assistant chiefs, chiefs and assistant directors requested in-service training at state fisheries and wildlife agencies within the previous 3 years.

The Role of the Professional Societies

The American Fisheries Society (AFS), The Wildlife Society (TWS), and other professional societies that serve the fish and wildlife management profession have important roles to play in continuing education for their members. They also support curriculum development, certification, accreditation, and employment services for pre-service education (Lackey, 1979, Hodgdon, 1984). The majority of new student members of these societies joined because of the professional development opportunities, often in the form of continuing education found in the annual conferences (Zale, et al, 1990).

Within limits summarized in the situation assessment (related to quality, quantity, and timeliness of information now available to managers), publications of the societies are a primary source of information exchange among members. The expansion in the number of journals and the overall amount of printed material available to managers is likely to increase in the foreseeable future (Slack and Silvy, 1990).

The AFS has a continuing education person on staff at the national office to oversee, plan, and develop education programs for the membership. In addition to the staffing commitment, the AFS has contracted with the American College Testing Service (ACT) to monitor, accredit, and record continuing education programs offered to the membership. (Brouha,1991). Local chapters of the AFS are now also beginning to recognize the utility of formal continuing education programs for their membership. For example, the Michigan Chapter-AFS now offers full-day education programs in human dimensions subjects for the membership, coinciding with the bi-annual meetings (Kutkuhn, 1992).

The Wildlife Society offers a Professional Development Certificate for completing a program of professional development that includes both formal and on-the-job education (The Wildlife Society, 1989). Regional chapters of TWS are considering continuing education, just as the ASF chapters have done.

Continuing Education Programs for Fish and Wildlife Managers: Examples from State Agencies, Federal Agencies, Public and Private Schools

Some state and federal agencies, as well as some public and private schools, are providing opportunities for continuing education. At the federal level, an example is the Bureau of Land Management (BLM) Training Center in Tucson, Arizona, where managers from the BLM as well as the U.S.D.A. Forest Service, the National Park Service and the U.S. Fish and Wildlife Service can go for education on a wide variety of management tasks (Hamilton, et al, 1987).

An example of university-based education is the Pennsylvania State University Management Program for Natural Resource Managers (Penn State, 1989). An example of a university-based program developed for an federal agency is the U.S.D.A. Forest Service program: Continuing Education for Biologists (Salwasser, et al, 1990).

The Banff Center School of Management's Resource Management Programs are an example of private continuing education programs for fish and wildlife managers (Banff Center, 1988).

MDNR Academy

An example of a department-wide continuing education program at the state level that includes both fish and wildlife managers can be found in the Michigan Department of Natural Resources (MDNR) Mid-Management Academy. This education program for mid-level managers runs for 2 weeks with a 2 day follow-up 6 months later. A list of topics is in Appendix I. The purpose of the Academy is to provide an updating in all areas of people management skills. It does not provide technical skill training for biological management tasks. Modified versions of the Academy have been provided for top management and clerical staff (Allen, 1988).

One important focus of the curriculum is on supervisory skills. This is especially appropriate for fish and wildlife managers who have been promoted to people management positions, since according to Peters (1987): "There is no more difficult a step in a career than that from non-boss to boss".

One of the benefits of the intensive 2-week program is that close working relationships are built among participants. When a person who has been to the Academy runs into a problem or wants to initiate a change, they can turn to others they know well who may have a solution or idea. This building on collective experience is a benefit in addition to the knowledge gained by individuals at the Academy (Allen, 1988).

Summary of Positioning

Informal in-service experiences in agencies perpetuated both good and bad management practices (Hunter, 1984). The pattern that emerged in the assessment of informal education is that formal education programs available within a state agency are needed much more than they are now available.

There are exceptions to this, such as the Michigan Department of Natural Resources Mid-Management Academy.

Continuing education offered by professional societies was not in direct competition with the Application Strategies Package. In fact, professional society membership in the Responsive Management Project and access to the Application Strategies Package would increase availability of continuing education to their members.

University-based continuing education programs were usually offered at the sponsoring institution, creating availability problems for potential audiences that have travel restrictions. Private programs or government programs such as the BLM training center in Tucson offered at a single location had the same limitation. Programs based at a university or at a private institution had an additional limitation in that they can be very expensive. A single week-long continuing education program at Pennsylvania State University's Program was $2800 (plus travel) per participant in 1987 (Penn State, 1988).

Federal continuing education programs had the potential to be the most direct competition for the Application Strategies Package. The most significant difference reducing competition with these federal programs was that the target segment for the Application Strategies Package is <u>state</u>

agency managers.

Based on this positioning section, there was a need for continuing education programs that were conveniently available, met content and delivery needs, and were low-cost for fisheries and wildlife managers. This information, combined with information from the situation assessment, was used to tailor a program to the target segment for the Application Strategies Package.

Targeting

Targeting for Continuing Education

Targeting is the step in marketing where products or services are developed for the chosen segment of a market, based on needs determined in the situation assessment. Targeting continuing education programs to a market segment involves development of a curriculum, and decisions about price, location, and promotion. Each of these elements focuses on needs of the specific target segment (Beder, 1986).

Curriculum includes elements of subject matter, delivery, and scheduling. Subject matter is as variable as the audiences and encompasses technical skills, human relation skills, management skills, or personal development. Choices for delivery of continuing education programs are usually formal courses, workshops, self-paced individual instruction courses, professional conferences, and informal readings. Scheduling for any of these can range from a single, concentrated time-slot, to multiple times over several months. The best approach and scheduling for the target segment is determined in targeting (Willard and Warren, 1986).

Pricing of continuing education program is a very difficult issue. Required programs are price inelastic. Raising the price does not reduce the quantity of programs demanded very much. Non-required programs are price elastic. Quantity demands drops quickly for even small price increases. Professional continuing education in areas that require it for certification such as medicine and teaching are often priced relatively high. Continuing education programs not required for professional development or certification must be priced relatively low. A complete cost-benefit analysis during the budgeting process for program development and implementation is needed to realistically set prices for participants (Fischer, 1986).

Location for continuing education must be convenient or at least accessible for all involved. Demographic information from the market segmentation done earlier can guide siting decisions amenable to attendees and teachers (Mason, 1986).

Promotion for professional continuing education takes on many forms. There are 3 basic means of promotion; publicity, advertising, and personal communications. **Advertising** (paid promotion), has been used by the public sector (Lewis, 1978). However, advertising is almost never used in professional continuing education because other promotion that is free of charge is available. **Publicity** includes several possibilities:

-announcements in professional journals

-notices in newsletters

-program leader's promotion

-professional conference presentations

-direct mail promotions

-t-shirt, pens, calendars, etc.

Personal communication consists of:

-face-to-face contacts among professionals at meetings

-telephone

-electronic mail

-letters.

Each of these promotion methods has advantages and disadvantages based on cost, timeliness, accessibility, and ability to target selected audiences. Effective evaluation of promotion should be part of every continuing education program in order to find the most cost-effective method of reaching a target audience (Falk, 1986).

In summary, targeting curriculum, price, location, and promotion of professional continuing education programs to a specific well-defined market segment is the key to successful development for these programs (Beder, 1986).

Targeting for the Application Strategies Package

Products and services developed for the Application

Strategies Package in targeting were specifically for the market segment of mid-level fisheries and wildlife managers in state agencies described in segmentation. In targeting, all elements of the situation assessment for continuing education for fisheries and wildlife managers such as trends, current conditions, learning styles, empirical studies on needs, etc. were taken into account. Details of planning development of the Application Strategies Package, including a time-line, groups involved, and budget are in Appendix J. Each element of targeting is presented next with the Application Strategies Package as an example.

Targeting: Curriculum (Subjects and Delivery) for the Application Strategies Package

Application Strategies Package Subjects

The current conditions section of the situation assessment for continuing education of fisheries and wildlife managers indicated several priority needs for education program content. These were: communication, dispute resolution, marketing, responding to change, and public relations. Need for these subjects was supported by the trend analysis section of the situation assessment that indicated managers will need increased skills in managing change. Given the general categories of subject needs, an Application Strategies Package Development Team (See Appendix D) determined an appropriate grouping of content into 3 education workshops. These were: marketing, responding to change, and communication and dispute resolution.

The education workshop on **marketing** trains managers to adapt and then apply basic business marketing principles to fish and wildlife management. The **change** workshop examines the interactions between individual management style and agency characteristics, to provide managers with means to initiate positive changes in themselves or the agency. The **communication and dispute resolution** workshop begins with an awareness of the importance of communication, and ends with skill development for resolving resource allocation disputes. Figures 5,6, and 7 outline contents for each of the 3 workshops. Goals and objectives for each workshop are in Appendix K.

Responding to Change

For Fisheries and Wildlife Managers

Goal: To learn applied skills for accepting, facilitating, and directing change in a state fish and wildlife agency

Setting: 3-day interactive workshop for mid- to upper-level managers in a Fish and Wildlife Agency

TOPICS

I. INTRODUCTION & FOUNDATIONS
- Societal Trends
- The Challenge of Change

II. INDIVIDUAL ASSESSMENT
- Individual Thinking
- Behavioral Styles

III. AGENCY ASSESSMENT
- Agency Culture

IV. GROUP INTERACTIONS
- Synergistic Decision-Making

V. AGENCY CHANGE MECHANISMS
- Change Agents
- Facilitating Change

IV. ACTION PLAN
- Apply Insights/Skills

Figure 5: Content Outline for "Responding To Change" Workshop

MARKETING

In a Fisheries and Wildlife Agency

Goal: Training in the process of marketing to improve agency services and to provide skills to implement a marketing plan

Setting: 3-day interactive workshop for mid- to upper-level managers in a Fish and Wildlife Agency

TOPICS

I. MARKETING PRINCIPLES

- Need For Marketing
- Marketing Within A Fish & Wildlife Agency

II. AGENCY SITUATION ASSESSMENT

- Situation Assessment Factors
- Resources To Accomplish A Situation Assessment

III. MARKETING STRATEGIES

- Segmenting
- Targeting
- Positioning

IV. IMPLEMENTING MARKETING

- Constituent Relations
- Information & Education
- Planning & Budgeting
- Marketing Information

Figure 6: Content Outline for "Marketing" Workshop

Communication and Dispute Resolution

For Fisheries and Wildlife Managers

Goal: Training in the processes of conflict management and interpersonal communication

Setting: 3-day interactive workshop for mid- to upper-level managers in a Fish and Wildlife Agency

TOPICS

I. **ISSUE MANAGEMENT PRINCIPLES**

- Issue Stages
- Issue Types

II. **CURRENT AGENCY ISSUE MANAGEMENT PROCEDURES**

- Assessment
- Intervention Role

III. **COMMUNICATION PRINCIPLES**

- Open Communication
- Public Involvement
- Agency Credibility

IV. **PERSONAL SKILL DEVELOPMENT**

- Skill Practice
- Skill Implementation

Figure 7: Content Outline for "Communication and Dispute Resolution" Workshop

Application Strategies Package Delivery

Results of the situation assessment indicated that a 3-day workshop conducted by a trained leader was the best delivery method for the Application Strategies Package. To meet needs of the target segment suggested by the constraints section in the situation assessment, these workshops needed a variety of approaches to learning. The 3 workshops the Application Strategies Package were therefore designed as 3 days in length, for 5-25 agency personnel. The workshops were to be interactive, with participants regularly involved in small-group discussions, writing, thinking, and problem-solving. The training emphasized practical application of new skills to on-the-job situations. Every effort was made to ensure that training was immediately useful to participants in their agency work. There was a Leader's Guide, a videotape, and a Participant's Manual developed for each workshop.

Participant's Manuals

The participant's manuals for each Application Strategies Package workshop consisted of a 3-ring notebook with a workshop schedule, informational text, worksheets, graphics of all the leader's overheads, a script of the workshop videotape, and additional references. In addition, the Change workshop had participant's copies of materials from

Human Synergistics, Inc. and Orion International, Inc. The manuals average 150 pages each.

Workshop Coordination and Leadership

The Application Strategies Package was designed to be implemented in a variety of ways by state agencies that are part of Responsive Management. Qualified leadership is critical to the success of these workshops. An Application Strategies Package workshop is best run by a team involving a "coordinator" and a "leader". While the Workshop Coordinator will most certainly be an agency employee, the Workshop Leader may be an outside consultant who has been contracted to present the actual training processes. The Workshop Coordinator is responsible for arrangements necessary to put on a workshop. These include:

-Arranging a room, seating, tables, and refreshments;
-Obtaining equipment needed by the workshop leader;
-Communicating with agency management about costs, objectives, leader selection, participant selection, and time commitments;
-Communication with the workshop leader about participants and the agency;
-Communication with participants about travel, workshop location, workshop objectives, commitment expectations, and pre-workshop activities;

-Duplication and distribution of participant materials;

-Contracts and travel arrangements for the leader;

-Attendance at the workshop to provide for needs that arise.

Selecting the Workshop Leader

Three criteria for leaders should be met for this workshop:

1. Leaders need to be knowledgeable about the subject of the workshop.
2. Leaders must be experienced as teachers and discussion facilitators in a workshop setting.
3. Leaders have to be familiar with the content and process used in the specific Applications Strategies Package training workshop being presented.

