A Field Guide for Evaluating National Park Service Interpretation

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The Blind Men and the Elephant

by
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It was six men of Indostan
To learning much inclined,
Who went to see the elephant
(Though all of them were blind),
That each by observation
Might satisfy his mind.

The first approached the elephant
And, happening to fall
Against his broad and sturdy side,
At once began to bawl,
"God bless me! but the elephant
Is very like a wall!"

The second feeling of the tusk
Cried: "Ho! what have we here
So very round and smooth and sharp?
To me 'tis mighty clear
This wonder of an elephant
Is very like a spear!"

The third approached the animal,
And, happening to take
The squirming trunk within his hands,
Thus boldly up and spake:
"I see," quoth he, "the elephant,
Is very like a snake!"

The fourth reached out his eager hand,
And felt about the knee;
"What most this wondrous beast is like
Is mighty plain," quoth he;
"Tis clear enough the elephant
Is very like a tree."

The fifth, who chanced to touch the ear,
Said, "E'en the blindest man
Can tell what this resembles most.
Deny the fact who can,
This marvel of an elephant
Is very like a fan!"

The sixth no sooner had begun
About the beast to grope,
Than, seizing on the swinging tail
That fell within his scope,
"I see," quoth he, "the elephant
Is very like a rope!"

And so these men of Indostan
Disputed loud and long,
Each in his own opinion
Exceeding stiff and strong,
Though each was partly in the right,
And all were in the wrong!

So, oft in theologic wars
The disputants, I ween,
Rail on in utter ignorance
Of what each other mean,
And prate about an elephant
Not one of them has seen!

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INTRODUCTION

Each year millions of travelers from across the nation and around the world visit American National Parks. Considerable time and money is spent interpreting historic, cultural, and natural resources contained in these parks.

Since its inception in 1916, the National Park Service has done a great deal to develop the concept of resource interpretation into something more than merely providing information. Yet, interpretation faces an increasing expectation to balance visitor needs with growing public concern for preserving park resources. Questions are continually raised about the purposes of interpretation, about the value of interpretation to the parks and to the public, and about how to assess interpretive success. Hartzog (1974:397) noted that "...the effectiveness of park interpretation must be a major concern of all administrators, not just those involved actively in the effort."

Today, interpretation continues to be scrutinized, especially at budget time. "Unfortunately, interpretive program data have not been well recorded and presented to budget controllers" (Knudsen 1984:406). The nature of interpretation, often obscure by definition and consequently elusive of traditional evaluation, makes determination of its merit and worth difficult at best. This is especially true with today's tight budgets.

Traditionally, interpretation has been evaluated in one of two ways: (1) on the basis of visitor participation and generated revenue, or (2) on the basis of audits, in which case, only the expertise of the interpreter is assessed. Visitor numbers and dollar expenditures seldom represent the entire picture. They are not always appropriate indicators of the true value or benefit of interpretation. As for auditing, the somewhat subjective reactions obtained in the auditing process are not, by themselves, entirely appropriate for budget justification.

In a recent publication entitled *Interpretive Views*, Machlis (1987) acknowledged that there is generally a high opinion of interpretation, that most in the profession consider it important to the mission of the National Park Service, and that professionals "consider interpretation's impact upon the visitor to be of critical importance" (1987:177). But there appears to be little consensus about the roles of interpretation and/or the methods by which it should be evaluated.

Basically, park resource interpretation is the mechanism through which information about a particular resource flows from park management to park visitors. Many interpretation professionals agree, however, that interpretation is much more than merely providing information. According to some (Mott 1976; Tilden 1977; Woodward 1983; Dewar 1986) interpretation is a method of educating the public about park resources. Others see it as a management technique used to facilitate appreciation of resources and park policy (Sharpe and Gensler 1979; Braley and Hanna 1980; Roggenbuck 1982; Kraus and Allen 1987). Furthermore, interpretation is sometimes viewed as an art form – a form of inspi-

ration (Tilden 1977; Merriman 1980; Lewis 1989). Beyond these purposes, interpretation also has recreation value (Sharpe 1976; Kraus and Allen 1987). In fact, as the National Park Service moves to fulfill its dual mandate to encourage visitor enjoyment and, at the same time, preserve the resource, interpretation programs are often the most popular aspect of a visitor's park experience.

Before addressing the concern of how best to evaluate interpretation, it is important first to review the purpose(s) of interpretation and to discuss the importance of interpretive evaluation in the overall scheme of park management. The first part of this manual does this and includes a discussion of the decision-making process involved in interpretive evaluation. Following this discussion are several possible techniques for evaluating interpretation, and finally, an annotated bibliography provides several sources for additional reference.

This manual is designed to be used! It is designed to be used by a wide range of people, with varied backgrounds and levels of expertise, to help improve interpretation. Written as a field guide, interpreters, supervisors, chiefs of interpretation, superintendents, and others should find this a handy reference for making choices about evaluating the effectiveness and/or efficiency of park interpretation.

This manual also is designed to be a **working** document. The techniques described herein have been successfully employed in other fields. Some modification may be required to adapt them for specific park needs; so try them, massage them, use them in combination with each other, and make notes about how they work for you. Comments, successes, and suggestions are important and we would like to integrate them into future editions of this field guide.

The field guide is divided into three major sections. The first section is designed to help clarify evaluation decisions. Evaluating interpretation involves a great many choices about what, when, and how. Accompanied by graphics, this section examines carefully several relevant evaluation decisions. As you read this section, keep an eye open for your specific evaluation concerns. The basic questions that will help guide you through this section are: (1) "What do I want to evaluate?", (2) "When should I evaluate?", and (3) "From what perspective do I want to evaluate?".

The second section contains a description of twelve evaluation techniques. This is the heart of this field guide. This section will help answer the question, "What technique(s) are most appropriate in my situation?" Each technique is organized to provide: (1) a clear description of the technique and rationale for its use, (2) a discussion of its application to interpretation, (3) procedures to be followed, (4) advantages and limitations, (5) a series of gauges or indicators of time, cost, effort, ease of application, and training involved, and (6) a list of references for additional information. **This section is not a comprehensive treatment of each technique but rather an aid for getting started.**

The third section, an annotated bibliography, is organized alphabetically by primary author. Each citation is accompanied by an annotation and one or more keywords which

reference the field(s) from which each was drawn (**fine arts, education, recreation/tourism**, and **management/marketing**).

This field guide is not an end-all document. It does not prescribe one best-way to evaluate. Its purpose is to help develop an awareness of techniques that can be used to evaluate interpretive programs, and to then facilitate interpreters' efforts in becoming competent evaluators. Evaluation can be a powerful way to document the worth of a program or to improve service to the visitor. So, dog ear the pages, write in the margins, and when it is no longer presentable, call us, we'll print you a new copy. Most of all, let us know what works and what does not!

CAUTION!
THIS MANUAL IS ALLERGIC TO DUST!

EVALUATING INTERPRETATION

Several authors have given thought to interpretive evaluation. Moses and Epstein (1977:1) described interpretive evaluation as a "tightly controlled scientific study which examines both the operation and the output of interpretive activities and programs." These authors described evaluation as "proving" how something (a process, program, project) works. They acknowledged that, though such "proof" is often time-consuming and costly, it serves several valuable purposes to:

(1) assure that visitor expectations are met;

(2) assure that park management objectives are met; and,

(3) establish a foundation upon which the visitor is able to build a deeper understanding and appreciation of the resource.

Other authors as well (Marsh 1983; Roggenbuck 1978) address the purposes of interpretive evaluation, but few capture the reasons for evaluating as well as Roggenbuck and Propst (1981). They stated that evaluating interpretation is important because:

(1) public agencies are increasingly required to demonstrate the cost effectiveness of their programs in answer to heightened public awareness of government spending;

(2) different administrative units within agencies vie for limited funds; programs showing measurable benefits have the competitive edge in the budget race;

(3) evaluating programs requires periodic scrutiny of interpretive objectives to ensure that interpretive objectives reflect changes in agency mission, management policy, or political climate; and

(4) evaluation provides feedback about individual interpretative services and the program as a whole.

In 1975, when Wagar wrote about the effectiveness of interpretation, he mentioned that few studies at that time addressed specifically the evaluation of interpretation. Related research in education, communication, and psychology provided the only precedent. Linn (1976) also suggested that other fields (specifically anthropology, industry, and education) were tapped for their usefulness in evaluation. At that time, not near enough was gleaned from outside expertise for use by interpreters. For this field guide the disciplines of education, fine arts, recreation, tourism, management, and marketing all proved useful in compiling techniques for use in interpretive evaluation. Contained in this portion of the manual is a discussion, accompanied by graphic representations, of park decisions, the communications process, the interpretative experience, and the evaluation component, as they relate to interpretive evaluation. The final section is devoted to discussing the entire evaluation cycle.

PARK DECISIONS

Traditionally, much National Park Service interpretation has been evaluated in isolation of management goals. But as Sealey (1986:103) stated, "evaluation is one of the most important activities to support good management decisions about interpretation." He

continued by saying that "the interpretation evaluation process involves weighing values," and that these values are brought to the experience by the people who visit the parks, they exist within the organization managing the resource, and they influence and are influenced by the type of resource being interpreted.

Values are a part of any human interaction. Interpretation, as human interaction involves values. Roggenbuck (1978:9), in fact, mentioned that "resource managers and interpreters today face increasing public skepticism on the societal value of their programs." He acknowledged the philosophy of some decision-makers by saying that interpretation is often seen as nice but not critical. According to Roggenbuck, evaluating interpretation is, in part, convincing decision-makers about the value(s) of interpretation. Problems arise however because decision-makers:

(1) argue over the definition of "appropriate" public benefits;

(2) are not always clear about what or how to evaluate;

(3) face time, money, administrative, and political constraints; and,

(4) fail to contemplate fundamental reasons for interpreting at all.

Consequently, interpreters and administrators proceed under the assumption that interpretation is inherently good. This "preconceived necessity", according to Roggenbuck (1978:9) is one of the major rationalizations against evaluation.