To obtain workshop leaders with the necessary qualifications, agencies may choose to use their own personnel who have attended an Application Strategies Package Orientation Workshop. An outside consultant, or personnel from other states with trained leaders may also be used. The leader is responsible for presenting workshop material, facilitating small and large group discussions, and applying workshop content to the specific agency sponsoring the workshop. In addition, the leader is responsible for obtaining and learning leadership materials and communicating equipment needs to the agency. The leader's role begins before the workshop since they will be instrumental in distributing materials, communicating the nature of the workshop, assessing the needs of the workshop participants and anticipating necessary adjustments to the workshop schedule.

Workshop Participants

Content of the workshop was aimed at mid-level managers with little or no knowledge of the subjects covered. Greatest return on the investment would come from targeting this group for workshop participation. However, virtually anyone in a state fish and wildlife agency could benefit from attending, if the leader took the audience into consideration during the workshop. Materials such as those used in this workshop has been successfully modified for use with top management, secretaries, and field personnel.

Information about participants should be communicated to the workshop leader in advance, so preparations can take into account final segmentation and targeting of workshop participants. This information about participants should include at a minimum:

1. job title and responsibilities
2. length of time with the agency
3. supervisory responsibilities

4. work location

Workshop participants are responsible for coming prepared, ready to contribute and take full advantage of the learning experience.

Targeting: Location for the Application Strategies Package

Location

The situation assessment indicated the importance of convenient location for continuing education programs. Convenient location implies short travel distances, readily available accommodations, and a good site for conducting a workshop. The Application Strategies Package workshops were designed to be very flexible and portable in location. For example, they are not based at a central location or institution. Within a state fisheries and wildlife agency, they may be offered at regional locations instead of at agency headquarters.

Site

The following site guidelines were chosen for the Application Strategies Package. The site chosen should be a comfortable classroom setting with large tables for writing and room for small-group discussions. Restrooms, coffee/tea, and soft drinks should be readily available during breaks. Participants should be away from distractions of normal work-day routines. It is important that everyone attend for all 3 days (8:30-4:30), and give full attention to the workshop. Adequate space at the front of the room should be available for the leader's equipment and materials.

Targeting: Pricing for the Application Strategies Package

The state agency survey of liaisons for the Responsive Management Project in the situation assessment indicated that most states budget relatively little money to continuing education. Most of what is budgeted in fisheries and wildlife agencies goes to law enforcement training, or to travel expenses for professional conferences. Therefore, the Application Strategies Package had to be designed to respond to a price inelastic situation, and be inexpensive for agencies. This was accomplished by keeping workshop material costs very low, and providing agencies with all materials needed to conduct a workshop in-house. This allowed for very flexible use of the workshops.

Costs for the materials varied among workshops. For Marketing and Communication and Dispute Resolution, the Participant's Manual duplication cost was estimated at $8.00 each. The Change workshop contained material to be purchased from outside sources. The list of materials for that workshop is below.

"Responding to Change" Workshop Materials (one per participant)

Workshop Participant's Manual (duplicated by each state, @$6.00)
Life Styles Inventory LSI 1 Self Development Guide ($18.00)
Life Styles Inventory LSI 1 (part of Self Development Guide)
Life Styles Prescription for Change ($5.50)
Organizational Culture Inventory ($6.00)
Caribbean Island Survival II Exercise ($3.95)
Group Process Questionnaire ($3.95)
Pencil

In addition to participant materials costs, there were other both direct and indirect costs for each workshop. Direct costs included leader fees and travel expenses, participant travel expenses, and facility and equipment use. Indirect costs included participant time and planning time.

Targeting: Promotion of Application Strategies Package

The Application Strategies Package had 2 levels of need for promotion. The first was promotion during development of the workshops. This consisted primarily of selling the idea of Responsive Management to state fisheries and wildlife agencies, and relied on publicity and personal communications. Included in this were most of the items listed in these categories earlier in this chapter from Falk (1986). A general information brochure was sent out to state agencies early in the project development phase. The need for the products of the project were so great that promotion was not of major importance in gaining member states, once information about it was made available.

The second level of need for promotion of the Application Strategies Package was for implementation. Once a continuing education program is developed, implementation must be promoted (Falk, 1986). The situation assessment indicated that mid-level managers in state fisheries and wildlife agencies often have problems obtaining information about available continuing education.

A general model that can be used for a progression of promotion is AIDA; Attention, Interest, Desire, and Action (Falk, 1986). For the Application Strategies Package, these categories were all addressed by 3 channels of promotion:

1. A core team from each state sent to an orientation workshop.
2. Activities of the Responsive Management national office.
3. Word of mouth through both workshop participants and workshop leaders.

The first 2 are described in more detail in the following chapter on Application Strategies Package implementation. The third method of implementation promotion, word-of-mouth, may the most important of all for continuing education promotion (Fischer, 1984). This type of promotion will spread over time for the Application Strategies Package as more and more managers attend the workshops.

Chapter Summary

Marketing strategy is the process of applying information from the situation assessment to choice and description of market segments, and then developing the marketing mix of product, price, place and promotion to meet the segment's needs. This chapter uses the Application Strategies Package of the Responsive Management Project as an example of marketing strategy development. Figure 8 revisits the strategy part of marketing from the overall continuing education marketing model first presented in Figure 2.

Segmentation, positioning, and targeting are primarily aimed at state agency personnel. In this chapter, there was a description of the mid-level manager target segment chosen for the Application Strategies Package, and then a description of the continuing education program developed for them based on the situation assessment.

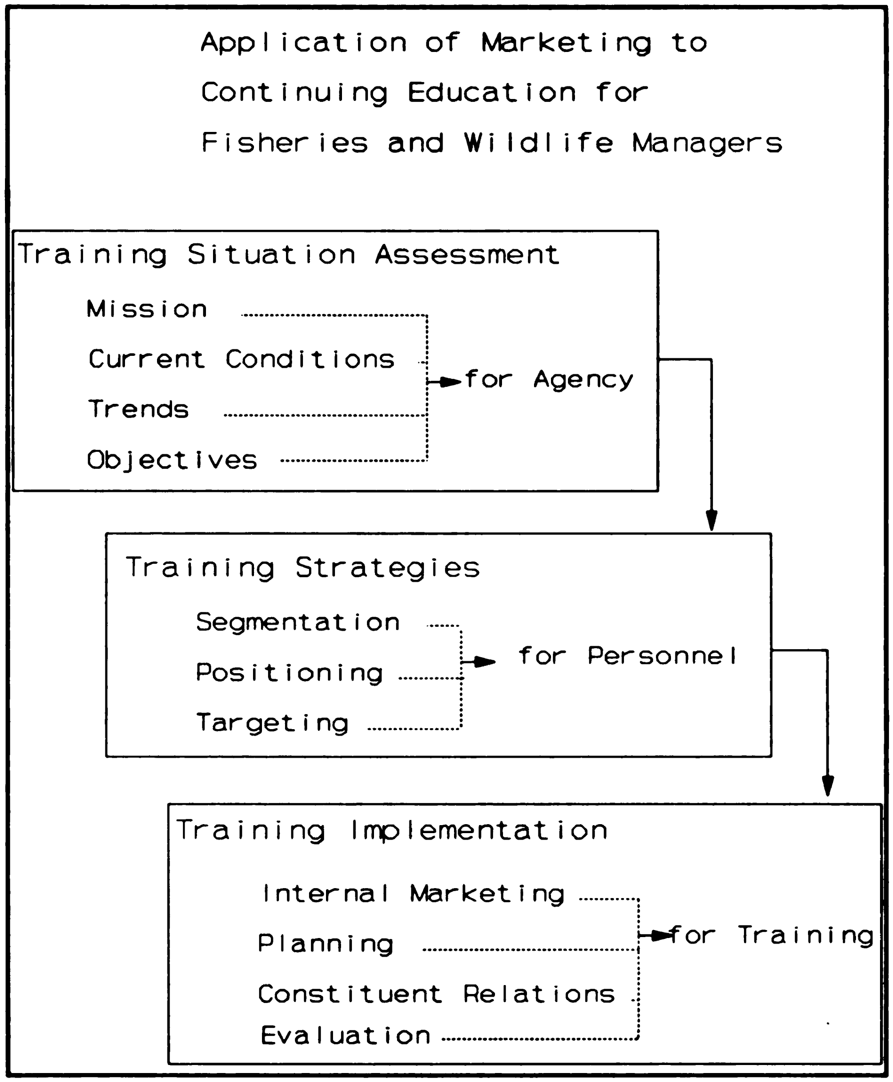

Figure 8: Strategy in a Marketing Model for Continuing Education of Public Agency Managers.

MARKETING CONTINUING EDUCATION: IMPLEMENTATION

Introduction

Continuing Education Program Implementation

Implementation for continuing education of fisheries and wildlife managers includes 4 steps: internal marketing, planning, constituent relations, and evaluation. It is here that programs developed during the situation assessment and strategy stages are carried out. Implementing continuing education programs can be a relatively easy task if the first 2 parts of marketing, situation assessment and development of strategy, are done well (Beder, 1986).

Application Strategies Package Implementation

The Application Strategies Package was implemented by individual state agencies who received all Responsive Management Project materials as members of the project. Implementation was facilitated through by several means, described in more detail in the sections that follow:

-Coordinating efforts of a national Responsive Management office

-An Application Strategies Package Overview Booklet

-Initial and follow-up orientation workshops for the Application Strategies Package

-A full set of leadership materials for each Application Strategies Package workshop

Implementation: Internal Marketing

Internal marketing for continuing education can be used to overcome obstacles to education in an agency or institution. (Lovelock and Weinberg, 1984; Kotler, 1988). Continuing education programs normally require internal marketing. Up to this point, the discussion of marketing continuing education programs has been focused outward; on assessing, segmenting, and targeting the consumers of programs. Internal marketing on the other hand occurs within an agency or institution and involves infusing marketing into all levels as a routine way of doing business. Top management needs to support marketing of continuing education, and middle managers who plan programs need to practice it if the whole marketing program is to work within an agency (Paterson, 1988; Lovelock and Weinberg, 1984).

There are many barriers to marketing within an agency or institution that can be addressed by internal marketing

(Kotler, 1988):

-top management support
-acquiring needed marketing skills
-obtaining timely information on market segments
-funding for planning and implementation.

A complete marketing program can be developed for within the organization that addresses these barriers. For example, with internal marketing, one of the market segments might be top management. This segment can be described using a combination of variables such as demographics or behavior, then specific plans can be targeted to them in order to obtain their support for overall marketing. Someone will need to take the lead in this effort, and have some marketing skills with which to begin (Paterson, 1988; Kotler, 1988).

Internal Marketing for the Application Strategies Package

An important implementation document related to internal marketing for the Application Strategies Package (ASP) was a 27 page executive summary titled "ASP Overview". This overview was targeted at upper level managers and top administrators who make decisions about continuing education implementation in a fisheries and wildlife agency. It included sections on content and delivery for all workshops, as well as a section on planning and budgeting for implementation of an ASP workshop in an agency.

The Responsive Management Project established a national office at the end of development and the beginning of implementation. This office provided both logistical support for using products and services of the project, and an element of credibility that aided in internal marketing for the project with state agency administrators (Duda, 1990).

Implementation: Planning

Good planning can bring about the support and budget needed to make marketing of continuing education programs a success. Planning for implementing continuing education programs is a straightforward management process once a situation assessment has been conducted and a strategy developed.(Kotler, 1988). Implementation planning consists primarily of tasks listed for a workshop coordinator in the following section (Beder, 1986).

<u>Planning for Implementation of the Application Strategies Package</u>

The national office of the Responsive Management Project could provide planning expertise if state agencies needed it. This included recommending workshop leaders, providing workshop materials, or actually conducting an ASP workshop for agency managers.

Planning for implementation of an ASP workshop at the state level could best be done by a workshop coordinator who had specific responsibilities for communication, organization, and promotion of ASP workshops with the following timetable:

-Communicate with agency personnel training and management about workshop objectives, budget, and time commitments. (before workshop implementation decision)

-Locate and reserve workshop classroom (8 weeks before workshop)

-Contact and schedule workshop leader (8 weeks before workshop)

-Choose, contact, and schedule workshop participants (6 weeks before workshop)

-Arrange for participant and leader travel, food, and lodging (6 weeks before workshop)

-Duplicate participants materials (3 weeks before workshop)

-Arrange for A-V equipment (3 weeks before workshop)

-Collect specific information about participants and send to the workshop leader (3 weeks before the workshop)

-Send out pre-workshop materials and information (including Participant Manual) to participants (3 weeks before workshop)

Leader's Guides

Planning for the ASP workshop leaders was facilitated by a complete set of leadership materials produced for each of the 3 workshops. These materials included a Leader's Guide, and a videotape. The Leader's Guide for each education workshop consisted of a 3-ring notebook with the following materials:

-an overview section for leaders on presenting the workshop in a state agency

-a detailed recommended workshop schedule

-a detailed guide for presenting each session within the workshop, including time allotted, objectives, materials needed, setting, and step-by-step procedures

-a 10-15 minute videotape of key workshop points, with script

-additional references

-a master list of equipment and materials needed

-a complete set of color or black and white overhead transparencies needed to present the workshop

-case studies where appropriate

The Leader's Guides provided enough information so that an individual familiar with the content and experienced as a workshop leader could present any of the workshops. The Guides were not intended to train anyone to be a workshop leader, or to provide a course in the subject of a workshop.

Videotapes

Leader's materials for each workshop included a 10-15 minute videotape of key points in workshop content that set the stage and provides introductory information for several activities. These videotapes were part of the multi-media process that helped the ASP meet needs of a variety of learning styles in workshop participants.

Budgeting

Budgeting was also a straightforward process once basic decisions are made. Budgeting included planning of money for:

-participant materials
-workshop leader materials
-workshop leader fee, and travel expenses
-facility and equipment rental
-accommodations for participants if not otherwise arranged

Implementation: Constituent Relations

Constituent relations activity occurs before, during, and after a continuing education program. This includes a broad range of service-related items such as providing a comfortable work atmosphere for education workshops, effectively communicating with participants before the program, and answering follow-up questions. Failure to create and live up to high standards of customer service in a service-oriented business, such as continuing education, will lead to failure of a program. Providing a quality experience is the essence of good constituent relations. (Paterson, 1988; Beder, 1986).

Quality

Quality affects every step of implementation and is the most important element for success of a continuing education program. The best situation assessments and strategies developed for continuing education must lead to high quality programs, as perceived by individuals who participate in them. Quality assurance is the latest watch-word in private-sector and public-sector product and service industries (Peters, 1992).

Constituent Relations for the Application Strategies Package

Application Strategies Package Orientation Workshop

The orientation workshop for the ASP provided for both planning of implementation and development of constituent relations. It also served an important role in promotion.

At the end of the ASP development period of 2 years, an Orientation Workshop for all state agency participants was held at Michigan State University. 60 managers, representing 20 states, came to the workshop so that every state had 3 people in attendance. Each of the 3 educational workshops; Marketing, Responding to Change, and Communication and Dispute Resolution, was presented in its entirety to a group of 20 that included one representative from each state. That representative also received the videotape and Leader's Guide for the workshop.

The 3 people from each state became the "core team" for that state, since each had attended a complete workshop in one workshop. The core team was then responsible for promoting and implementing the ASP in their state. In some cases, they became ASP workshop leaders. In all states, this core team became the primary vehicle of constituent relations for the ASP, as the source and target of communications with and among state agencies regarding ASP implementation.

Implementation: Evaluation

There are several levels of evaluation that can occur with continuing education programs. The first is standard evaluation of the program content and delivery. Delivery includes elements of conducting the program as well as program operation: e.g. facilities, food, accommodations, etc. This level of evaluation can lead to changes in a program to improve it for the next time, since information from evaluation can be fed back into planning and budgeting as part of the continuing marketing process (Kotler, 1988; Walshok, 1982).

On another level, program outcomes can be evaluated for changes that occur in an agency or individual as result of program use (Walshok, 1982).

Finally, evaluation can occur that yields information to feed back into any of the 3 main parts of the marketing process. This can be in the form of case studies to add to situation assessment information, participant information to better define segments, or obtaining information for better internal marketing of continuing education.

Evaluation for the Application Strategies Package

The Application Strategies Package was evaluated by all the methods listed above. First, workshop content and delivery were evaluated by a standard post-workshop questionnaire. An example of this type of evaluation used in the Application Strategies Package are in Part VI of Appendix L.

Secondly, evaluation of changes that occurred in workshop participants were assessed in a pilot test of one of the Application Strategies Package workshops with managers from 2 states, Wyoming and Louisiana. This pilot test assessed content of the "Marketing" workshop, and tested the instructional model used to conduct all the workshops. Results are in Appendix L.

Finally, use of the Application Strategies Package workshops has yielded some data about managers participating in the workshops that can be fed back into the marketing framework to refine description and needs of the target segment. Data and interpretation from this are presented in the following chapter.

Chapter Summary

Internal marketing, planning, constituent relations, and evaluation are the steps of implementation in the marketing model revisited in Figure 9. Implementation is the step where programs are actually conducted. It therefore operates primarily at the training program level.

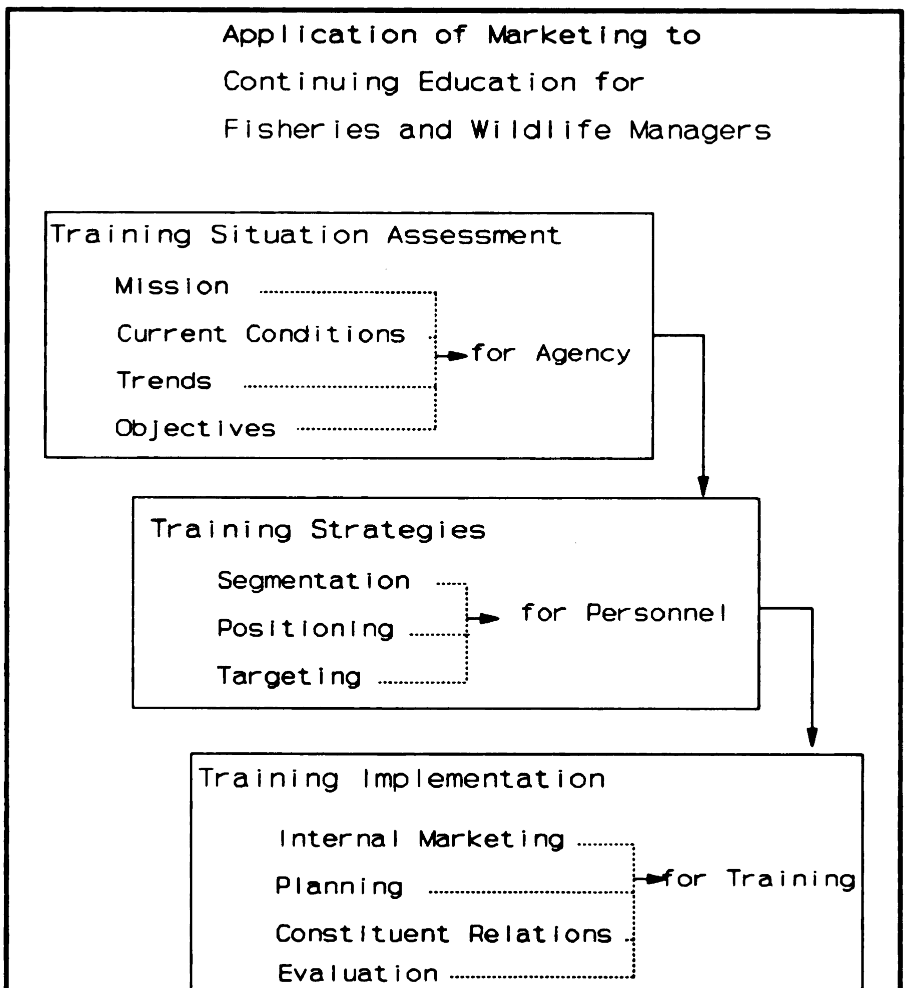

Figure 9: Implementation in a Marketing Model for Public Agency Managers.

APPLICATION STRATEGIES PACKAGE IMPLEMENTATION: SELECTED RESULTS AND MANAGEMENT IMPLICATIONS

Introduction

One of the education workshops, "Responding to Change for Fisheries and Wildlife Managers", developed for the Application Strategies Package is based on management skill assessment and improvement materials from Human Synergistics, Inc. (See Appendix F). This workshop has now been implemented in several state fisheries and wildlife agencies. Results from the management skills assessment inventory used in these workshops can be applied to further refine target segment descriptions for future continuing education program development.

The instrument (See Appendix F for availability) rates managers on 12 different factors of human interactions using responses to 240 questions. The premise of the instrument is that there are both positive and negative aspects to our behaviors related to managing our relationships with other people. Insights into these behaviors can lead to action plans that develop positive aspects and minimize negative aspects of our work relationships. It is available in both pencil and paper and computer-assisted versions.

The instrument has undergone extensive testing and has been used for 16 years by over 150,000 people in corporate settings (Human Synergistics, 1989). The alpha reliabilities obtained with the instrument for each of the 12 factors are at least .8 (N=934). Split-half reliabilities are at least .83 (N=1000) (Cooke and Rousseau, 1982). Details of theoretical model and measurement model development, and discussions of reliability testing, construct validity, convergent validity, discriminant validity, and criterion-related validity are in Cooke and Lafferty (1981) and Cooke and Rousseau (1983). The 12 management factors measured with the scale are in Table 1 (Cooke and Rousseau, 1982).

Table 1: Management Style Factors and Reliabilities

Factors	Alpha	Split-half
1. Humanistic/encouraging	.85	.90
2. Affiliative	.80	.84
3. Approval	.83	.86
4. Conventional	.83	.85
5. Dependent	.82	.85
6. Avoidance	.88	.87
7. Oppositional	.85	.91
8. Power	.86	.82
9. Competitive	.85	.85
10. Perfectionistic	.83	.83
11. Achievement	.88	.88
12. Self-actualizing	.88	.88

Management Styles Summary

The management styles of the inventory measure 12 discrete aspects of concerns for people, tasks, satisfaction, and security. The first 3 factors relate to concern for people and satisfaction, the second 3 factors relate to concern for people and security, the third 3 factors relate to concern for task and security, and the last 3 factors relate to concerns for tasks and satisfaction. For more detailed descriptions of each factor, see Appendix G.

1. Humanistic-Encouraging
   Measures our interest in people, our tendency to care about others, and our ability to encourage them to improve

2. Affiliative
   Measures our degree of commitment to forming and sustaining satisfying relationships

3. Approval
   Measures our need to be accepted by others to increase or sustain our feelings of self-worth

4. Conventional
   Measures our tendency to act in a conforming way

5. Dependent
   Measures the degree to which we feel our efforts do not count

6. Avoidance
   Measures our tendency to use the defensive strategy of withdrawal

7. Oppositional
   Measures our tendency to use the defensive and aggressive strategy of disagreeing with others, and to seed attention by being critical and cynical

8. Power
   Measures our tendency to associate our self-worth with the degree to which we can control and dominate others

9. Competitive
   Measures our need to establish a sense of self-worth through competing against and comparing ourselves to others

10. Perfectionistic
    Measures the degree to which we feel a driven need to be seen by others as perfect

11. Achievement
    Measures a way of thinking that is highly associated with personal effectiveness

12. Self-Actualizing
    Measures a way of thinking that results in the highest form of personal fulfillment

The 12 factors are each scored on a scale of 0-40, using 20 questions per factor. Raw scores are then converted to percentile scores, comparing an individual to about 10,000 others in similar management situations who have used the instrument. Respondents are considered to have high score on a factor if they score above the 75th percentile, a medium score if they score between the 25th and 75th percentiles, and a low score if they score below the 25th percentile (Human Synergistics, 1989).

The ideal profile for mid-level managers has high scores on people and satisfaction factors such as achievement, self-actualization, humanistic-encouraging, and affiliative. Correspondingly, an ideal profile has low scores on negative factors related to security and tasks such as dependence, avoidance, oppositional, and power. The ideal profile was generated by managers who were considered excellent in key management areas such as low employee turnover, high employee ratings, high profits, low health problems, etc. (Cooke and Rousseau, 1982).

Methods

Data for fish and wildlife managers was collected using the Human Synergistics Life Style Inventory Level I instrument from 5 different Application Strategies Package (ASP) workshops in a variety of settings from 1990-1992. Workshops varied in size from 19 to 38, and represent a wide variety of respondents from 26 state fish and wildlife agencies (Total N = 150).

This is not a random sample of fish and wildlife managers. The sample over-represents those who already have some interest in team-building or other human interaction skills, since the ASP workshops were in human dimensions subjects and attendance was largely voluntary. The sample also over-represents the mid-west and western states. Neither of these limitations are likely to affect conclusions from the data related to describing market segments, but the limitations do reduce generalizability to other groups.

To determine if data for all groups could be collapsed into composite factor scores, the 5 different workshop groups representing fish and wildlife managers were compared among themselves on each of the 12 factors using ANOVA on the raw scores. Tables of means and standard deviations of raw scores for all groups are in Appendix H. The only factor with a significant difference among the 5 groups ($p=.05$) was Avoidance.

Group differences on the Avoidance scale may be partly explained by the fact that a few managers were <u>required</u> to come to the workshops, although most attended voluntarily. It is possible that those who volunteered had a significantly lower Avoidance scale score than those who were required to attend. Composite data for Avoidance is included with the caveat of recognizing the high variability on the factor. With this in mind, data for all 5 groups of fish and wildlife managers were then collapsed into a single composite score on each of the 12 factors.

Composite raw scores for fish and wildlife managers were changed to percentile scores by comparing them to 9207 mid-level corporate managers previously tested by Human Synergistics. Confidence intervals were computed and graphed for each factor where data were available. Interpretation of the percentile scores was provided by ACUMEN, the computer assisted version of the instrument which provides comprehensive analysis and a management development plan (Human Synergistics, 1989).