As park decisions flow through administrative channels, decisions about interpretation are transmitted throughout the park (See Figure 1). Interpretive decisions are influenced by management mandates, that is to say that the park mission statement, management goals and objectives, and nature of park resource(s) (cultural, historic, natural, or recreational) are crucial to deciding the type and scope of interpretive services. This includes decisions about whether personal or non-personal interpretation[1] is best for the particular park scenario. More about this will be described later in the discussion about the communication process.

Perhaps the most critical question for evaluators of interpretation is, **what exactly do I want to evaluate?**: is it interpreter performance?; is it change in visitor behavior or attitude?; is it effectiveness of a brochure, wayside, presentation, or program?; or is it efficiency of a proposed interpretive plan? Sealey (1986:98) mentioned that of the major problems encountered with evaluating interpretation, the most common is not knowing what it is that needs to be evaluated. Similarly, McDonough (1986:100) stated that:

> "Unfortunately, most of the time devoted to interpretive evaluation is spent discussing evaluation methods rather than on what it is we are actually trying to find out. As a result, we have many lists of suggested methods but few discussions of what the results of applying these methods can tell us. One begins to suspect that this trend is a result of the more basic problem of not knowing exactly what we want our interpretive programs to accomplish. It is hard to measure results when we are not sure what we want those results to be.

[1] **Personal** interpretation, as referred to in this manual, is basically interpretation that makes use of a live interpreter—guided tours, living history, live narration, campfire programs, and so on. **Non-personal** interpretation, on the other hand, encompasses all other interpretation and includes audio-visual programs (slide shows, movies, tape programs), written programs (brochures, maps, signs, waysides, and other literature), and technological programs (interactive video, computers, etc.).

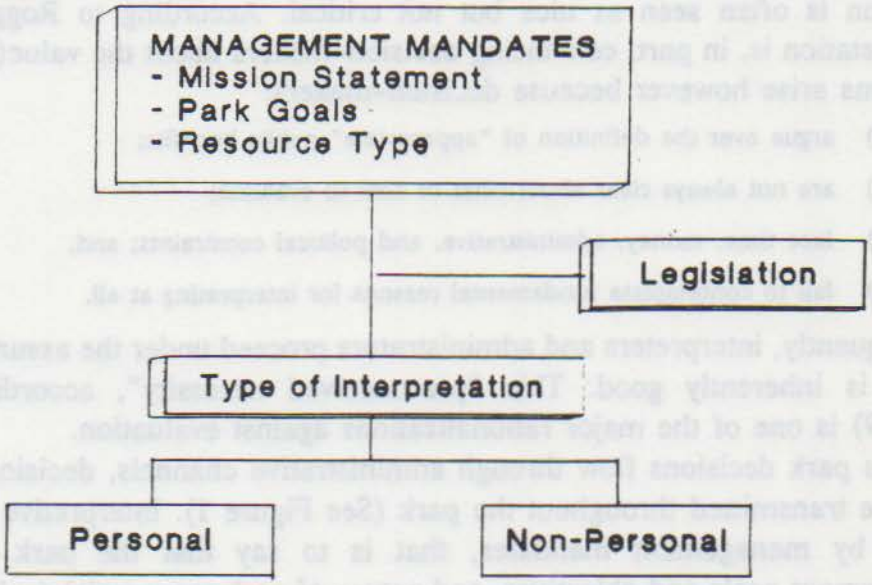


Figure 1. Park Decisions

Adapting Worthen and Sanders' (1987) topics for education evaluation, the **what** of interpretation evaluation might include:

- visitor satisfaction, use, and enjoyment
- interpreter qualifications and performance
- interpretation design and process
- park organizational structure and culture as it relates to interpretation
- exhibits and all other interpretive products and materials
- aspects of park operations
- interpretation budgets and finances
- visitor facilities and interpretive equipment
- interpretive policies
- park–community relationships
- supervisor–interpreter relationships
- public involvement in parks
- ideas, plans, or objectives for interpretation

Basically, these ideas lend themselves to evaluating at least one of the aspects of the communication process. As Roggenbuck (1981:14) stated,

> "When asked to determine the effectiveness of their programs, interpreters should evaluate one or more of the three important elements of the communication process: the message, the interpreter's performance and[/or] the audience response".

THE COMMUNICATION COMPONENT

It is generally acknowledged that the interpretive process consists of sender, message, receiver, and feedback—the basic components of the communications process (See Figure 2). Regardless which component is being evaluated the goal is to assess some level of efficiency, effectiveness, and/or quality.

Evaluating the interpreter, as sender, involves judging presentation content, organization, style, communication skills, and body language. Evaluating the message involves examining content, length of message, unity of theme, appropriateness of media, audience reaction, and so forth. And, evaluating visitors, involves measuring changes in knowledge, attitudes, and/or behavior, as a result of the interpretive experience. (Roggenbuck 1981; McDonough 1986).

A discussion of the term **baggage** is appropriate here. The term baggage in this manual refers to the attitudes, values, motivations, beliefs, etc. brought to the interpretive experience by any human being. This includes baggage brought to the experience by visitors, interpreters, group members, administrators, and evaluators.

Specifically, baggage refers to the affective (emotional), cognitive, and psychomotor (or behavioral) domains of a person's psyche. Table 1 lists the types of characteristics inherent in each of the three domains. Though some might argue that a person's human dimensions cannot be categorized, it is useful for analytical purposes. Thus, Hammond's (1973) categorization of human dimensions is used here.

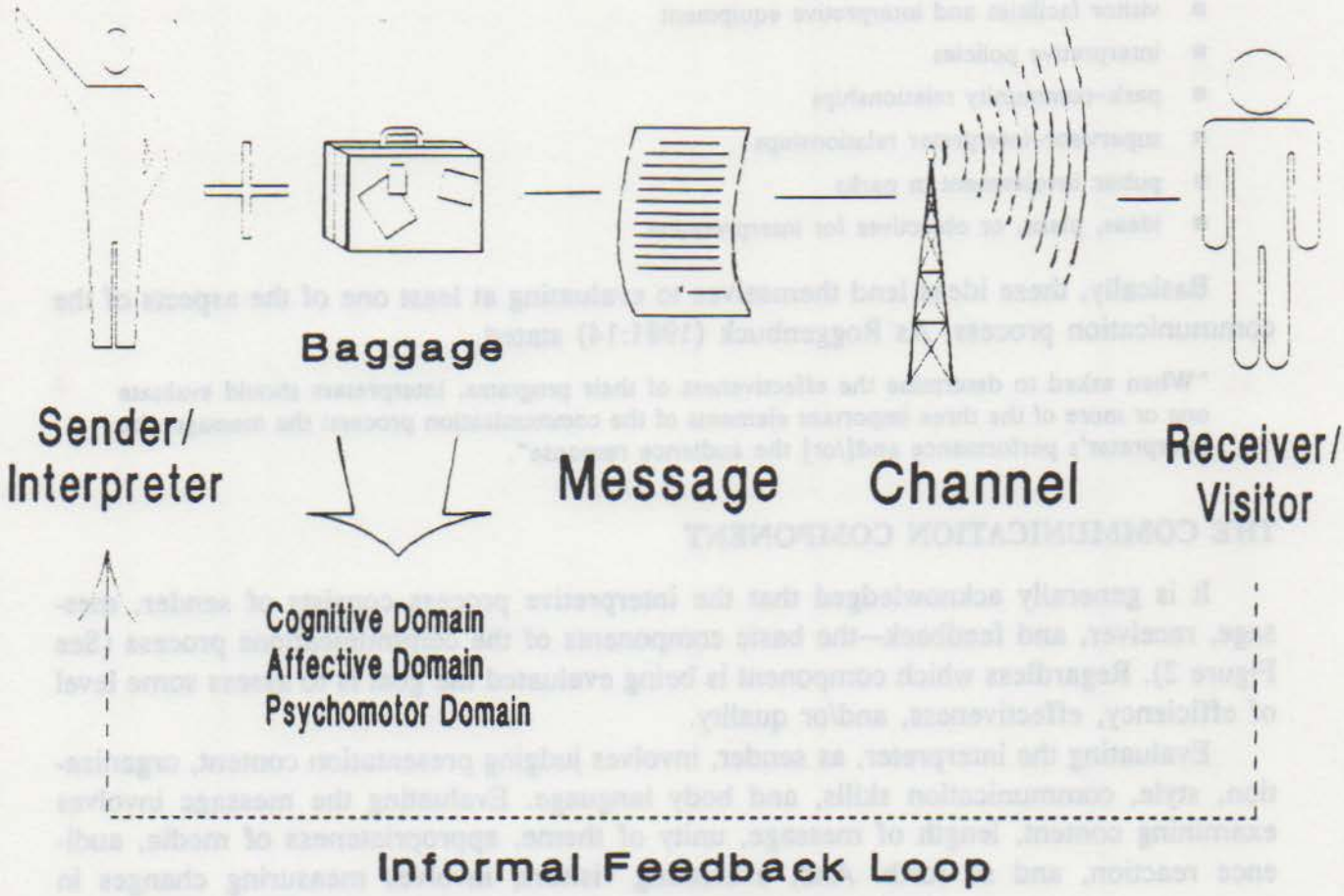


Figure 2. Communication Component

TABLE 1: Affective, Cognitive, and Psychomotor Domains (adapted from Hammond 1973)

Affective	Cognitive	Psychomotor/Behavioral
Interest	Knowledge	Skills
Attitude	Understanding	Abilities
Feelings	Beliefs	Coordination
Emotions	Intentions	
Motivations	Expectations	
Values	Intellect	
Perceptions	Comprehension	

As Veverka (1978:18) stated,

> "[W]hen park/site visitors partake of interpretive services, they come with different levels of knowledge or information of the subject being presented, or with different skill abilities that they may need to utilize during a program. They also possess different attitudes about the interpretive service or program topic..."