Results

Data from fisheries and wildlife managers are compared to 3 separate groups of other managers with data from Human Synergistic's applications of their instrument in corporate settings. These other groups are:

1. Key executives concept of the best managers
2. Effective teams
3. Ineffective teams

For the group defined as the best managers, 18 key executives in both companies and universities used the Human Synergistics instrument to score the person they thought was the best manager in their organization. Effective teams are defined as those that had high scores on a problem solving simulation when working in groups of 5. Ineffective teams had low scores on the same simulation (Human Synergistics, 1989).

Variance data on factors for the 3 comparison groups were not available. Other published data (Human Synergistics, 1989) on a variety of groups indicates that normally confidence intervals for this instrument are + or - 5% on the percentile scores for each factor. This is approximately what was obtained with the composite group of fisheries and wildlife managers, and there is no reason to believe it would be different for the 3 comparison groups.

Although there were no very high or very low percentile scores on the 12 factors for fish and wildlife managers, slightly preferred (highest percentile scores) operational styles are oppositional and avoidance. Preferred secondary styles are conventional, power, and competition. The least preferred operational style is humanistic/encouraging.

Fisheries and wildlife managers are compared to the best managers in businesses and universities in Figure 10. These best managers have scores in the high (>75th percentile) range on the humanistic, achievement, and self-actualizing factors. They score in the low range on approval, conventional, dependent, avoidance, oppositional, power, and competitive factors, being similar in this aspect to effective teams. There were no factors that were scored similarly by fish and wildlife managers when compared to this group of best managers, although affiliative, competitive, and perfectionistic scores were closest.

Figure 11 compares fish and wildlife managers to effective teams. Effective teams scored in the low (<25th percentile) category on the approval, conventional, dependent, avoidance, oppositional, power, competitive and perfectionistic factors. They scored in the medium (>25th<75th percentile) category on the other 4 factors. In contrast, fish and wildlife managers score in the medium range on all factors, and so were similar to effective teams in only 4 factors: achievement, self-actualizing, humanistic-encouraging, and affiliative.

When compared to ineffective teams (Figure 12), fish and wildlife managers had very similar scores on 6 factors: approval, dependent, avoidance, oppositional, power, and competitive. Ineffective teams had lower scores on the humanistic, affiliative, conventional, perfectionistic, achievement, and self-actualizing factors.

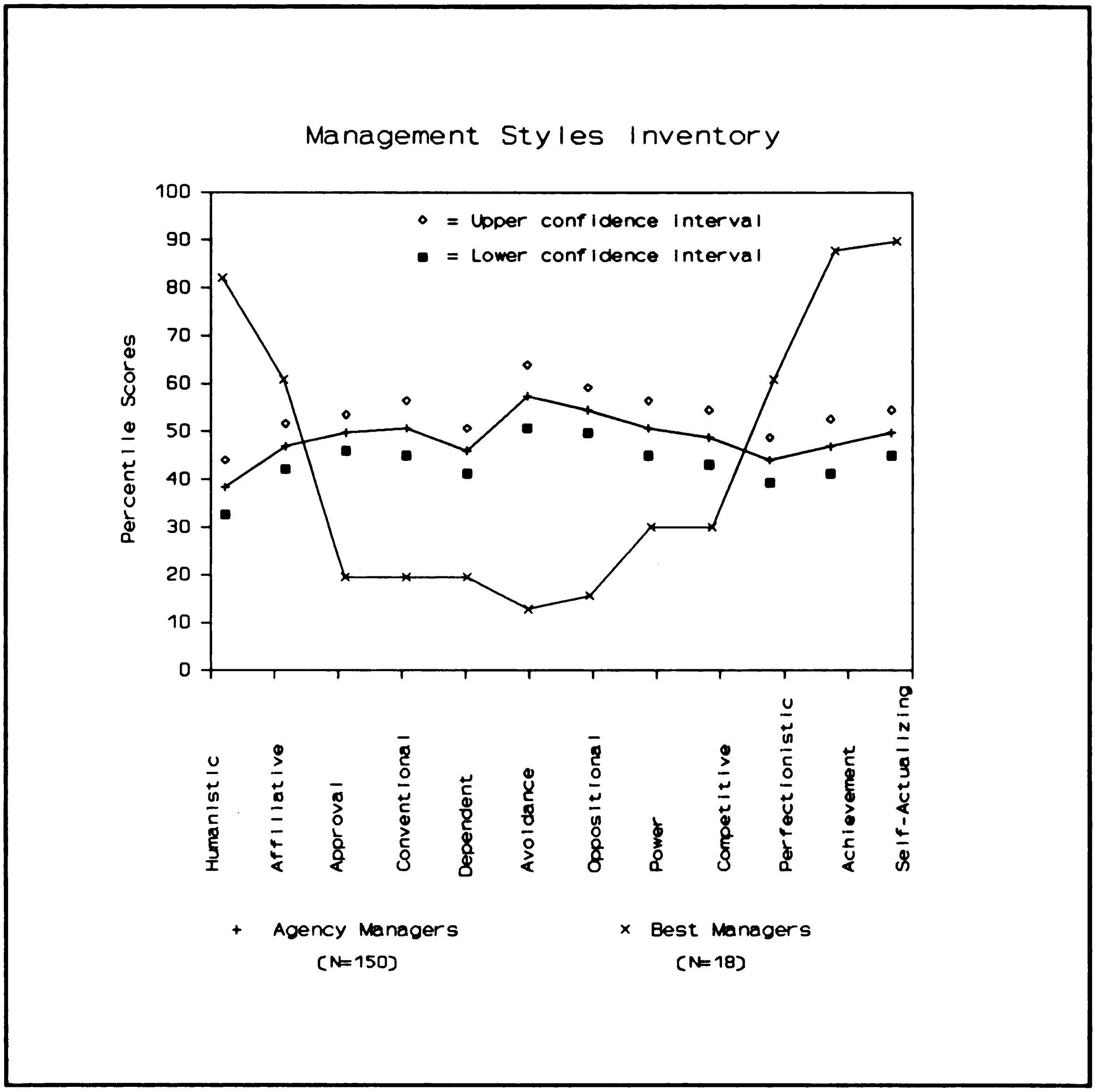

Figure 10: Key Executives Concept of Best Business and University Managers Compared to Fisheries and Wildlife Managers

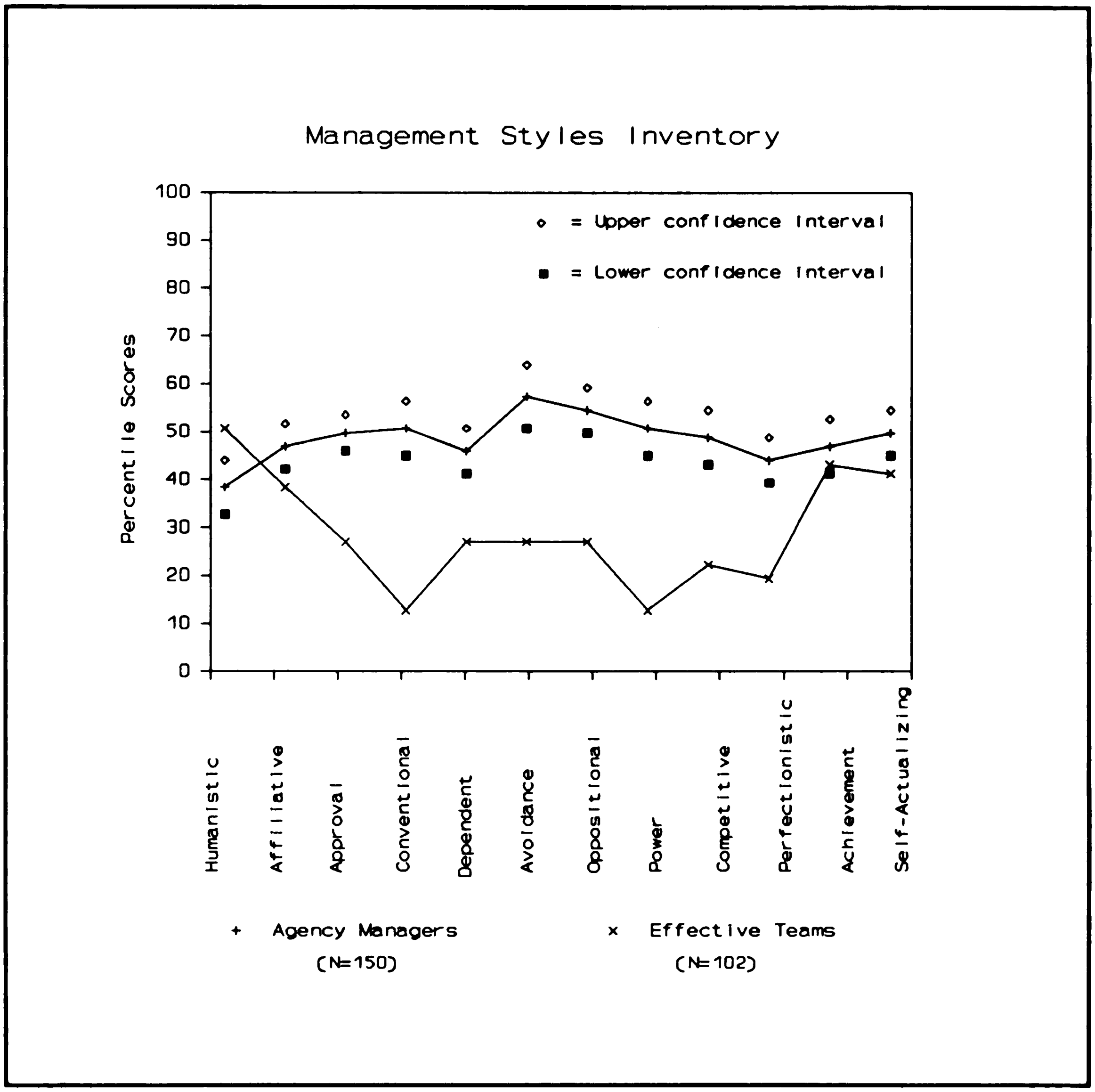

Figure 11: Fish and Wildlife Managers Compared to Effective Teams

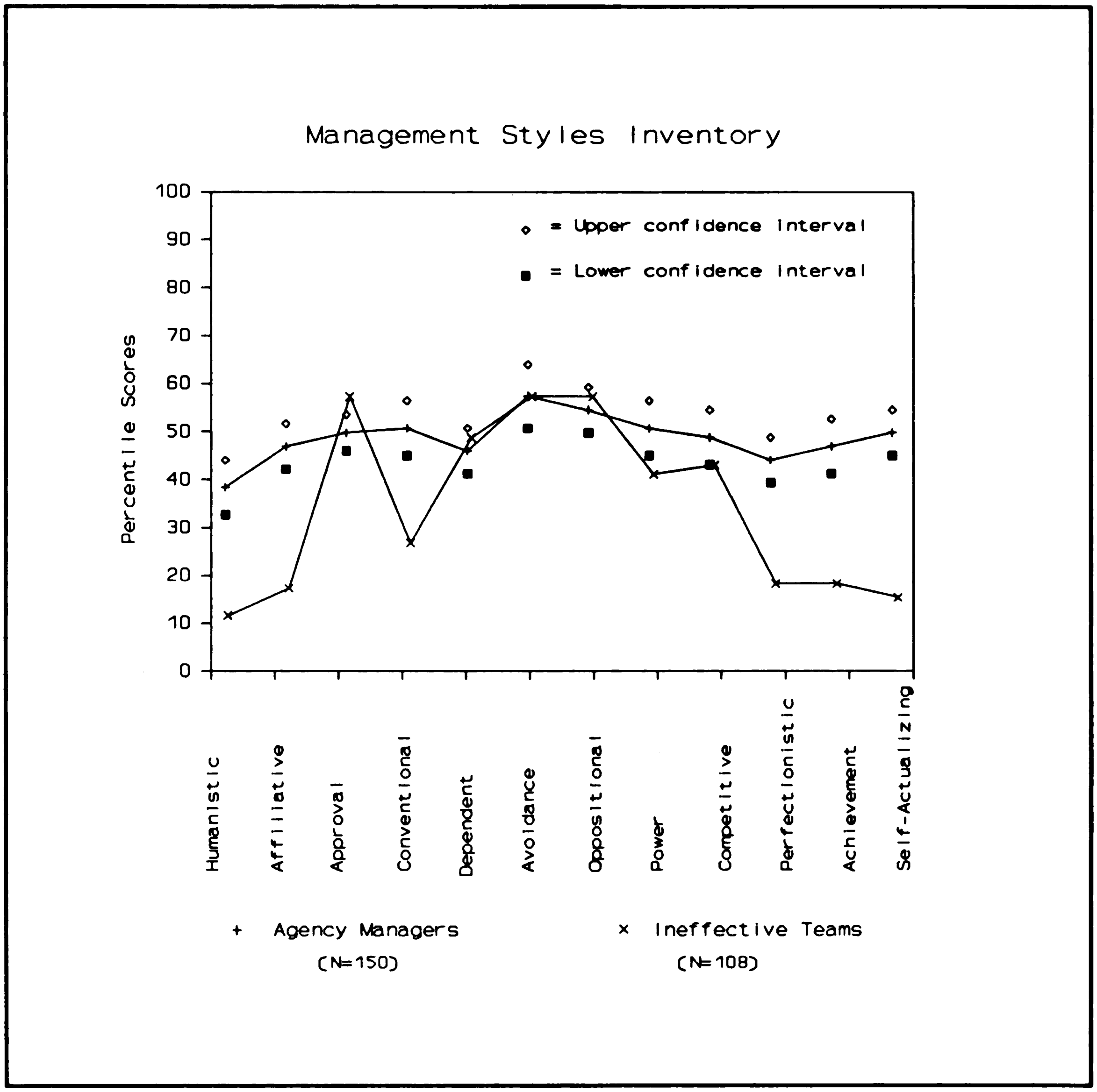

Figure 12: Fish and Wildlife Managers Compared to Ineffective Teams

Discussion

In general, people with the type of profile represented by fish and wildlife managers are task-oriented managers who rely on traditional methods and standard operating procedures, and who may be perceived by others as dogmatic and forceful. They may experience difficulty executing management responsibilities that require innovation and change, or that deviate from previously established procedures (Human Synergistics, 1989). The consistency of the data across workshops within fish and wildlife managers indicates some homogeneity related to the type of person that chooses this career.