Substantial amounts of research have been conducted with regard to human dimensions as they relate specifically to interpretation (Hendee 1972; Pettus 1976; Ham 1983; Cable 1987). McDonough (1986:100) perhaps best summed up the type of work accomplished in evaluating interpretation with this in mind. She noted that:

> "studies of impacts on knowledge (cognitive impacts) have included knowledge gain, knowledge retention, and some work in cognitive differentiation. Impacts on feelings (affective impacts) have included preference, enjoyment, and attitude change. Impacts on overt visitor behavior have included what people actually do, as well as the amount of behavior change".

Ideally, evaluators would like to measure the amount of change actually realized by the visitor in the interpretive experience. Whereas such a goal is rather lofty, i.e. restricted by the limits of social science research, researchers are recognizing more and more that people respond individually to the same interpretive message. Recognizing that many differences exist among visitors, and recognizing that no one communication technique will be equally effective with all groups, enables interpreters to better plan their communication with visitors.

INTERPRETION COMPONENT

The interpretive component addresses the question, **"From what perspective do I evaluate?"** Machlis, in the concluding comments of *Interpretive Views* (1986), reported that interpretation has been viewed as art, management, and advertising. Lewis (1986) described it as fine art, advertising, and recreation. Others (Eddy 1986; Cantor 1986; and Robinson 1986) felt it was mostly education. The term interpretation means different things to different people.

Interpretation as education involves cognition, comprehension, information analysis, information synthesis, discovery and so forth. Interpretation as fine art involves creativity, provocation, inspiration, and performance. Interpretation as management/marketing involves organization, control, promotion, persuasion, and service. And as recreation/tourism, interpretation involves pursuit of leisure, satisfaction, and sensual experiences.

If interpretation is education, then perhaps testing is one way to evaluate. If interpretation is fine art, then it may need to be evaluated in the same manner as a painting, poem, or theater presentation. If it is a management technique, visitor attitudes and/or actions toward policies may need to be evaluated following interpretation. If it is recreation, levels of visitor enjoyment and satisfaction might be assessed. Interpretation, then, can be evaluated from many perspectives. (Figure 3)

Table 2 outlines each of the four perspectives in terms of the sender (interpreter), message (interpretation), and receiver (visitor).

TABLE 2. Perspectives of Interpretation

	EDUCATION	FINE ART	MGMT/MKTING	REC/TOURISM
Interpretation	Education	Art Poetry Theater	Management Marketing Business	Recreation Tourism
Interpreter	Teacher	Artist Performer	Manager Administrator	Recreator Tour Guide
Visitor	Student	Appreciator Client Critic Patron	Recreationist Consumer	Tourist

Interpretation as Education

Several authors support the notion that interpretation is primarily **education** (Hardy 1986, Mott 1976, Dewar 1986, Contor 1986). Precisely stated, "public education, not law enforcement, is the key to the survival of our parks" (Cantor 1986:73).

Indeed, a great deal of interpretation is teaching and learning. And like education, interpretation is both affective and cognitive; both knowledge and feelings. The educational goals of interpretation are not merely to impart facts, but also to provide overviews, to stimulate interest, and to help visitors develop concepts and contemplate values. To consider traditional book learning is to realize that students attend classes, take notes, study, and take tests, all in an effort to absorb and retain information. Are the same expectations to be assumed for park visitors? What of enjoyment? And what of learning in the context of enjoyment—the precursor to learning?

Mott thoroughly supported the notion of educational strength in interpretation. He reported that interpreters have a responsibility for making their programs relevant, informative, accurate, and educational in an effort to help visitors and recreationists see and understand the interrelationships of humans and resources. He wrote that "interpretation must be taken out of the realm of entertainment. It must become the serious business of education" (1976:8).

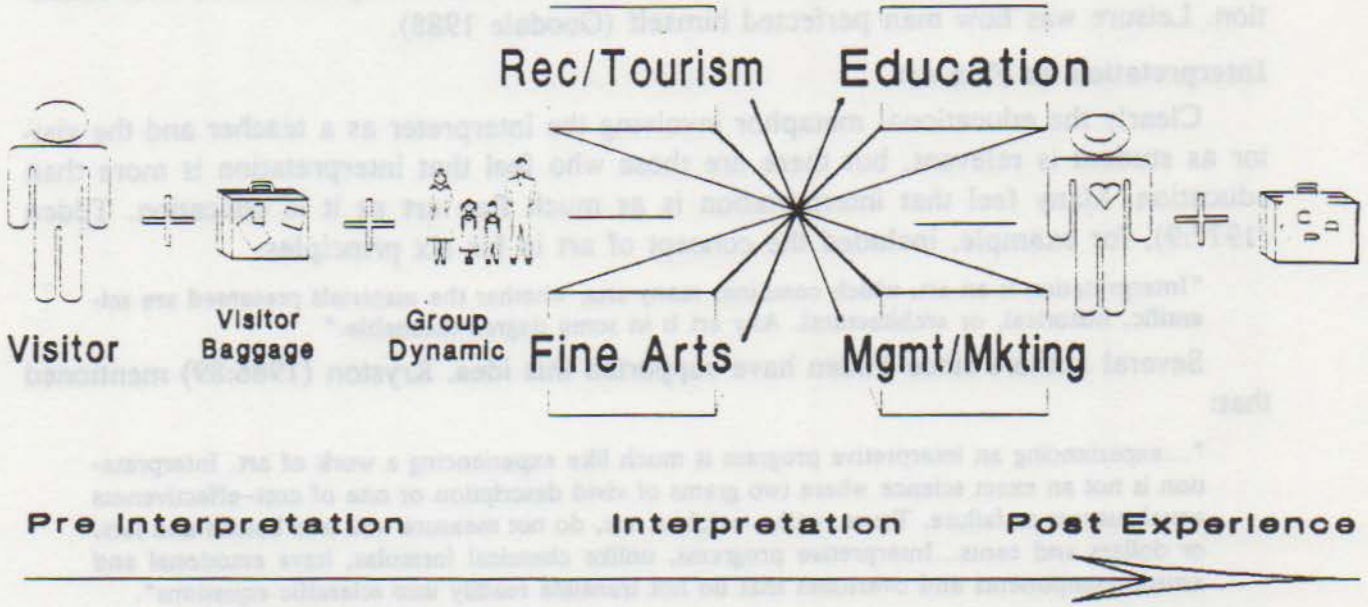


Figure 3. Interpretation Component

Hardy (1986:132) also suggested a 'back to basics' approach is the most appropriate. "Over the past couple of decades, the public has been exposed to enough general environmental education through television and elsewhere to ready them for solid information about park resources...". He supported giving the visitor the facts needed to avoid damaging the park resource or endangering him/herself.

Interpreters and teachers are, to a certain degree, "partners in a common task" (Woodward 1985). Providing an opportunity for visitors to increase their knowledge is one of the major purposes of interpretation—perhaps its greatest purpose. "People hunger for knowledge; they delight in the simple joy of learning new things (Cantor 1986). In fact, the classical view of leisure as purported by Aristotle, was clearly associated with education. Leisure was how man perfected himself (Goodale 1988).

Interpretation as Fine Art

Clearly the educational metaphor involving the interpreter as a teacher and the visitor as student is relevant, but there are those who feel that interpretation is more than education. Many feel that interpretation is as much **fine art** as it is education. Tilden (1977:9), for example, included the concept of art in his six principles:

> "Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is in some degree teachable."

Several authors since Tilden have supported this idea. Kryston (1986:89) mentioned that:

> "...experiencing an interpretive program is much like experiencing a work of art. Interpretation is not an exact science where two grams of vivid description or one of cost-effectiveness equal success or failure. Tours, walks, exhibits, etc, do not measure well into bottles and jars, or dollars and cents...Interpretive programs, unlike chemical formulas, have emotional and artistic components and overtones that do not translate readily into scientific equations".

Eddy (1986:144), who used music as a metaphor for interpretation, said, "the notes are only the way to the music". In this case, the facts are only the way to interpretation.

Warren (1986:44) defined interpretation as the "art of explaining science or history", and even though he acknowledged interpretation as art, he also stated that there are no objective criteria to measure program effectiveness "any more than one can measure any form of art". Robinson (1986:52) agreed, saying that "levels of provocation are not susceptible to accurate assessment, at least in conventional ways, because they are inherently subjective values".

Lewis (1986:108) tended to disagree with this view. He not only felt that interpretation is fine art, but went on to suggest methods for evaluating it as such. He suggested that interpretation could be evaluated in the same way as literature, theater, and music; "perhaps each park needs a critic who would write reviews of interpretive events."

Eisner's writing (1984) about educational connoisseurship tended to support the notion that the fine arts can be evaluated. He proposed an artistic paradigm for evaluation which he saw as an important, qualitative method. Basically, he proposed evaluators consider connoisseurship and criticism as a means to observe, describe, and help others to recognize the subtle but relevant qualities and characteristics of an experience that might otherwise go unnoticed or unappreciated.

Machlis (1986:174) contributed a token of realism by mentioning that there are those who support the idea of interpretation as art but often they are hesitant to talk extensively about interpreters as artists. He stated, "To be an artist in a modern organization, especially a government agency, is to be organizationally at risk."

Interpretation as Management

There is little doubt that interpretation, to a great degree, serves as a **management** tool. Huggins (1986:66), for example stated that "any interpretive program that does not address a management concern is simply entertainment, and therefore inappropriate from a cost-effective point of view". Warren (1986:41), on the other hand, stated that "interpretive programs have been judged largely on how well they contribute to resource management, law enforcement, or safety issues, or how efficient they are from a cost accounting standpoint. These activities are secondary to the prime purposes for which parks were created" - for resource preservation and visitor enjoyment. The degree to which interpretation serves as a management tool is germane here.

Briggle (1986:87) argued that "in addition to satisfying visitor expectations and needs, there is also management's expectation that interpretation should assist in park problem-solving." Huggins (1986:66) proposed that "...most of us do not have the luxury of surplus time in which to engage in any activity that does not directly attend to the goals of management."

From a managers perspective, Vaughn (1985:2) mentioned that "evaluation is especially necessary for government services where program outcomes usually cannot be assessed by market factors such as sales or ratings; yet, the public is concerned about the proper expenditure of their tax dollars." He goes on to say that all managers should be concerned with increasing not only the effectiveness, but also the efficiency of their activities, and that properly designed evaluation research is one way to accomplish this.

There have been a few research studies conducted which specifically address the idea of interpretation as a management tool (Braley and Hanna 1980; Sharpe and Gensler 1978; Roggenbuck et al. 1982). The purpose of the Braley and Hanna study was simply to discover ways interpretation has been used as a management tool. Three categories were used to define the function of interpretation in this regard:

(1) To provide for natural and cultural resource protection;

(2) To increase public understanding of resource management goals and objectives; and

(3) To promote a pleasurable, safe visitation experience.

This particular study revealed that, of the three, over half of those surveyed reported that interpretation was used as a management tool to achieve the first goal - resource protection. One third used interpretation to achieve the second goal - increase public understanding of management goals; and one sixth to achieve goal three - a safe, pleasurable experience.

Related to the management function of interpretation are the concepts of marketing and advertising. Machlis (1986) defined advertising as a separate 'occupational metaphor'. In this study, the concepts of both marketing and advertising were incorporated into one metaphor used to encompass the various dimensions of 'business' as a whole—

management, marketing, advertising, public relations, selling, service, packaging, and so forth. These various dimensions of interpretation as business have been discussed by several authors (Leicester 1986; Lewis 1986; Jarvis 1986). Regardless, interpretation can be used to "assist with almost any management dilemma except budgetary anemia" (Sharpe and Sharpe 1986:96).

It is also germane here, to mention briefly the idea of 'service', because interpreters are, in fact, part of the service industry. With the emergence of the informational age, business customers are becoming increasingly aware of, and expect more in terms of quality service. As Albrecht and Zemke (1985:14) explained, the service package refers to the "sum total of the goods, services, and experiences offered to the customer." The interpretive experience is, in essence, a service package offered to the park visitor.

Interpretation as Recreation/Tourism

Closely linked to the idea of service is interpretation as recreation/tourism. Examining interpretation from this perspective is to look at the enjoyment, fulfillment, and satisfaction derived by the visitor from the interpretive experience. Recreation is frequently defined "as an activity one enters into during his leisure time for the satisfaction derived from the experience" (Sessoms et al. 1975:17). The expected satisfaction might include challenge, discovery, seeking self-fulfillment, or simply having fun.

Similarly, interpretation can be seen as tourism – a specific facet of recreation. Tourism is defined by Mathieson and Wall (1982:1) as,

> "the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay at those destinations, and the facilities (and services) created to cater to their needs."

The visitor, in this case, is the tourist—"a pleasure traveler influenced by leisure time and the desire for adventure and vacation experience" (Gunn 1988:83). The interpreter is the tour guide.

Interpreters as tour guides, have a responsibility to the tourists in the parks; a responsibility to go beyond the facts, to serve as host and ambassador, to fairly and accurately represent their park, community, and society, and to facilitate tourist appreciation for the tapestry of global cultures (Pond 1988). In fact, Leicester (1986) suggested parks combine their efforts with the business community, including tourism and recreation industries, to facilitate more effective exchange of information between these professionals and interpreters.

On a much broader scope, society is increasingly threatened by concerns about the environment, drug abuse, and the potential for global destruction. All over the world people "face an urgent need to understand each other more clearly" (Pond 1988). In this light, interpretation as a component of tourism, serves as a communication mechanism to increase understanding among visitors who travel to our parks.

EVALUATION COMPONENT

Then what is efficient interpretation? When is it effective? How do we know we when we are providing a quality service to the public? The ideas of effectiveness, efficiency,

quantity, and quality pervade interpretive decisions and assessment. Traditionally, quantitative measures (numbers and revenues), have been the primary measures of evaluation for determining **efficiency**. Questions are continually raised, however, about the **effectiveness** of these programs (Figure 4).

Some believe, as Robinson (1986:51) does, that "the objectives, aims, and values of interpretation are basically qualitative and subjective." Unfortunately, there are more who believe, as Sontag (1986:77) summarized, that if it isn't quantifiable "it must be irrelevant." Cold, hard facts traditionally have been the way to get a fair slice of the budget pie, but determining the true value of park interpretation may require the use of qualitative techniques - words instead of, or in combination with numbers.

A substantial amount of literature has been dedicated to the rhetoric surrounding quantitative and qualitative research (Firestone 1987; Bednarz 1985; McMillan and Schumacher 1989). The intent here is not to add fuel to this fire, but simply to clarify the distinction between the terminologies used in the literature.

A simple distinction between quantitative and qualitative is basically a statistical versus non-statistical approach to data analysis. A **quantitative** approach summarizes results in terms of numbers, scores, dollars, averages, and so forth. Quantitative approaches involve numerical and statistical analysis, and are used primarily to gauge efficiency. A **qualitative** approach, on the other hand, summarizes what people might think, feel, do or say using words or narrative. Qualitative approaches can gauge effectiveness in that the methods address the meanings people give to an experience.

Despite the differences, quantitative and qualitative approaches both are considered in the evaluation field to be systematic and rigorous for their particular focus. As Bitgood (1988:7) stated, "in the extreme, both approaches are problematic. Descriptive statistics fail to capture the variety and richness of human responses. On the other hand, a complete lack of quantitative description makes it difficult to see the orderly patterns of behavior that are evident when behavior is measured by numbers." Some combination of both quantitative and qualitative measures are probably needed to accurately assess the values and worth of interpretation programs.

THE EVALUATION CYCLE

> "Evaluation is too often thought of as the final step in any process... But it is not necessarily an end; it is more often a beginning. If the process or event...is not to be repeated or its evaluation put to use elsewhere, then there is no reason for evaluation. In today's world, evaluation outcomes and the means for obtaining them are (or should be) part of the initial planning process" (Howell 1987:24).

As Howell clearly pointed out, evaluation should be an integral part of an agency's overall planning process. All too often, the planning process is described as a linear function where evaluation is the final step in the process (Kraus and Allen 1987).

Increasingly, authors (Vaughn 1985; Shih 1983; Theobald 1986) have recognized that planning is a cyclical process. In addition, greater numbers are recognizing that evaluation is clearly part of that cycle. In fact, in a recent University of Missouri publication entitled *Tourism USA*, evaluation is shown as connecting directly to each of the other parts of the planning process (Figure 5). Theobald (1987:22) perhaps summed it up best by saying