Lists of potential productive and counter-productive characteristics of people with the factor profile of fish and wildlife managers were generated by interpreting scores using ACUMEN, the computer version of the Human Synergistics instrument. ACUMEN takes into account scores on all factors, not just the highest or lowest ones when interpreting a profile (Myers, 1987). These are presented below.

Potential productive characteristics of a person with this profile are (Myers, 1987):

-motivation to be successful

-willing to work hard to get results

-knowledgeable about standard procedures and techniques

-works effectively in a structured, non-stressful work-place

-has a strong set of personal values and beliefs

-able to set limits for other people

-seen as enthusiastic and energetic

-able to direct others when conditions demand authoritarian action

-makes an effort to be recognized and well-regarded by others

-responsible; can be counted on when needed

-usually able to present own position in a straightforward manner

-sometimes able to listen to others and be empathetic to their needs

-frequently able to take a stand on an issue

-sometimes will show a willingness to compromise with others

-often able to act decisively

-able to establish limits and take disciplinary action when needed

-driven to succeed

-discriminating and careful judgement

Potential counter-productive characteristics of people with this profile are (Myers, 1987):

-strong tendency to stick rigidly to particular methods, not considering alternatives adequately

-performance may benefit from co-worker's counsel, but often resents input or feedback

-may not work well on tasks requiring creativity

-may not realistically set challenging goals

-gets upset easily, disturbing concentration and ability to perform up to potential

-finds it difficult to trust others

-can behave in an inflexible, dogmatic manner

-gets upset easily

-difficult for others to understand

-behavior vacillates between aggressiveness and yielding to others

-often needs to impress others to feel good about self

-tends to blame others when things go wrong

-may be seen as having a negative attitude

-becomes emotionally involved in conflict, rather than dealing with it in an objective, emotionally detached manner

-easily angered, particularly when antagonized

-may take a rigid, unyielding stance, seeing own position as "right" and opponent's position as "wrong"

-often deals with conflict and opposition in a forceful, aggressive manner that "adds fuel to the fire"

-may confuse dominating others with leading them

-tends to exhibit inconsistent behavior-subordinates may not know what to expect

-inadequate self-confidence

-tends to blame others when problems arise, rather that focusing on effective problem-solving; this tendency hurts morale

-more motivated by gaining power and success than by achieving excellence in performance

Several items on the list above of potential counter-productive characteristics mention possible problems with working through conflict situations for people having the profile of fish and wildlife managers. For example, being easily angered, taking a rigid stance, dealing with conflict in an aggressive manner, and blaming others when things go wrong can heighten conflict to a disruptive stage. This conclusion is strengthened by referring back to Figures 11 and 12 that compare fish and wildlife mangers to effective and ineffective teams. Effective teams have styles that allow for conflict, but also allow for its resolution. Ineffective teams operate on power structure that emphasizes individual's need to be right, need to be liked and need to follow others (Human Synergistics, 1989).

Chapter Summary and Continuing Education Applications

Cutler (1982), Clark (1988), and Hunter (1984) cited in earlier chapters have suggested a need for teamwork, a sense of identity, and managerial skills in fisheries and wildlife managers. Results of application of the Human Synergistic's instrument can be used to refine a description of those needs and so further describe a segment of fisheries and wildlife managers. Following are some recommendations for continuing education that result from detailed segment descriptions above. Several of these recommendations use the Application Strategies Package workshops as examples, and reinforce decisions made during targeting in original development of the workshops.

Improving conflict resolution skills needed by this segment requires change in behavior by individuals. Learning these skills can best be addressed in small-group workshops with well-trained leaders that emphasize developing and observing communication skills in situational role-playing (Robinson and Marcus, 1983). An example of this setting and training was the Communication and Dispute Resolution Training Workshop of the Application Strategies Package.

Fisheries and wildlife managers can build on the productive characteristics of their general management styles. As an example, being knowledgeable about standard procedures and the ability to work effectively in a structured work-place are positive attributes for government positions (Allen, 1988). These attributes can be strengthened by continuing education programs that keep managers current concerning procedures and organization structure in their agencies.

In addition to the above list generated by ACUMEN, there are some observations that can be made regarding comparisons in Figures 11 and 12. Fisheries and Wildlife managers demonstrate more likeness to ineffective teams than to effective teams. The factors of achievement, self-actualization, affiliative, and humanistic-encouraging shared with effective teams are strong points that should be built on in a continuing education program.

To strengthen team-work skills needed by this segment, there is a survival simulation exercise entitled "Caribbean Island Survival II Exercise" built into the Responding to Change ASP workshop from a corporation that specializes in team-building simulations, Orion International, Inc. (Orion, 1987). This simulation is followed by an analysis of the group processes that occurred during the simulation using another workbook by Orion, International: "Group Process Questionnaire" (Orion, 1988).

Content of continuing education programs addressing differences found in Figures 11 and 12 could emphasize techniques to reduce the use of approval, oppositional, power, and competitive aspects of fish and wildlife managers. This action-oriented approach to change is used in the "Responding to Change" Application Strategies Package workshop. More detail about developing action plans is in another part of the workshop that uses a publication from

Human Synergistics titled "Prescription for Change: an Inquiry Process for Thinking about Your Life Style Results".

Fish and Wildlife managers have very different management styles than the best managers in the private sector. From comparisons in Figure 10, it is evident that even more emphasis could be placed on developing the achievement, self-actualization, and humanistic-encouraging factors in fish and wildlife managers in continuing education programs.

SUMMARY AND CONCLUSIONS

Summary

Marketing has utility as an approach to decision-making in development of continuing education programs for fisheries and wildlife managers. It integrates several important factors that include:

-Assessing the situation for continuing education in an agency, including an examination of trends and current conditions.

-Choosing and clearly defining segments of agency personnel for continuing education.

-Targeting specific programs to chosen segments on the basis of content, delivery, promotion, and cost.

-Implementing training programs with quality execution and evaluation.

Each of these factors is addressed in this dissertation using the Application Strategies Package of the Responsive Management Project as an example.

Additional Research Needs

Continuing research should be conducted for both the situation assessment phase and the segmentation phase of marketing, since trends, current conditions, and descriptions of segments will change over time. The more personnel who receive relevant, carefully targeted continuing education in a fisheries and wildlife agency, the better able those individuals will be able to satisfy agency publics and meet the challenges of the the 21st century.

Conclusions

State and federal administrators and managers of fish and wildlife resources at all levels should seek out opportunities for personnel to obtain team building and management skills. General factors of management such as managing people, managing tasks, managing conflict, and leading others are skills all managers need, so tools from private sector (corporate) settings are appropriate to apply to public sector (government) fisheries and wildlife management. Based on data presented in Chapter 5 and the situation assessment in Chapter 2, the most important new skills fisheries and wildlife managers need for the beginning of the next millennium are people skills related to building work groups that can accomplish complex tasks, and public involvement skills of all types.

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APPENDICES

APPENDIX A

Responsive Management States

Arizona
Arkansas
British Columbia
California
Colorado
Connecticut
Florida
Georgia
Idaho
Kansas
Kentucky
Louisiana
Maryland
Minnesota
Missouri
Montana
New Mexico
Ohio
Pennsylvania
Tennessee
Utah
Virginia
Washington
Wyoming

APPENDIX B

General Summarized Course Requirements for the Wildlife Society Professional Certification Program

Bachelor's or higher degree and the following semester hours:

1. Biological Sciences
   - Wildlife management (6 hours)
   - Wildlife biology (6 hours)
   - Ecology (3 hours)
   - Basic zoology (9 hours)
   - Basic botany (9 hours)
   - 3 additional hours in any above category
2. Physical Sciences
   - 9 hours in chemistry, physics, geology, or soils
3. Quantitative science
   - Calculus (3 hours)
   - Basic statistics (3 hours)
   - Biometry, sampling, or computer science (3 hours)
4. Humanities and Social Science
   - 9 hours in economics, sociology, psychology, political science, government, history, literature, or foreign language
5. Communications
   - 12 hours in composition, technical writing, journalism, public speaking, or mass media
6. Policy, Administration and law
   - 6 hours in resource policy, administration, environmental law, or land-use planning.

In addition to the coursework above, 5 years of professional experience must be completed to be certified.

Complete details are in the Program for Certification of Professional Wildlife Biologists published by:

The Wildlife Society
5410 Grosvenor Lane
Bethesda, MD 20814

General Summarized Course Requirements for The American Fisheries Society Professional Certification Program

Bachelor's or higher degree and the following semesters hours:

Four courses in fisheries and aquatic sciences, two of which must be directly related to fisheries science (fisheries science, ichthyology, fisheries management, fish ecology, fish culture, fish disease); other biological science courses which when added to the credit hours of the fisheries and aquatic sciences courses must total 30 hours.

Physical sciences (15 hours)

Mathematics and Statistics (6 hours)

Communications (6 hours)

In addition to the coursework above, 5 years of professional experience must be completed to be certified.

Complete details are the Professional Certification Program published by:

The American Fisheries Society
5410 Grosvenor Lane, Suite 110
Bethesda, MD 20814

APPENDIX C

Responsive Management State Liaison Survey

Date

Name
Address
City, State

Name,

We understand that you have been appointed to be the liaison in your state for the Responsive Management Project. Here at Michigan State University, our half of the project is to produce 3 modules for your agency to use in current staff in-service training. We hope to work closely with you over the next two years to make results of the project the very best they can be in meeting your state's needs.

To this end, you need some information from us, and we need some information from you. The information from us consists of a copy to the Responsive Management Project proposal, and 2 charts. One chart describes the development process for the training modules, and the other shows how they fit into the entire project. In the proposal, the training modules are referred to as the "Applications Strategy Packages".

The immediate information we need from you consists of responses to a phone survey that we would like to conduct during June. A copy of the survey is enclosed for you to review carefully, and consider the questions before we call. Filling in the blanks on the form itself, and writing extra notes in the margins will aid considerably during the phone call. Some of the questions you may not be able to answer completely, but keep in mind that the more information we have of this type, the better we will be able to customize the training modules to meet the needs of the states, both in content and delivery method. Please consult with colleagues and associates in your agency when considering responses to the questions. We need a broad perspective for the best possible input to the project.

Please return the enclosed postcard with a date and time selected for our call to you. Try to allow for at least 45 minutes to cover the questions, and any important tangents you bring up. If you have no objections, we will record the call for our reference later in adding the input from your state to our development process.

We look forward to working with you on this endeavor. The Responsive Management Project has great potential for benefits to fish and wildlife agencies, and your contribution is a key one. Please feel free to communicate with us anytime you have questions or comments. From time to time we will send you materials for comments, and will do our best to keep you informed of progress on the project.

Sincerely,

R. Ben Peyton
Associate Professor

Roger Eberhardt
Research Assistant

Responsive Management State Liaison Phone Survey

I. Liaison Information

A. What is your position in the agency?

B. What is the best address and telephone number for contacting you?

C. Will you have any constraints serving as liaison, such as extended leaves or frequent travel over the next 2 years?

II. Agency Information

A. Is your state organized into political/geographical units such as districts or regions, for the purpose of fisheries and wildlife management? If so, what are the number and size of these units?

III. Current Training Program Information for Agency Staff

We realize that training programs and policies may be quite different for each division in an agency. We have provided space to consider both wildlife and fisheries divisions for the following questions, if needed.

A. Are training programs usually agency wide, or within specific units?

B. Are staff employed to organize and provide in-service training? If so, how many staff members and in what areas?

Fisheries

Wildlife

D. What percent of in-service training is done by outside consultants?

Fisheries

Wildlife

E. Is money budgeted annually for agency training, both staff and materials? If so, about how much?

Fisheries

Wildlife

F. Where are training sessions usually offered?

Fisheries

Wildlife

G. How many participants are usually involved in a typical in-service training session at one time?

Fisheries

Wildlife

H. How long do training sessions usually last?

Fisheries

Wildlife

I. How are participants usually selected?

Fisheries

Wildlife

J. Is there a common format used in training?

Fisheries

Wildlife

K. What are the usual types of media used?

Fisheries

Wildlife

L. Evaluation Information

1. What methods are used to evaluate in-service training programs?

Fisheries

Wildlife

2. Who takes responsibility for evaluation?

Fisheries

Wildlife

M. How would you summarize the effectiveness of agency in-service training programs?

N1. In the matrix below, fill in the blanks with the <u>percent</u> of your <u>professional Fisheries staff</u> that have had training in the listed content areas since 1980.