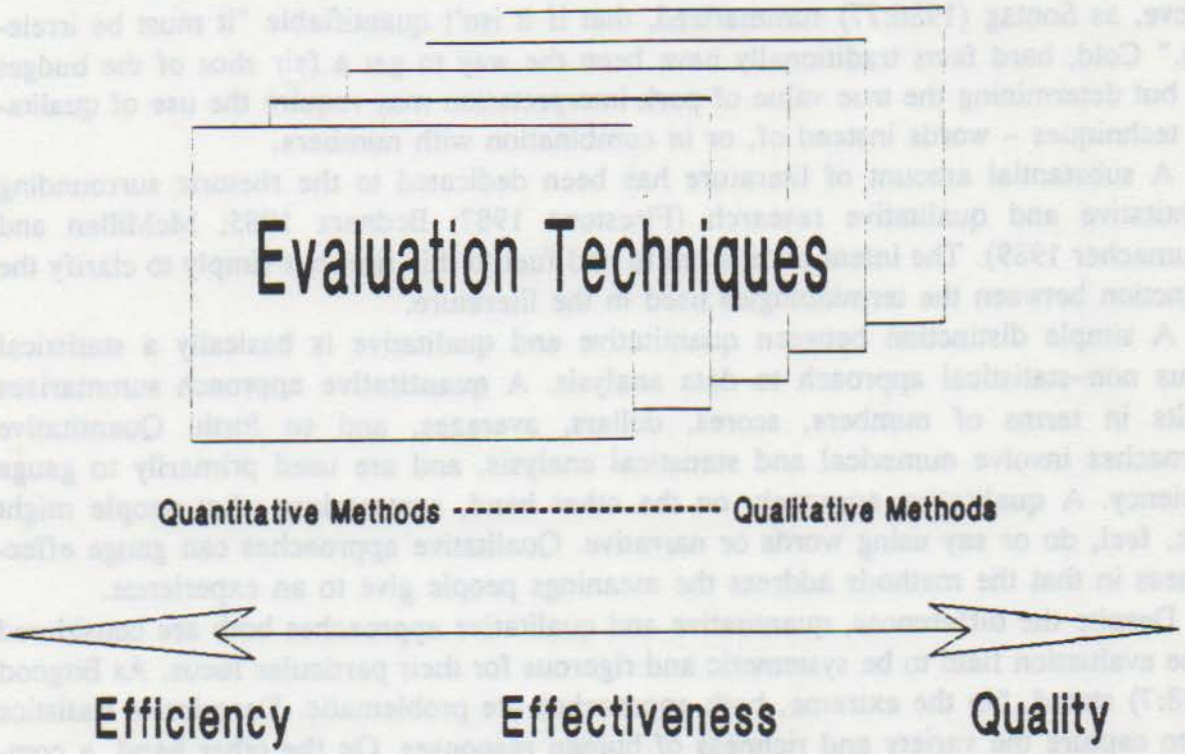


Figure 4. Evaluation Component

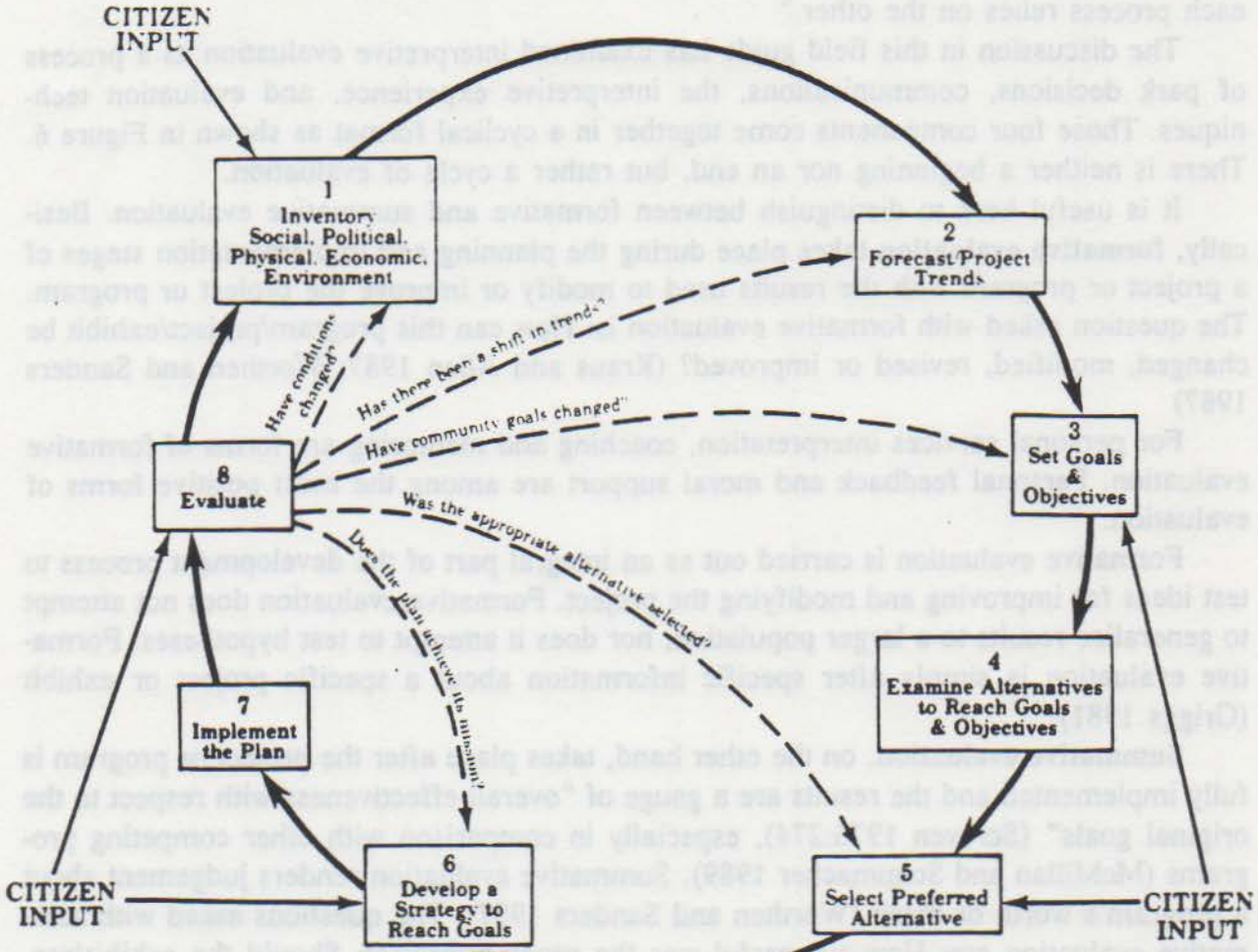


Figure 5. The Planning Process

(Source: University of Missouri, Department of Recreation & Parks Administration. 1986. *Tourism USA: Guidelines for Tourism Development. p. 20.)*

that there is an "inexorable relationship between evaluation and program planning since each process relies on the other."

The discussion in this field guide has examined interpretive evaluation as a process of park decisions, communications, the interpretive experience, and evaluation techniques. Those four components come together in a cyclical format as shown in Figure 6. There is neither a beginning nor an end, but rather a cycle of evaluation.

It is useful here to distinguish between formative and summative evaluation. Basically, **formative evaluation** takes place during the planning and implementation stages of a project or program with the results used to modify or improve the project or program. The question asked with formative evaluation is: How can this program/project/exhibit be changed, modified, revised or improved? (Kraus and Allen 1987; Worthen and Sanders 1987)

For personal services interpretation, coaching and mentoring are forms of formative evaluation. Personal feedback and moral support are among the most positive forms of evaluation.

Formative evaluation is carried out as an integral part of the development process to test ideas for improving and modifying the project. Formative evaluation does not attempt to generalize results to a larger population, nor does it attempt to test hypotheses. Formative evaluation is simply after specific information about a specific project or exhibit (Griggs 1981).

Summative evaluation, on the other hand, takes place after the project or program is fully implemented and the results are a gauge of "overall effectiveness with respect to the original goals" (Screven 1976:274), especially in comparison with other competing programs (McMillan and Schumacher 1989). Summative evaluation renders judgement about a program's worth or merit (Worthen and Sanders 1987). The questions asked with summative evaluation are: How successful was the program/project; Should the exhibit/program/project be continued, repeated, or discontinued; Which program achieved the objectives most effectively and efficiently?

The audience of formative evaluation is the program personnel—the interpreters and planners. The audience for summative evaluation are potential consumers—program personnel, outside funding sources, and visitors.

Other terms are commonly used for formative and summative evaluations: developmental and post-design evaluation (Bitgood 1988); process evaluation and outcome evaluation (Theobald 1979); and program planning/monitoring and economic efficiency/ impact assessment (Rossi et al. 1979).

It should not be assumed, from this discussion of the evaluation cycle, that all planning processes are the same. There is no single template for planning or for evaluation. The setting, management principles, organizational traditions, and even the roles of key players differ in each case (McLaughlin 1988). The same will hold true with evaluating interpretation.

Examining the **what** and **when** of evaluation is helpful in setting the stage, but it gives only vague clues about **how** to evaluate. The following section describes twelve techniques for evaluating interpretation that should give the reader a better idea of how to begin.

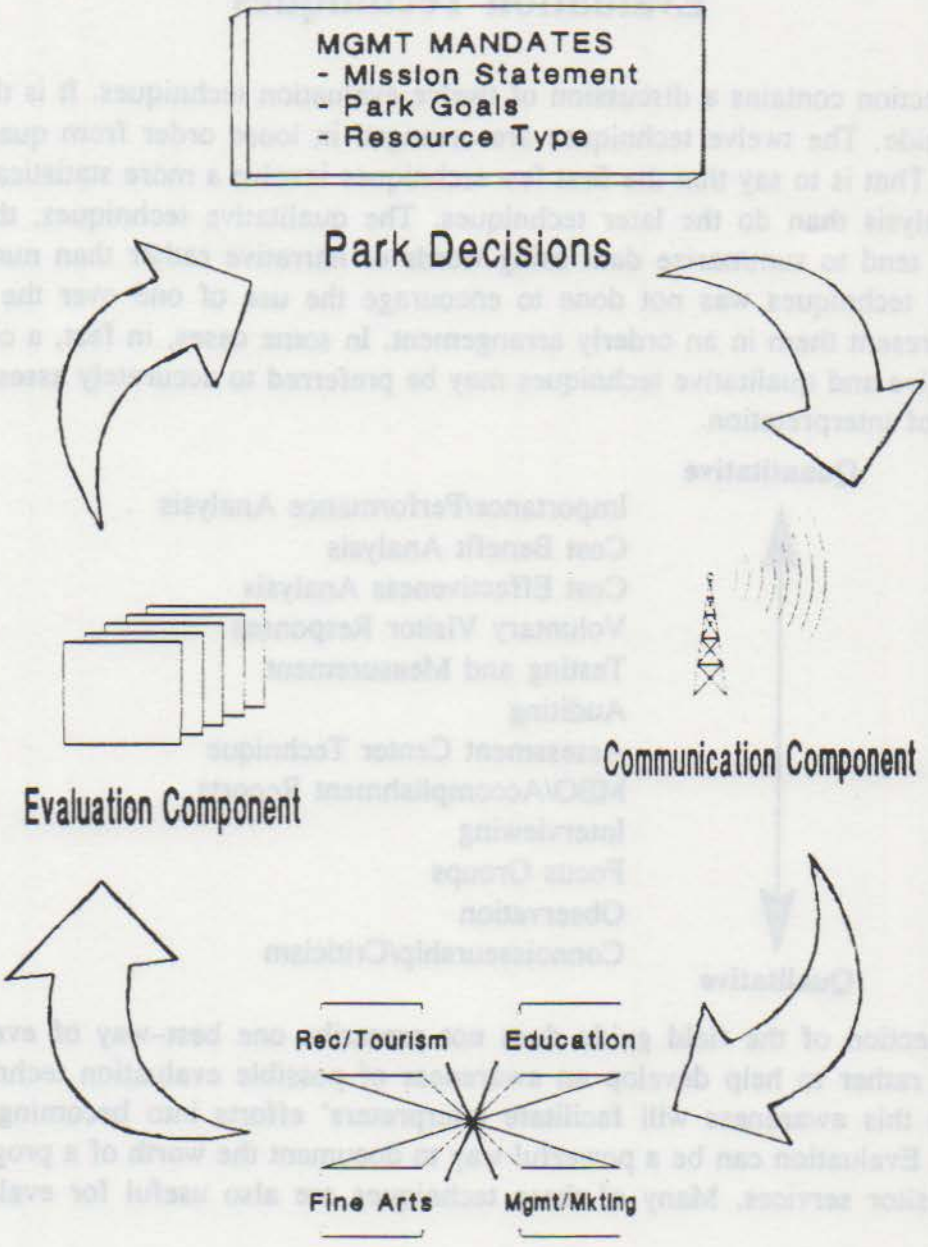
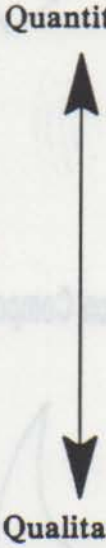


Figure 6. Interpretive Evaluation Process

Evaluation Techniques

This section contains a discussion of twelve evaluation techniques. It is the heart of the field guide. The twelve techniques are arranged in loose order from quantitative to qualitative. That is to say that the first few techniques involve a more statistical approach to data analysis than do the later techniques. The qualitative techniques, the last few techniques, tend to summarize data using words or narrative rather than numbers. The ordering of techniques was not done to encourage the use of one over the other, but simply to present them in an orderly arrangement. In some cases, in fact, a combination of quantitative and qualitative techniques may be preferred to accurately assess the merit and worth of interpretation.



Importance/Performance Analysis
Cost Benefit Analysis
Cost Effectiveness Analysis
Voluntary Visitor Responses
Testing and Measurement
Auditing
Assessment Center Technique
MBO/Accomplishment Reports
Interviewing
Focus Groups
Observation
Connoisseurship/Criticism

This section of the field guide does not prescribe one best-way of evaluating, its purpose is rather to help develop an awareness of possible evaluation techniques. It is hoped that this awareness will facilitate interpreters' efforts into becoming competent evaluators. Evaluation can be a powerful way to document the worth of a program and to improve visitor services. Many of these techniques are also useful for evaluating staff training.

Each technique is organized in such a way as to provide: (1) a clear description of the technique and rationale for its use, (2) a discussion of its application to interpretation, (3) procedures to be followed when using that particular technique, (4) the advantages and limitations of using that technique, and (5) a list of references for additional, more in-depth information. It should be noted that the discussions contained are not a comprehensive treatment of each technique but rather a catalyst for getting started.

Included with each technique is a page of gauges that furnishes levels of cost, time, visitor burden, ease of application, and training required. This page is included merely as a reference. The indicators (Low, Moderate, or High) are not based on scientific research and should only be used as subjective guidelines.

IMPORTANCE/PERFORMANCE ANALYSIS

DESCRIPTION AND RATIONALE

Importance/Performance Analysis (I/P) is based on the assumption that visitor satisfaction is affected by both the importance of an attribute (for example, how important is it, for an effective program, that a ranger provide individual attention) and the perceived performance of interpreters, given that attribute (to what degree does the visitor perceive that s/he received individual attention). I/P is an empirical test that can be used to obtain a powerful determinant of visitor satisfaction. Initially used as a tool to analyze automobile dealer's service records, importance/performance analysis has more recently been used as a method for gauging consumer product acceptance in other fields (Martilla and James 1977).

Importance/Performance Analysis is a low cost method of analysis that helps determine which areas of a program require the most resources and attention, which resources could be reduced or eliminated from particular areas in the program, or which efforts should be maintained. In addition, Importance/Performance Analysis reveals how separate social segments can be compared based upon each groups' perceived needs. The results of the analysis, when plotted on a Managerial Action Grid render important and useful data for strategic decision-making.

APPLICATIONS TO INTERPRETATION

Based on the assumption that visitor input is critical to program decision-making and that visitor satisfaction is a result of a preference for a program or service and judgements about its performance, importance/performance technique can be used to:

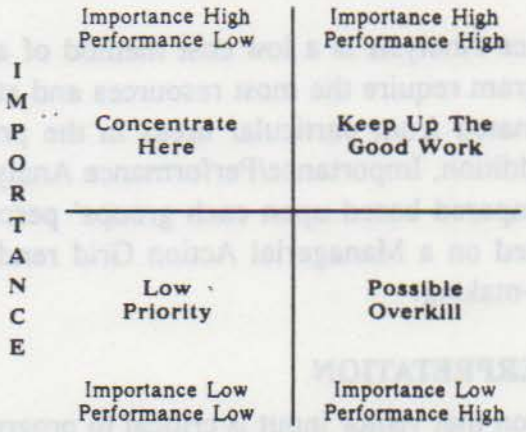
- evaluate both the overall Interpretive Program within a park or the different aspects of a single interpretive program.
- set planning priorities (i.e., examine the interrelationships between) regarding different aspects of interpretation;
- determine interpretive areas that require the most attention and/or resources;
- determine which resources could be reduced or eliminated in relation to certain interpretive programs/projects;
- reveal those interpretive programs or aspects of programs where present efforts should be maintained;
- reveal how different segments of the visitor population could be compared based on their perceived needs for interpretive services; levels of satisfaction, etc.
- analyze the focus of the total interpretive experience for the visitor.

PROCEDURE

- **Attribute Identification.** The first step of the I/P process is to isolate attributes which are directly related to the program in question. Careful decisions about the exact attributes to meas-

ure is a critical part of the process. In other words, overlooking an attribute which is important to visitors will tend to limit the usefulness of this technique. Identifying attributes can be accomplished in a number of ways: conversations with the involved parties, simple questionnaires, focus groups, gathering information from previous research, etc. It must also be noted that clear definitions of these attributes may need to be developed so as to eliminate any ambiguity in the way items are interpreted by respondents. Failure to do so may seriously affect reliability and validity.

- **Conduct Survey Research**. A empirical study is required at this stage to gather data from visitors (using a five- or seven-point Likert scale) about both the perceived importance of the selected attributes and the perceived performance of the agency, given those same attributes. A questionnaire is often used to solicit this information, and the survey (on-site or mail) is produced in such a way as to keep all the importance factors together and separate from the performance factors so as not to bias the study. Additional open and/or closed ended questions can be added to questionnaire to enrich the study.
- **Data Analysis.** Once the data are gathered, the results can easily be displayed on a two dimensional managerial action grid and systematically analyzed. The mean values of importance and performance attributes are used when plotting the action grid. The four quadrants of the grid reveal the range of weak to strong performance along with slight to extreme importance.



- **Develop decision strategies.** From the grid, management decisions can be made regarding focusing attention on a particular aspect of a program, reducing the emphasis on a program or particular aspect of the program, eliminating or maintaining programs or parts of programs.

ADVANTAGES

- This technique is a low cost, easily understood method of assessing which aspects of a program need more attention and which aspects may be consuming too many resources.
- Importance/Performance Analysis does not require high-powered statistical strategies and, with small samples, can even be conducted with a hand-held calculator.
- The fact that results can be easily displayed on an importance/performance grid allows management to interpret the data and apply it readily to program decisions.
- This technique can be used to evaluation both overall Interpretation Program as well as single programs.
- This technique allows managers to examine both sides of the visitor acceptance question simultaneously - how important are these factors and how well are they being performed.

LIMITATIONS

- This technique involves some visitor participation and may require OMB approval.

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Technique Gauges

Importance/
Performance
Analysis

Cost Low

Time Commitment Moderate

Ease of Application Low

Visitor Burden Low

Training Required Moderate

Value/Benefit High

COST BENEFIT ANALYSIS

DESCRIPTION AND RATIONALE

Cost Benefit Analysis refers to the evaluation of alternatives according to the cost of program components and the relative benefits gained by society. It assumes that all parts of the program can be defined using monetary values. This technique enables evaluators to make decisions based on the cost comparisons. The results of these comparisons are quantitative, that is, they are expressed in cost-benefit ratios. The goal of this technique is to determine which alternative provides the greatest benefit to society for the least relative cost. "Clearly, only those alternatives whose benefits exceed their costs should be considered, and only those with the highest levels of benefits relative to costs should be selected" (Levin 1981:19). Simply put, benefits must be at least equal to costs.

The decision about whether or not cost-benefit is the most appropriate cost analysis technique to use can be aided by answering the following questions: (1) Can program outcomes be translated into dollar figures? and (2) Is there adequate time, expertise (some level of economic analysis), and resources available for this type of analysis? Cost Benefit Analysis is useful in assessing whether or not a program is useful and practical.

APPLICATIONS TO INTERPRETATION

This type of analysis allows interpreters or administrators to choose between a variety of interpretive programs based on the costs associated with producing those programs and the benefits gained by the visitors, for example, deciding between the alternatives of providing a tour - the costs and benefits associated with a guided tour versus a self-guided tour. Interpretive benefits might be translated into the amount of money one would have to pay for interpretive services were they not provided as a part of normal park operation.

This technique may prove useful only in limited circumstances. It is included because of its wide spread use in other disciplines.

PROCEDURE(S)

- **Identify Alternatives**. Determine which programs or services are to be compared, and define the components of each. For example, if a supervisor wanted to determine which of several interpretive tour strategies was most cost/beneficial in terms of reaching the greatest number of visitors about a particular issue, the three tours would be carefully defined in terms of interpreter's time required, materials needed in preparation, anticipated number of visitors, etc.
- **Identify Costs**. Using the ingredient method, assign a dollar amount for each component defined in previous step. Identifying costs assumes that both direct costs (per hour interpreter cost, per piece exhibit/wayside cost, per piece material cost) and indirect costs (value of interpreter's time, visual pollution of waysides in scenic area, etc) are calculated.
- **Identify Benefits**. Also using the ingredient method, convert each perceived benefit into a dollar amount. As with costs, benefits can be both direct (numbers of visitors, resource

protection) and indirect (visitor understanding, literacy gain, increased motivation). Though often difficult, indirect benefits can be translated into dollar amounts. For example, increased awareness about a particular park issue may motivate some visitors to become more actively involved in that issue, and in turn, make more informed choices and so increasing their benefit to society.

- **Interpret benefit/cost ratios**. List monetary values for all costs and benefits along side selected alternatives in a table format for easy comparison. In order to consider any particular program the benefit must be at least equal to the cost for the same alternative. A ratio is obtained by simply dividing the cost amount by the benefit amount. The net benefit (dollar amount) can be obtained by subtracting the total cost amount from the total benefit amount for each alternative. The alternative resulting in the highest net benefit is the most cost beneficial.

ADVANTAGES

- a range of comparisons can be made between alternatives within interpretation, for example, comparing different types of interpretive programs (tours, campground programs, visitor center orientations, etc) or among services (interpretation law enforcement, maintenance, etc);
- this technique can be easily duplicated or repeated based on what others have tried

LIMITATIONS

- Benefits and cost must be defined in monetary terms. Assigning dollar amounts to certain program benefits is difficult and often subjective. Where is it difficult to assign monetary values, for example, benefits of an affective nature, an alternative analysis may be selected – cost-effectiveness or cost-utility, for example.
- Using the ingredient method to define costs and benefits can be subjective. Opportunity costs/benefits (i.e., indirect costs/benefits) are sometimes neglected, and ingredients can sometimes be "selected" subjectively.