<u>Content</u>	% Trained	% That Need Additional Training	Not A Need
Public Relations			
Mass Media Communications			
Public Involvement			
Conflict Resolution			
Marketing			
Understanding Resource Users (Sociology, Needs Assessments, etc.)			
Managing Resources to Meet User Needs			
Identifying Trends			
Media Use			
Management Skills			
Interpersonal Communication			
Critical Thinking			
Planning			
Biological			
Coping with Agency Change			
Coping with Constituency Change			

N2. In the matrix below, fill in the blanks with the percent of your professional Wildlife staff that have had training in the listed content areas since 1980.

Content	% Trained	% That Need Additional Training	Not A Need
Public Relations			
Mass Media Communications			
Public Involvement			
Conflict Resolution			
Marketing			
Understanding Resource Users (Sociology, Needs Assessments, etc.)			
Managing Resources to Meet User Needs			
Identifying Trends			
Media Use			
Management Skills			
Interpersonal Communication			
Critical Thinking			
Planning			
Biological			
Coping with Agency Change			
Coping with Constituency Change			

IV. Responsive Management Module Content Information

A. From the content matrix above, what are the 4 most important content areas for further training of your agency's fisheries and wildlife professional staff?

1.

2.

3.

4.

B. In the next 2 years, how many people will receive training in the areas identified in A. above?

1.

2.

3.

4.

C. Are there other critical areas for training that are not included in the content matrix above?

D. Will the budget for in-service training generally be increasing or decreasing in the next 2 years?

E. How much would the agency budget to do the training in the content areas identified in A. above?

1.

2.

3.

4.

V. Responsive Management Module Implementation Information

A. Rank the following methods for training, according to your agency's preference. (1-5; 1 most preferred)

__ Agency sends a "core" team to a training session, then they train other agency staff.

__ Bring in outside consultants to train all staff at one time.

__ Use self-instructional, self-paced materials for individuals to use on their own.

__ Set up a training/learning center for individuals in the agency to use as needs arise.

__ Other or combination. Please describe.

B. Considering budget requirements and work loads for each of the following methods, what is a reasonable length of time to expect staff members to participate in training sessions?

When training a "core" team of staff:___________________

When training a majority of staff members:______________

When giving release time for individual use of training materials: __________________

C. What media equipment does your agency presently have available for staff training?

1. 1/2" VHS video recorder _____
2. large (>19") TV monitors _____
3. video projector _____
4. slide projector and screen _____
5. overhear projector _____
6. bulletin board _____
7. IBM compatible personal computers _____
8. Learning center _____

APPENDIX D

ASP Development Team

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Michigan State University
East Lansing, Michigan

Roger Eberhardt
Graduate Assistant
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Michigan State University
East Lansing, Michigan

APPENDIX E

Responsive Management Advisory Board

Larry Kruckenberg, Chairman
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Cheyenne, Wyoming

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Florida Game and Freshwater Fish Commission
Tallahassee, Florida

Ron Helinski
Maryland Forest Park and Wildlife Services
Annapolis, Maryland

Wilma MacKenzie
Minnesota Department of Fish and Wildlife
St. Paul, Minnesota

Sandra Wolfe
California Department of Fish and Game
Sacramento, California

Bud Bristow, Project Director
Phoenix, Arizona

APPENDIX F

Management Styles Inventory Availability

The instrument, scoring system, and basic interpretation booklet can be obtained from:

Life Styles Inventory Self-Development Guide
Human Synergistics, Inc.
39819 Plymouth Road
Plymouth, Michigan 48170
(313) 459-1030

APPENDIX G

Management Style Type Descriptions

Humanistic-encouraging

In general, this style is characterized by:
-a focused concern for the growth and development of others
-appreciation of the strengths in other, and belief in their potential for improvement
-optimism regarding what people can accomplish
-a nurturing approach to relationships
-the willingness to assist others with self-improvement
-the ability to inspire and motivate others

Affiliative

In general, this style is characterized by:
-a tendency to value relationships above all else
-a need to build relationships that are meaningful and reciprocal
-strong, well-developed interpersonal skills
-a tendency to motivate others using genuine praise and concern

Approval

In general, this style is characterized by:
-low self-esteem
-preoccupation with the opinions of others
-on over-concern with being popular and well-liked
-a tendency to be too agreeable, wishy-washy and compliant
-difficulties with conflict, negotiation, and confrontation

Conventional

In general, this style is characterized by:
-a tendency to view rules as a source of comfort and safety
-a preference for staying unseen and unnoticed
-a tendency to cover up mistakes
-reduced initiative
-a preoccupation with appearing average, normal and like everyone else
-unquestioned obedience to authority figures and rules
-a reduction in originality
-feelings of security with a bureaucracy

Dependent

In general, this style is characterized by:
-an over-concern with pleasing people, and not questioning others or taking independent action
-a passive attitude
-feelings of helplessness
-the presence of rapid change or traumatic set-backs in one's life
-a tendency to be easily influenced
-a lack of self-respect, which results in feeling unable to accomplish things
-difficulty making decision

Avoidance

In general, this style is characterized by:
-a strong tendency to deny responsibility for one's own behavior
-feelings of guilt over real or imagined mistakes
-fear of failure
-a preoccupation with one's own concerns
-lack of self-disclosure that eventually leads to emotional isolation

Oppositional

In general, this style is characterized by:
-the ability to ask tough, probing questions
-a tendency to seem aloof and detached from people
-a need to look for flaws in everything
-a tendency to make others feel uncomfortable
-a negative, cynical attitude
-a sarcastic sense of humor

Power

In general, this style is characterized by:
-a high need for power, status, prestige, influence, and control
-a tendency to dictate, rather than guide the actions of others
-an aggressive and possibly vengeful attitude
-narrow, rigid thinking
-a tendency to be threatened by perceived attempts to undermine authority

Competitive

In general, this style is characterized by:
-the association of self-worth with winning and losing
-a need for recognition and praise from others
-a tendency toward aggressiveness
-reckless hip-shooting behavior and unnecessary risk-taking
-a win-lose orientation that distorts perspectives and goals
-an extreme fear of failure

Perfectionistic

In general, this style is characterized by:
-a tendency to attach self-worth to accomplishment of tasks
-low self-esteem
-a tendency to place excessive demands on self and others
-a preoccupation with detail that distorts perspective and judgement
-an excessive concern with avoiding mistakes
-and inability to deal with, or express, emotion

Achievement

In general, this style is characterized by:
-a focus on achieving a standard of excellence
-the belief that things have specific and definable causes; a lack of belief in fate, luck or chance
-the knowledge that individual effort counts
-a commitment to making things better
-a preference for setting and accomplishing realistic, attainable goals, rather than goals imposed by other
-a belief in the benefits of asking for and giving honest feedback

Self-actualising

In general, this style is characterized by:
-concern for self-development
-strong instincts and intuition
-relative freedom from feelings of guilt or worry
-an energetic, exciting approach to life
-a strong desire to know about and experience things directly

APPENDIX H

Tables of Means and Standard Deviations (SD) for 4 Groups Using the Human Synergistics Management Style Inventory

Table 2: A Western State N=27

Factor	Mean	SD
Humanistic	29.7	6.8
Affiliative	29.9	4.8
Approval	13.1	3.8
Conventional	13.0	4.8
Dependent	14.5	5.9
Avoidance	4.7	4.0
Oppositional	6.9	3.9
Power	5.3	4.9
Competitive	13.3	8.5
Perfectionistic	18.5	5.4
Achievement	30.2	7.2
Self-actualizing	28.6	5.7

Table 3: A 20-State Agency Composite Group N=27

Factor	Mean	SD
Humanistic	28.8	5.5
Affiliative	28.9	7.0
Approval	10.4	5.2
Conventional	12.2	5.3
Dependent	11.1	5.5
Avoidance	4.2	3.8
Oppositional	6.3	3.7
Power	5.2	3.5
Competitive	11.5	4.9
Perfectionistic	19.3	4.2
Achievement	31.8	6.3
Self-actualizing	30.2	6.3

Table 4: A Mid-Western State N=28

Factor	Mean	SD
Humanistic	27.5	6.3
Affiliative	29.7	4.9
Approval	12.9	3.7
Conventional	16.3	4.9
Dependent	17.0	6.1
Avoidance	5.7	4.1
Oppositional	5.9	3.8
Power	6.2	5.0
Competitive	12.0	8.3
Perfectionistic	20.8	5.4
Achievement	32.5	7.1
Self-actualizing	29.0	5.9

Table 5: A Western State N=38

Factor	Mean	SD
Humanistic	29.6	5.6
Affiliative	30.2	5.8
Approval	12.3	5.1
Conventional	13.7	6.1
Dependent	13.3	5.9
Avoidance	4.5	4.3
Oppositional	5.6	4.3
Power	4.6	3.5
Competitive	11.0	5.3
Perfectionistic	17.3	4.1
Achievement	30.0	6.4
Self-actualizing	27.5	6.2

APPENDIX I

Michigan Department of Natural Resources Mid-Management Academy Curriculum Summary

Day 1 P.M.
Introductions and Curriculum Orientation

Day 2 A.M. and P.M.
Assessing one's own managerial style

Day 2 Evening
Tour fish hatchery

Day 3 A.M.
Developing the multiple roles of the manager

Day 3 P.M.
Effective managerial communications

Day 4 A.M.
State legislative process and relating to lawmakers

Day 4 P.M.
Participation in a televised press conference

Day 5 A.M. and P.M.
DNR public relations and simulated TV press conference

Day 6 A.M.
Creating a productive work environment

Day 6 P.M.
The manager as supervisor

Day 7 A.M.
Conflict management

Day 7 P.M.
Budgeting in the DNR

Day 8 A.M.
Microcomputers and information management

Day 8 P.M.
Written communications

Day 9 A.M.
Strategic planning and interaction with the public

Day 9 P.M.
Organizational strategy in mid-level management

Day 9 Evening
Dinner and talk with the DNR director

Day 10 A.M.
Evaluations and "Where do we go from here?"

APPENDIX J

ASP Planning Documentation

Responsive Management was initiated by the Western Association of Fish and Wildlife Agencies, with 26 state agencies providing planning input and funding. The Project had 2 parts. One was a Constituency Inventory Package that provided a set of computer aided telephone survey instruments for collecting information from the public (e.g., demographics, participation, economics, agency performance, wildlife issues, attitudes toward wildlife, and knowledge of wildlife). These surveys and the technology to conduct them were developed at the University of Arizona and Yale University. The other part of the project was the Application Strategies Package (ASP) developed at Michigan State University. The ASP was the professional continuing education aspect of the Responsive Management Project.

Development of the ASP occurred in several steps, with over 75 people involved. Principle contributors and timing of their input over the 30 month process are listed below. Following the chart is a description of contributions of each group or aspect of the project. Finally, an ASP budget overview is presented at the end of this appendix.

First 15 Months (Start November, 1987)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Initial planning session	x														
MSU developers	x		x	x	x	x	x	x	x	x	x	x	x	x	x
Development team									x						
Module teams															
State liaisons						x	x	x	x	x	x				
Advisory board					x				x	x					
Pilot test															
Orientation workshop															

Second 15 Months (End April, 1990)

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Initial planning session															
MSU developers	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Development team															
Module teams	x	x	x			x	x	x	x						
State liaisons			x				x		x						x
Advisory board		x				x		x					x		
Pilot test											x				
Orientation workshop															x

Principle Contributors

Initial Planning Session

The Responsive Management (RM) Project was conceived at an informal gathering at the Western Association of Fish and Wildlife Agency's (WAFWA) annual meeting the summer of 1986. In November 1987, a formal initial planning session for the Project was held for 2 days in Phoenix, Arizona. The group of people there represented state fish and wildlife agencies, WAFWA, and university researchers. The outcome of the meeting was a decision to proceed with the 2 parts of the project, the Application Strategies Package (ASP) and the Constituency Inventory Package (CIP), using WAFWA as the contracting organization. Three universities were chosen as project development sites, Michigan State University for the ASP and the University of Arizona and Yale University for the CIP.

MSU Developers

MSU developers at Michigan State University, Ben Peyton and Roger Eberhardt, were responsible for development and testing of the ASP, as well as conducting an orientation workshop for state agencies that were part of the RM project. We were to deliver a master copy of all materials to WAFWA within 2 years of our starting date.

Development Team

The Development Team consisted of 4 members from state agencies and universities (See Appendix D).

Module Teams

Module Teams of 2 people each were assembled to produce materials for the 3 workshops. These 6 people were all recognized experts in the content area of their workshops as well as being experienced teachers and workshop leaders. The teams each met separately twice. The first was a planning meeting where ASP project materials to date were presented to them. The teams went away with the charge to develop drafts of materials for a 3 day workshop of their module. Approximately 3 months later, each team met again at Michigan State to present their efforts. Materials were then revised and final production was accomplished by the 2 MSU developers.

ASP Module Team Members

Marketing

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Advisory Board

The Advisory Board served as the link between WAFWA and project developers, meeting 4 times per year for the 2 year development phase. The Board reviewed module materials to provide their input. They were also overseeing development of the CIP, and served to oversee transition to implementation of all project materials in state agencies. The Advisory Board consisted of 6 people from state fish and wildlife agencies (see Appendix E).

Applications Strategies Package Budget

Expenditures for planning, development, and implementation of the Application Strategies Package totaled $88,300. Financial support was provided by:

Western Association of Fisheries and Wildlife Agencies
International Association of Fisheries and Wildlife Agencies
Southeastern Association of Fisheries and Wildlife Agencies
U.S. Fish and Wildlife Service
National Fish and Wildlife Foundation
Individual state and provincial agencies

APPENDIX K

ASP Workshop's Goals and Objectives

The overall goal of these 3 education workshops was to provide managers an opportunity to gain skills needed to be responsive to changing demands of natural resource users. The marketing workshop provided a methodology for an examination of the agency's publics. As such, it was focussed largely on external aspects of fisheries and wildlife management. The change workshop provided an opportunity for individual managers to examine their changing role within the agency. Therefore, this workshop was targeted mostly to individual managers and internal agency operations. The communication and dispute resolution workshop dealt with interaction between the external and internal agency aspects of management.

A similar pattern occurred within workshops, each of which could be partitioned into 3 parts. These were: an overview of the topic (external), an examination of the individual manager's role (internal), and specific applied skill development for managing resulting interactions (interaction). Goals and objectives for each ASP workshop are listed below.

Marketing in a Fisheries and Wildlife Agency

Workshop Goals

In general, this workshop is an outward view from the agency to examine both users and non-users of agency output. It is closely integrated with the Constituency Inventory Package (CIP) of the Responsive Management Project. This workshop addresses the concern: Given certain answers to certain questions, what decision should a manager make?

After completing this workshop, an agency manager will better understand how to segment and target both user and non-user groups for the purpose of efficiently applying information about marketing strategies to resource and people management.

The first and second parts of this workshop are a basic understanding of marketing principles such as segmentation, needs assessment, and trend analysis. Marketing concepts in business will be adapted to meet needs of public agencies.

The third part is concerned with the process of developing a marketing strategy related to segmenting and targeting markets for agency products and services. In this part decisions are made about which sections of the CIP to use, and when to use them.

The fourth part is interpretation of marketing data for resource management and developing an implementation plan for the marketing strategy. Given answers to questions from the second part, what decisions should be made.

The last part is an evaluation section for workshop participants.

Workshop Objectives

Part I Marketing Principles

After completing this part, agency managers should be able to:

...define marketing as presented in this module.

...recognize the elements of a marketing orientation toward constituents.

...understand the need for marketing within the agency.

Part II Situation Assessment

After completing this part, agency mangers should be able to:

...formulate marketing goals to accomplish the mission of the agency.

...list the publics who represent the constituents of the agency.

...select a goal and choose publics to become markets.

...identify situation factors and analyze current conditions for each market.

...write marketing objectives based on goals and current conditions.

Part III Strategy

After completing this session, agency managers should be able to:

...define market segmentation.

...determine a basis for segmentation in their agency.

...know how to use constituent data to segment markets and list segment needs in priority order.

...apply the 4 "P's" (product/service, price, place, and promotion) to target selected market segments.

Part IV Implementation

After completing this part, an agency manager should be able to:

...apply principles of information and education, constituent relations, planning and budgeting to the implementation of marketing with the agency.

...develop a marketing information system within their agency.

...recognize typical barriers to implementation of marketing.

Part V Evaluation

After completing this part, agency managers should be able to:

...contribute to improvement of the marketing workshop by constructively criticizing the content and process using the evaluation forms provided.

Responding to Change for Fisheries and Wildlife Managers

Workshop Goals

In general this workshop is an examination of an agency's culture, an individual's thinking style, and the relationship between the two. After completing this workshop, an agency manager will better understand the process by which change occurs in themselves and the agency, and have applied skills in accepting, facilitating and directing change.

The first part of this workshop is an individual-based process that integrates 12 factors of thinking, personality, and communication styles into a holistic view of a person as a manager. This part uses a Life Styles Inventory from Human Synergistics, Inc. used in corporate settings for management development.

The second part of this workshop is a process that examines 12 aspects of agency culture. It uses another instrument from business management development.

The third part is the interaction between the individual and agency culture. A role-playing situational game by Orion International, Inc. is used in this part. Ramifications of accepting and facilitating change within individual and agency constraints are examined.

Workshop Objectives

In this workshop, you will:

Recognize:

- that change is a continuous process.
- characteristics of successful and unsuccessful changes.
- the critical importance of the Stimulus + Thinking = Response equation.
- how change occurs in your agency.
- major factors that characterize a person as resisting or facilitating change.

relevant changes occurring in society today.

Assess:

individual thinking, learning, communication, and management style that influences interaction among co-workers.

specific factors of agency culture that influence its responsiveness to change.

Interpret:

individual scores on the Life Styles Inventory-Level I.

agency composite scores on the Organizational Culture Inventory-Level V.

Apply:

information learned about yourself and your agency culture to interactive situations.

results of the Caribbean Island Survival II Exercise Simulation to individual styles in a group setting.

Practice:

interactions which facilitate responding to change.

Develop:

a specific action plan for a response to change.

Communication and Dispute Resolution for Fisheries and Wildlife Managers

Workshop Goals

In general, this workshop is the connection between the external view of the marketing workshop, and the internal view of the change workshop. There are issues that develop as a result of communication, ambiguities, and interactions between an agency's managers and an agency's publics.

After completing this workshop, a manager will have applied skills in managing and avoiding conflicts that arise, both as a part of normal agency operations, and as a result of crises that develop.

The first part of this workshop deals with public involvement and examine the pros and cons of available communication options. It examines issue components and issue development.

The second part emphasizes the individual manager's role in conflict resolution related to the conflict cycle.

The third part is a skill-building series of exercises focussing on indirect persuasion, negotiation, mediation, and structured communication that empower a manager to apply knowledge learned in the first two parts.

<u>Workshop Objectives</u>

Agency Program Level

Participants will be able to...

...recognize the social and political nature of issue management and the need for a major program of issue management.

...understand the components and developmental nature of resource <u>issues</u>.

...recognize the role of personal communication skills of resource managers in successfully managing fisheries and wildlife issues.

...evaluate their own agency/unit performance regarding several tasks of public involvement

...reflect on what level of priority should be given to agency improvement in public involvement tasks.

...assess and discuss the credibility assigned to themselves and their agency by various stakeholder groups.

...recognize the existence and utility of a full range of communication objectives and public involvement strategies which may be incorporated into an issue management program.

Personal Skill Level

Participants will be able to...

...understand the nature of <u>conflict</u> as a part of resource issues and the developmental nature of <u>conflict</u> stages.

...become skilled in recognizing the stages of conflict in a dispute.

...become skilled at recognizing five typical behavior styles in themselves and others.

...become knowledgeable about the differences in adversarial and third party roles.

...become skilled at analyzing their own appropriate role in an issue.

...know the characteristics of indirect persuasion and the advantages of this approach in conflict management.

...contrast the use of indirect persuasion with direct persuasion in a conflict.

...apply the 7 principles of communication involved in dispute management and relate these to indirect persuasion.

...become skilled in the processes of indirect persuasion for resolving conflict including:

using a recorder
initiating dialogue
intriguing and involving all parties
channeling and guiding discussion
listening
providing feedback
effective questioning
assimilating agreements and disagreements
reinforcing
negotiating
solidifying agreements

...become skilled at organizing and mediating a conflict in a structured communication dialogue technique.

...identify their strongest interpersonal communication skills.

...identify weak behavior skills and set specific goals for developing these behavior skills.

...identify an opportunity for conflict which requires their use of interpersonal communication skills.

...define their own roles in that opportunity and assess their abilities to manage the conflict situation.

...propose a specific plan for either developing or finding expertise to supplement their current skills at conflict management for use in the identified situation.

APPENDIX L

Application Strategies Package Pilot Test Results

FINAL REPORT

EVALUATION OF THE ASP[1] WORKSHOP MODEL

RESULTS OF THE WYOMING/LOUISIANA PILOT TEST

December 12-14, 1989

Submitted by:

R. Ben Peyton and Roger Eberhardt, Department of Fisheries and Wildlife, Michigan State University, E. Lansing, MI 48824

Background

The ASP involves the development of three training modules to be used by state natural resource agencies. Topics of the three modules are: marketing, coping with and initiating change in society, and management of issues and conflicts.[2] The three modules will be completed for distribution and use in March, 1990. As part of the Responsive Management Development Phase, two states (Wyoming and Louisiana) were selected to pilot test the ASP and Constituency Inventory Package (CIP) models. Both states were trained on the CIP materials in Arizona in October, and will have completed a pilot survey by the end of December. The ASP pilot workshop was scheduled for December, to be held in Cheyenne, Wy for both states.

ASP materials have been evaluated by at least 2 additional methods. First, peer review from our development team, the project Advisory Board, and representatives of each participating state agency has been actively sought at all stages. Second, pilot testing of ASP training modules has occurred at several different levels as part of the development process. For example, individual activities have been used as sessions within other workshop settings to check such things as time for completion and vocabulary.

ASP Pilot Test Objectives

The pilot test was intended to contribute to the following:

1. Determine whether the three day format was acceptable to participants and effective in providing adequate coverage of the material.

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[1]Application Strategies Package of the Responsive Management Program sponsored by the Western Association of the Fisheries and Wildlife Agencies.

[2]See Appendix IV for a more detailed summary of the three modules.

2. Assess the readability, utility and clarity of the workshop textual materials.

3. Assess the interest level of the workshop topic and materials.

4. Determine whether selected topics should be added and whether certain others should be omitted.

5. Evaluate the effectiveness of the combined teaching model (lecture, audio-visual, discussion, group interaction) which has been built into all three modules.

6. Determine whether desirable shifts in knowledge and attitudes regarding marketing processes and application to fisheries and wildlife agencies occurred during the workshop experience.[3]

7. Provide an additional day of training to the 3 Louisiana participants which would enable them to return to their own state agency and give similar training in marketing to members of that agency.

Pilot Test Methods

As part of Responsive Management's field test program, the module on marketing was selected to be used with Wyoming and Louisiana personnel. This module was selected for the following reasons:

1. Marketing most closely relates to the CIP and would make a more cohesive pilot experience for the two state agencies involved.

2. The marketing module contained more original material which could benefit from pilot evaluation and subsequent revision.

3. The marketing module represents the training model well and can be used to evaluate the approach used in all three modules.

Objectives were evaluated using a combination of data collection means.

1. A pre- and post-survey was administered to allow a comparison of participant knowledge and attitudes before and after the workshop. Respondents were asked to write a 7 digit number on their surveys so that answers could remain confidential and yet allow evaluators to detect

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[3]Some of the objectives for the Marketing Module presented in Appendix V were selected and evaluated on the pre- and post-survey.

changes in individual respondents.

2. An overall workshop evaluation form was filled out by participants on which they provided their perception of the effectiveness, interest, clarity, etc. of the materials and the presentation.

3. Following each half day, the participants were asked to evaluate certain aspects of the materials and presentation used during that time.[4]

4. Two observers recorded participant comments, responses, interest levels and other indicators of effectiveness.

5. Evaluative (critical) comments were solicited by the presenter during the workshop, and the two observers interviewed participants on an individual basis during breaks and at the end of each day's session.

The workshop was presented by one of the coauthors of the module, Dr. Dick Paterson (Land Between the Lakes, Murray, Ky) who does similar training for various federal agencies. Dr. Paterson's familiarity with the method and content of the text materials enabled him to present the workshop as it had been intentionally designed and therefore allowed the evaluators to focus on the actual module and not an adapted version by some other trainer. Certain additional sections were included to determine whether they were desirable as permanent additions to the module. The influence of the <u>presenter</u> was kept distinctly separate from the effects of the <u>workshop module materials</u> by the evaluators as the process occurred.

The nature of the pilot test made this a <u>formative</u>, rather than <u>summative</u> evaluation. Information gathered is very valuable to suggest specific revisions for this module and makes important contributions to the objectives listed previously. However, it is difficult to generalize to the suitability of the training model used in the ASP modules to all participating states since factors such as workshop leader qualifications, background of participants etc., will vary. It is also impossible to assess long term effects of such training given the short time frame of the pilot test. The evaluation must consider only short term outcomes and assume that if learning and attitude shifts take place, the performance of participants in their professional roles will be enhanced over time.

Results

Participants of the workshop from both states (Wy: n = 10; La: n = 3) represented the target audience of the training modules well. (Bud Bristow, Responsive Management Project Director also participated and submitted evaluative comments.) All participants were mid-level administrators. Most had

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[4] Appendix III

supervisory responsibilities. The participants represented wildlife, fisheries, information and education, and planning divisions within their agencies. They had worked for their agencies an average of 13.5 years and, with few exceptions, had spent their entire careers in one agency. One participant had a previous marketing course and three reported taking an advertising class in college. None of the others reported any formal training in marketing, although most participants described informal discussions and some reading about selling and involving the public in fisheries and wildlife management decisions.

Pre- and Post-Survey Comparisons[5]

Item #8. Define marketing as you understand it right now.