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Technique Gauges

Cost Benefit Analysis

Cost Moderate

Time Commitment Moderate

Ease of Application High

Visitor Burden Low

Training Required Moderate

Value/Benefit Low/Moderate

COST EFFECTIVE ANALYSIS

DESCRIPTION AND RATIONALE

The focus of **Cost Effective Analysis** is determining which particular strategy or alternative maximizes the desired results for any given resource. Cost effectiveness relates to the overall effectiveness of money invested. It answers the question about whether or not an investment in a particular program achieves the desired return; are the most effective programs—those which achieve desired outcomes—also the most cost effective? This technique can be used to explore how options can be efficiently achieved, to estimate the costs of achieving various levels of pre-specified outputs, and to compare alternatives that achieve similar outputs (McGuigan and Moyer 1975).

Whereas it is often difficult to assign a dollar figure to affective traits and some cognitive knowledge gains (as with cost-benefit analysis, for example), these changes can be compared using cost effectiveness analysis. Results are measured in units of effect rather than in dollar amounts. Units of effect include psychological or physical changes that take place as a result of participation in a particular program. Appropriate test scores can be used to compare achievement of specified criteria.

Cost effectiveness analysis assumes that outputs are justified and useful. This technique also assumes that: (1) the systems being evaluated must have common goals or purposes; (2) alternative means exist for meeting goals; and (3) sufficient, measureable detail is available.

APPLICATIONS TO INTERPRETATION

Cost effectiveness is decision-oriented evaluation. It is used to assist decision-makers in making choices among several alternatives with regard to the ones that will maximize the impact of available resources. For example, this technique might be used to compare alternatives (slide show, wayside, or brochure) to determine which is the most effective method for reducing vandalism. The goal is to determine which alternative is the most effective relative to the costs necessary for implementing that alternative? The unit of effect might be a change in behavior, increased awareness of the problem, or perhaps a gain in knowledge about the extent of the problem. Assessing the unit of effect might involve testing participants following each type of encounter. The results would aid in decisions about which method is the most effective for reducing depreciative behavior.

PROCEDURE(S)

- **Specify Alternatives.** Define the nature and scope of each alternative. The alternatives for the example mentioned above would include: slide show, wayside exhibit, and brochure. Each alternative is designed to decrease the amount of depreciative behavior in a park. During this step, each alternative is defined clearly and thoroughly, and all details for its implementation are refined.

- **Calculate Costs.** Using the ingredient process, calculate the cost for implementing each treatment. Space requirements, materials and staff needed, and other inputs should all be considered. Often an opportunity cost or cost representing the value of a particular treatment is assigned. The slide show, for example, might be considered a greater value because it involves **personal** interpretation.
- **Determine Effectiveness Units.** Decide which unit(s) of effect will be used to measure success of each of the various treatments - test scores for cognitive knowledge gain, observed behavioral change, etc. Tests are administered to two groups, one who receives the treatment and one who does not. Both groups are tested in the same manner.
- **Calculate Cost/Effectiveness Ratios.** A per visitor cost can easily be calculated from the total cost per treatment determined in step two. Simply divide the total cost for implementing the treatment by the number of visitors contacted. This per visitor cost can then be compared with the mean visitor test score and a ratio calculated. Often, what appears to be the most effective treatment (usually the treatment with the highest scores) is often not the most cost-effective. Only when a ratio is completed does the most cost-effective become evident. The lowest ratio indicates the most cost-effective alternative.

ADVANTAGES

- outcomes (units of effect) can be measured as physical change or psychological change
- outcomes need not be translated to dollar amounts
- this technique can be easily duplicated, copied, or repeated based on what others have done

LIMITATIONS

- visitor testing increases the level of visitor burden necessary to use this technique
- only programs with similar or identical goals can be compared

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Technique Gauges

Cost Effective Analysis

Cost Moderate

Time Commitment Moderate

Ease of Application Moderate

Visitor Burden Low

Training Required Moderate

Value/Benefit Moderate/High

VOLUNTARY VISITOR RESPONSE

DESCRIPTION AND RATIONALE

Also referred to as unsolicited visitor comments, this technique can take the form of suggestions forms, complaint forms, comment cards, guest books, visitation logs, etc. These comments are easily obtained by providing a box or sign to indicate park interest in suggestions. This technique allows the visitor to comment on the content, process, and quality of a program as they so desire and to do so in such a way that the information is not formally solicited by park personnel in a person to person contact.

APPLICATIONS TO INTERPRETATION

This technique can be used to:

- determine whether or not visitors are satisfied with an exhibit content and/or presentation;
- gather information about the types of exhibits or programs desired by a particular visiting population;
- determine and support levels of expenditure on interpretive programs and materials.

PROCEDURE(S)

- **Identify Issues**. Determine what areas/issues/programs are of concern that might benefit from voluntary or informal visitor comment. Areas of concern are often recognized from previous visitor comments.
- **Provide Area for Visitor Comment**. This means devising a mechanism through which visitors are able to communicate to the park about their general concerns in a free-form, non-structured manner. To do this establish an area convenient for visitors to compose and deposit their comments. This might be in a location of high visitor use such as a visitor center. An area can be set aside for a suggestion box, guest book, or comment cards.
- **Read and Analyze Information**. In many cases, it will be appropriate to compile the range of complaints, compliments, and comments in such a manner that is usable by the staff and/or decision-makers. Decisions about how to record, compile, and disseminate this information will depend upon individual park philosophy about visitor input and channels of communication. Often, providing public access to the comments will make other visitors aware of common concerns.

ADVANTAGES

- Often, by virtue of being anonymous, comments in suggestion boxes and on comment cards yield valuable information about sensitive or political issues not exposed using other methods.
- Volunteered comments can often indicate trends if data are gathered over time. Though comments should not be translated as an average opinion, trends and tendencies that otherwise may not be apparent often emerge using this technique.

LIMITATIONS

- Responses tend to over represent the satisfied or irritated visitor, in other words the extreme cases. For this reason, each suggestion should be considered carefully. The variety of comments/suggestions will present a spectrum or range of comments rather than an average opinion.
- It is impossible to generalize the comments, either negative or positive, over the entire population served.

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Technique Gauges

Voluntary Visitor Response

Cost Low

Time Commitment Low

Ease of Application Low

Visitor Burden Low

Training Required Low

Value/Benefit Low/Moderate

TESTING AND MEASUREMENT

DESCRIPTION AND RATIONALE

Testing and measurement is a form of objectives-based evaluation in which tests are used to determine the degree to which pre-specified objectives are attained. Testing has been used by educators for decades as a method for determining whether or not students achieve academic objectives set by teachers and school administrators. Test instruments can measure cognition (knowledge gain), aptitude (ability to learn), affect (indication of interest, values, personality traits, etc.), and skills (ability to accomplish psychomotor competency). The types of tests used by educators to measure skills and abilities usually fall into one of the following categories: standardized tests which may be norm or criterion referenced tests, aptitude tests, achievement tests, or interest inventories.

APPLICATIONS TO INTERPRETATION

Testing and measurement can be used by interpreters or administrators to determine:

- the knowledge gained by a visitor going on a tour, attending a program, or participating in an interpretive experience;
- the change in visitor attitude as a result of exposure to interpretation;
- the level of competence possessed by an interpreter in terms of factual information or skills needed to give a tour, present a slide show, etc.
- visitor interest in a particular topic, resource, or issue;

Testing and measurement can easily be implemented in school programs and with computer assisted instruction.

PROCEDURE(S)

Write Objectives. In writing test items to meet these instructural objectives, interpreters need to consider what visitors need to know, what they should be able to do to demonstrate that they know these things, and how their achievement toward these objectives can be measured? Describing desired outcomes involves writing cognitive objectives, affective objectives, and/or behavioral objectives.

Compose Test Items. Depending on the type of information desired, a variety of test items can be developed. They include:

- matching items
- master list (key list) items
- tabular (matrix) items
- best answer items
- greater-less-same items
- rank order items
- question and short answer items
- statement and comment items
- experiment/result items
- experiment/result/interpretation items

Pretest. Just as with a survey questionnaire, test questions should be pretested to determine their reliability and validity in providing the type of information desired by testing and the clarity of directions.

ADVANTAGES

The advantage of using this approach lies in its easy application and the fact that it provides relevant information for administrators and decision-makers. This approach helps interpreters target for specific outcomes. And, because the approach has been practiced for many years in other fields (management, education, recreation), there is an extensive literature base replete with creative ideas for applying this approach. Quizboards, computers, and other interactive technology are ways in which testing can be applied so that the experience has recreational value for the visitor. If testing is not fun, why do so many Americans watch *Jeopardy*.

LIMITATIONS

Critics of the approach, however, see it as tunnel vision serving only to limit the effectiveness and potential of the evaluation. For example,

- the emphasis is primarily on outcome, not on the value of the objectives as assessed at that time;
- the approach neglects potentially important alternatives and contexts; and
- the approach promotes essentially a linear method of evaluation.
- traditional testing (testing a 'captive audience' or group that cannot leave until the test is complete) is not always appropriate in interpretive situations. Visitor motivations should to be considered when using this technique.

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Technique Gauges

Testing and Measurement

Cost Moderate/High

Time Commitment High

Ease of Application Moderate/High

Visitor Burden Moderate/High

Training Required Moderate/High

Value/Benefit High

AUDITING

DESCRIPTION AND RATIONALE

Auditing is a process by which interpretive supervisors guide the development of individual programs and evaluate their effectiveness. Normally, checklists are used to record information about the quality of the interpreter's performance and the accuracy of the interpretive message. It is a procedure which helps supervisors and managers make decisions about interpretive programs, and at the same time, help interpreters improve their performance.