Responses were analyzed to determine use of key words and to determine whether post-test responses were broader and more accurate. On the pre-workshop survey, the majority of participants defined marketing as selling or promotion. On the post-survey, marketing was correctly defined in broader terms as an exchange between the agency and its constituents which involved research and targeting components.

Findings are summarized below:[6]

PRE-SURVEY:	POST-SURVEY:	CHANGES:
Inform (2), selling (8), promote (5), target (1), transfer of goods (1), identify needs (1)	Research (3), selling (3), developing services...(3), exchange (6), flexibility (1), acceptance (1), targeting (2), planning (4), tailoring products (2), promoting (2)	None of the post responses were inaccurate or less desirable than pre-survey responses. 11 respondents had substantially better definitions on the post-survey.

[5]See Appendix I

[6]Numbers in parentheses indicate the number of respondents using each term.

Item #9. Rate your perception of how useful marketing will be in YOUR WORK on the following scale. Circle the appropriate response.

very useful--occasionally useful--seldom useful--never useful

PRE-SURVEY:	POST-SURVEY:	CHANGE:
10 respondents selected "very useful", 3 "occasionally useful", and one "seldom useful"	13 respondents selected "very useful", one "occasionally useful"	5 respondents shifted to more favorable position, one shifted negatively

Item #10. Describe why you chose the response you circled in question 9.

The general reasoning shifted from a perception that marketing is only a selling/promotion activity to one that marketing can be used to determine what constituents want and tailoring agency services to meet needs. Four respondents showed a substantially improved answer on the post-survey.

Item #11. Is there a need for marketing in YOUR AGENCY right now? If so, why? If not, why not?

All respondents indicated a need existed on both the pre- and post-surveys. However, on the pre-survey, the emphasis was on selling and image (public relations) to cope with trends. On the post-survey, the idea of exchange and targeting became more prevalent.

Item #12. What department(s) should do the marketing in your agency? Why?

A comparison of pre- and post-survey results showed a shift from perceiving marketing to be the responsibility of a committee or department to the realization that marketing must be integrated into all levels and across all divisions to be effective.

PRE-SURVEY:	POST-SURVEY:	CHANGE:
"All" (6), "administrators" (2), "I & E" (4)	"All" (9), "everyone--from top to bottom" (6), "I & E plus a multidivisional committee" (1)	7 respondents showed substantially better understanding of the implementation of marketing in an agency

Item #13. What benefits do you think marketing could have for your agency's constituents?

Participants mentioned public relations and a better agency image on the pre-survey more than other reasons. The idea of efficiency and improving agency response by targeting constituents was often mentioned on the post-survey.

Item #14. Briefly describe any marketing efforts you are aware of in your agency right now.

There was no general increase in awareness of either formal or informal agency marketing efforts as a result of this workshop.

Participant Workshop Evaluation Results

Participant responses to the evaluation form are tabulated in Appendix II. In summary, the results were extremely positive.

In the "General Evaluation" section, with 4 being the most favorable, all items were rated very high (above 3.3) with the exception of the item "The facility for this workshop was ideal." Since the workshop was being held in Wyoming's state offices, Wy participants were not really distanced from their daily routines and pressures. The room provided was small and not designed well for such interactive programs. These two factors probably contributed to the lower rating of 2.5 for this item.

The "Workshop Activity" section was also well rated with only 2 items being rated at less than 3. One of these items (#11, rated 1.8) indicated that participants felt a need for more illustrative case studies in the workshop. The other (#13, rated 2.8) suggested that some parts of the workshop presentation was not related to the text materials given to the respondents. This latter perception was primarily brought about by deviations from the workshop text purposefully included so that additional topics could be explored as future additions to the text and workshop agenda.

One item asked if the participant would recommend the workshop to others. All respondents indicated they would. Several gave as their reason that the concepts and applications included were important to resource managers.

General comments made by respondents involved fine tuning the presentation materials with the notable exception of one suggestion that workshop participants be better prepared by preworkshop activities. This strategy is a formal part of the three workshop modules, but was omitted in this case of the marketing pilot. This and other comments by the participants indicate the importance of this strategy in future implementations.

Discussion

A summative statement regarding each of the pilot objectives is presented below:

Objective 1. Determine whether the three day format was acceptable to participants and effective in providing adequate coverage of the material.

Based on participant evaluations and interviews the three day format is suitable for covering the material included in the modules.

Objective 2. Assess the readability, utility and clarity of the workshop textual materials.

Due to the pilot nature of the workshop, participants did not have an opportunity to read the text before the session, nor was adequate time given for them to carefully evaluate the readability of the text. However, comments indicated the text appeared to be clearly written. Considerable evidence existed that the concepts and skills covered were useful.

Objective 3. Assess the interest level of the workshop topic and materials.

The observers were impressed with the continued attention of the participants over the three days. Since the Wyoming members were close to their offices, had the material not been applicable and interesting, it is likely they would have found many excuses to be gone from some of the proceedings. However, attendance was consistent throughout. In addition, observer discussions with the participants and written comments indicated the workshop was interesting and meaningful to these professionals.

Objective 4. Determine whether selected topics should be added and whether certain others should be omitted.

The need for further treatment of several topics was identified. The following will be added or expanded:

1. Additional case studies will be incorporated into the text to replace the case studies used by Dr. Paterson from his own experiences.

2. The leader's guide will encourage the workshop leader to have someone from the agency discuss any ongoing marketing projects in the agency. Suggestions for how to best incorporate this activity will be included.

3. Several opportunities to more strongly relate the marketing module to the CIP were identified and will be incorporated.

4. A graphic aid which demonstrates marketing in the agency will be designed and added to the text so that participants will not only be oriented to their progress in the workshop, but also how the process relates to implementation of marketing in the agency.

5. A section on developing the agency's public image through marketing will be added.

6. A section on internal marketing (marketing the marketing concept within the agency itself) will be added to the module.

<u>Objective 5. Evaluate the effectiveness of the combined teaching model (lecture, discussion, group interaction) which has been built into all three modules.</u>

The combination of lecture, discussion and group interaction proved successful for this module and indicates the workshop model will work well with the other two modules as well.

<u>Objective 6. Determine whether desirable shifts in knowledge and attitudes regarding marketing processes and application to fisheries and wildlife agencies occurred during the workshop experience.</u>

Positive shifts in participant understanding of the marketing process and its application to fisheries and wildlife management did occur. Participants were better able to define marketing, identified more of the important components of the marketing process and exhibited a better awareness of appropriate implementation strategies into a FW agency. A broader set of benefits of marketing were understood by participants following the workshop. Attitudes about the desirability of using marketing in their own agency were definitely strengthened.

<u>Objective #7. Provide an additional day of training to the 3 Louisiana participants which would enable them to return to their own state agency and give similar training in marketing to members of that agency.</u>

The Louisiana participants had determined that their most immediate need was to implement marketing in association with the CIP pilot survey. Therefore, they will send participants to the April, 1990 training session in E. Lansing, MI before attempting to train more of their own agency personnel in marketing. Time was spent with the Louisiana participants in discussing the CIP results and interpretations. A committment was made for further consultation to assist Louisiana develop their marketing plan from the CIP results in lieu of more in-depth workshop training.

Workshop Participant Survey
Application Strategies Package
Responsive Management

Marketing Education Module

Instructions: Complete the following pre-workshop survey, given your present knowledge and beliefs. Answer every question. It should take about 15 minutes. Return it to your agency facilitator at least one day before the workshop.

1. Write down any 7 digit number: ____________. REMEMBER YOUR NUMBER, you will need it at the workshop.

2. Describe your job responsibilities.

3. How long have you worked for your agency?

4. How long have you worked in your present position?

5. How long have your worked in any fish and wildlife agency?

6. Describe your formal education in marketing, ie: have you had any courses, workshops, or done any reading in any aspect of marketing?

7. Describe your informal education in marketing, ie: have you heard about marketing ideas from other people, have you applied any aspect of marketing to your work?

8. Define marketing as you understand it right now.

9. Rate your perception of how useful marketing will be in YOUR WORK on the following scale. Circle the appropriate response.

very useful--occasionally useful--seldom useful--never useful

10. Describe why you chose the response you circled in question 9.

11. Is there a need for marketing in YOUR AGENCY right now? If so, why? If not, why not?

12. What department(s) should do the marketing in your agency? Why?

13. What benefits do you think marketing could have for your agency's constituents?

14. Briefly describe any marketing efforts you are aware of in your agency right now.

Part VI

EVALUATION OF THIS WORKSHOP

Scored: SA=4 (excellent)
A=3 (good)
D=2 (fair)
SD=1 (poor)

Instructions R=reverse coded

Please use this questionnaire to evaluate this workshop. Your answers and comments will help improve our program.

Indicate how you feel about the statements below using this response code.

Circle SA if you strongly agree with the statement.

Circle A if you moderately agree with the statement.

Circle D if you moderately disagree with the statement.

Circle SD if you strongly disagree with the statement.

Means			
			A. Your General Evaluation
3.5		(1) SA A D SD	I enjoyed the course on marketing.
3.3		(2) SA A D SD	My behavior will change as a result of my participation in the workshop.
3.5	(R)	(3) SA A D SD	The content of this workshop is <u>not</u> relevant to my work.
3.5		(4) SA A D SD	I learned a great deal about marketing in this workshop.

3.7 (R) (5) SA A D SD I do not want to be involved in any future workshops of this type.

3.6 (R) (6) SA A D SD This workshop only stated the obvious and was a waste of my time.

3.5 (7) SA A D SD This workshop was interesting.

3.8 (R) (8) SA A D SD The workshop leader did a poor job.

2.5 (9) SA A D SD The facility for this workshop was ideal.

B. Workshop Activity Evaluation

Please indicate your feelings about the statements below for the individual workshop activities listed.

3.3 (1) SA A D SD The content presented in the lectures was clear and easy to understand.

3.2 (R) (2) SA A D SD The visual aids were not helpful in understanding the material.

3.4 (3) SA A D SD I understood how the lectures and the workshop activities were related.

3.2 (R) (4) SA A D SD Too many ideas were presented in the time available.

3.5 (5) SA A D SD The presentations were stimulating and interesting.

3.2 (6) SA A D SD The material was easy to read.

3.4 (7) SA A D SD The class discussions were helpful when it came to applying information to my work.

3.5 (8) SA A D SD The content of the lectures was clearly related to marketing.

3.2 (9) SA A D SD The learning activities helped me to better understand the information.

1.8 (R)(10) SA A D SD More illustrative case studies are needed.

3.1 (11) SA A D SD The learning activities helped me learn new marketing management skills.

2.8 (12) SA A D SD The activities were clearly related to the text material.

3.0 (13) SA A D SD I learned a great deal about how to improve my work efficiency using a marketing approach.

Please briefly answer the following questions:

(1) Which workshop activities need to be improved, and in what way?

For all activities, make sure the leader coordinates with the participant's manual. Include more discussion in the implementation part. Add a case study as an example to all worksheets. Clear up the terminology confusion in the strategy section.

(2) Would you want to change the amount of time devoted to any activity? If so, how much and for what reason?

Increase the time on internal marketing.

(3) Would you recommend this workshop to other persons like yourself?

Yes _X___ No ____ Why or why not?

The concepts and applications are important to everyone in the agency.

(4) Please add here any comments which will help us evaluate the workshop.

Add a quick overview section on the whole Responsive Management project.

Prepare participants more before the workshop so they can bring some ideas to it.

Get top management involved.

Use small-group activities.

Add a graphic for overall marketing in the agency.

Make sure all overheads or an equivalent are in the participant's manual so they do not feel like they have to take notes.

Evaluation of Tuesday A.M

Instructions

Please use this questionnaire to evaluate this session. Your answers and comments will help improve our program.

Indicate how you feel about the statements below using this response code.

Circle SA if you strongly agree with the statement.

Circle A if you agree moderately with the statement.

Circle D if you disagree moderately with the statement.

Circle SD if you strongly disagree with the statement.

Please indicate your feelings about the statements below for the individual session activities listed by circling the appropriate response.

(1) SA A D SD The content presented in the lectures was clear and easy to understand.

(2) SA A D SD The visual aids were not helpful in understanding the material.

(3) SA A D SD I understood how the lectures and the session activities were related.

(4) SA A D SD Too many ideas were presented in the time available.

(5) SA A D SD The presentations were stimulating and interesting.

(6) SA A D SD The material was easy to read.

(7) SA A D SD The class discussions were helpful when it came to applying information to my work.

(8) SA A D SD The content of the lectures was clearly related to marketing.

(9) SA A D SD The activities helped me to better understand the information.

(10) SA A D SD More illustrative case studies are needed.

(11) SA A D SD The activities helped me learn new marketing management skills.

(12) SA A D SD The activities were clearly related to the text material.

Would you please briefly answer the following questions:

(1) Which session activities were of the most value? Rank the following from 1 to 10 according to their value. Omit items which are not applicable.

1 = highest; 10 = lowest

_____	Leader presentations	_____	Individual study time
_____	Individual activity	_____	Demonstration activities
_____	Case studies	_____	Large group discussion

(2) Would you want to change the amount of time devoted to this activity? If so, how much and for what reason?

(3) Please add here any comments which will help us evaluate the session.