APPLICATIONS TO INTERPRETATION

Supervisors normally audit interpretive programs to monitor and improve the performance of interpreters. Auditors can use a checklist or some means of audio- or video-taping to provide feedback to interpreters. Use of interpretive audits are normally conducted to determine whether or not the interpreter:

- gives an effective tour; whether or not those tours are factual, appropriate, and interesting.
- utilizes available resources to improve programmatic theme and continuity with other programs.
- practices safe and appropriate techniques of guiding.
- seeks out ways to provide provocative and inspirational interpretation;
- continually strives to develop quality interpretation;

PROCEDURE(S)

- **Set Objectives.** Set objectives and discuss the nature and scope of those objectives with the interpreter prior to the audit. In some cases, criteria and scales are established to determine: (1) how important the particular criteria is to the position; and, (2) how well the interpreter performs a particular task. In this manner, the score given the interpreter in the formal audit reflects both the importance and performance of particular attributes of the job.
- **Conduct Formal Audit.** A variety of checklists may be used during a formal audit and will vary according to the type of program being audited. Many effective checklists are available for use by interpreters even though they may require modification. If checklists must be developed from scratch, panels of experts or focus groups may be used to develop checklist items and weighting schemes.
- **Conduct Post-Audit Conference (Coaching).** It is essential to discuss the formal audit with the interpreter. The post-audit conference should take place as soon possible after the formal audit. If the objectives and criteria have been discussed prior to the audit, the post-audit discussion should be a direct two-way communication about to those objectives agreed upon by both parties. Use of electronic media to emphasize an interpreter's strengths and weaknesses provides excellent feedback and facilitates future training. However, use of media should be planned to be as unobtrusive as possible so that special attention given to scenario does not artificially influence interpreter performance and/or visitor behavior (Hawthorne effect).

ADVANTAGES

- This technique provides for two-way communication between the interpreter and supervisor. The coaching aspects of the audit are meant to lessen the intimidation of the evaluation process and reinforce the value of feedback.
- Using this technique, the evaluator is able to assess interpreter's actual performance in terms of content and technique.
- Follow-up coaching provides immediate feedback for interpreters. This follow-up period provides the opportunity to correct inconsistencies before they become habit, and provides a sounding board for possible modifications.

LIMITATIONS

- One sample audit may not give a representative picture of an interpreter's performance. Audits should be supplemented with other evaluation techniques to provide a thorough picture of an interpreter's performance, or several audits should be completed to more accurately assess performance.
- Audits provide evaluative information only on the performance of the interpreter and/or his or her message. Audits are less effective in assessing the effect of the program on visitors.

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Technique Gauges

Auditing

Cost Moderate

Time Commitment Moderate

Ease of Application Moderate

Visitor Burden Low

Training Required Low/Moderate

Value/Benefit Moderate/High

ASSESSMENT CENTER TECHNIQUE

DESCRIPTION AND RATIONALE

The Assessment Center idea was developed during WW II when the Office of Strategic Services (OSS) designed a series of simulated interviews, tests, and performances to reveal whether or not military and civilian candidates had the qualities needed for intelligence work. These candidates were examined in terms of their mental ability, motivation to serve, physical stamina, emotional stability and resistance to stress.

Today, managers use the Assessment Center Technique as a way to evaluate employee performance in terms of planning skills, time management, delegation, leadership, communications and so forth. The Peace Corps uses an adaptation of this technique, called the Trainee Assessment Model, to aid with volunteer selection. The seven dimensions assessed by the Peace Corps include: motivation, productive competence, respect and empathy, cultural awareness, emotional maturity, ability to adjust, and interaction skills. Each dimension is defined operationally and then assessed according to a variety of indicators.

Assessment Center workshops yield valuable information about employee capabilities. Through simulations, managers are often able to assess some of the more obscure dimensions of skill development such as problem analysis, sensitivity (listening), decision–making, and stress tolerance.

APPLICATIONS FOR INTERPRETATION

Using this technique can help interpretive supervisors analyze the component parts of an interpretive position and translate that into measurable skills. The recent trend toward Knowledge, Skills, and Abilities (KSA) assessment in the application process draws from this concept. An interpreter wears many hats. This technique can help assess the level of performance where such a variety of skills is required. For example, an interpreter may be expected to conduct a tour using effective communication skills, but he/she is also expected to practice crowd control, exhibit concern for visitor safety, and acknowledge visitor diversity in presentation. In training, through simulation, an expected level of performance of each of these components could be assessed.

PROCEDURE(S)

- **Job Task Analysis.** Initially, functions for which a certain person or position is responsible are identified.
- **Skill Determination**. Skills required to fulfill the designated responsibilities are selected and thoroughly described. The skills used for evaluating interpreters might include such things as: communication skills, group involvement/crowd control, time management, sensitivity, stress tolerance, planning and organization, problem analysis, influencing, accuracy and integrity of message, and so forth.
- **Simulation Plan**. In this phase, a series of exercises are created to simulate circumstances where the selected skills are used. An assessor team comprised of field specialists observes and

Technique Gauges

Assessment Center Technique

Cost Moderate/High

Time Commitment Moderate/High

Ease of Application Moderate

Visitor Burden Low

Training Required Moderate

Value/Benefit Moderate/High

evaluates participants' performance during these exercises. Each participant is evaluated by at least two other observers who then collaborate in a final narrative analysis.

- **Formal written evaluation**. The assessor team then compiles a written report outlining the performance of the interpreter. This includes a narrative description of the strengths and weaknesses of the employee's performance and is often accompanied by a scale or graph charting the various dimensions along a continuum. The performance is then discussed formally with the employee.

ADVANTAGES

- The Assessment Center Technique (ACT) is evaluation based on actual observation and yields valuable information about the strengths and weaknesses of interpreter performance.
- By isolating the various components or job tasks of an interpretive position, both the interpreter and supervisor are better able to examine the complexities and interrelationships of those job tasks as they relate to the entire process of personal interpretation.
- This technique can be used, not only as an evaluation tool, but also as a selection or training tool.

LIMITATIONS

- This technique can be costly. The Assessment Center Graduate School, USDA estimates a cost of between eight and ten thousand dollars for the assessment of six people. This cost includes the total expense of using highly trained evaluators who facilitate the entire process of task analysis, simulation planning, evaluation, and formal review. These costs can be decreased, however, if cooperation among several parks and/or regions can be facilitated so that common simulation and assessment packages can be used on similar programs.
- Simulated employee performance makes it difficult to determine an 'average' level of performance. The effects of staging influence validity.

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- open communication exists between all levels of the organization resulting in shared authority **and** responsibility;
- the objectives set reflect the overall goals of the agency.

LIMITATIONS

- This technique is often time consuming in terms of the paper trail needed to ensure its success. The amount of paperwork required is blamed for impairing managerial efficiency where the 'process' becomes more important than the 'content';
- Whereas the intent for supervisor-subordinate input is that it be mutual, often that communication can be abused by the supervisor. Rather than serving as a mentor relationship as the technique prescribes, it often remains one of hierarchy;
- This technique takes time to implement and requires that substantial changes in organizational behavior take place. The success of implementation and use is sometimes daunted by the pace of change.

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MANAGEMENT BY OBJECTIVES

DESCRIPTION AND RATIONALE

Management by objectives (MBO) is a proactive, results-oriented philosophy of management. This philosophy encourages management participation from all levels of the organization. MBO is basically a system whereby supervisors and subordinates jointly identify goals, determine actions needed achieve those goals, and decide appropriate measures for assessing the attainment of those goals. Simply, MBO is based on the notion of participatory management. (Culkin and Kirsch 1986)

APPLICATIONS TO INTERPRETATION

Used as an evaluation technique, MBO can help park administrators:

- determine needed changes in interpretive programs by involving both interpreters and supervisors in the planning, implementation, and assessment phases;
- assess whether or not interpretive programs are fulfilling their objectives to help park administration meet overall park goals;
- enhance program planning by incorporating visitors' perspectives as seen by front-line interpreters.

PROCEDURE(S)

- **Establish Objectives** - Taking into consideration overall agency goals, objectives (both short and long range) are set jointly, by supervisor and subordinate, for desired outcome. Objective setting might include decisions about: job clarification, individual work plans, annual accomplishments, individual performance targets, and so forth. The key to objective setting at this state is that the objectives must be **significant** but realistic, **specific** but not overly complex, **measurable, scheduled** but attainable, and **accountable** in terms of 'who' and 'what'. A great deal of literature is available about formulating objectives for interpretation planning (Theobald 1979, Bennett 1984, Carlson 1985, NPS 1985, NPS-6 1986, etc).

  Standards for assessing goal attainment should be set at this stage to be used later to monitor achievement. Decisions about which standards to use means defining clear and specific criteria by which success will be measured.

- **Develop Action Plan** - This stage involves establishing a means for achieving targets set in the previous stage. Working together, interpreters and supervisors consult on mutually agreeable steps to be taken. Setting individual work plans should include specific duties and activities to be completed during the course of a day.

- **Monitor Achievement** - This involves utilizing the criteria developed in stage one to determine progress toward goal. The standards for assessing goal achievement should already be set so that both supervisor and interpreter can measure effectiveness, timeliness, efficiency, and quality of action.

- **Make Adjustments** - Based on information gathered while monitoring achievement, determination is made at this step about what adjustments and/or modifications are needed. The process is cyclical and reverts at this point back to the objectives setting stage.

ADVANTAGES

- The major strength of this technique is the fact that supervisors and subordinates work jointly throughout the entire process. In this regard, there is greater assurance that:

INTERVIEWING

DESCRIPTION AND RATIONALE

> "The purpose of interviewing is to find out what is in and on someone else's mind...[it] is not to put things in someone's mind but rather to access the perspective of the person being interviewed" (Patton 1980:196).

Interviewing, in a face-to-face situation, is simply purposeful conversation. An interview is used to gather specific information about a topic. One person is usually in charge and it is that person's responsibility to facilitate the conversation in such a way as to gather data which reveals the interviewees perspective on a particular topic. With interviewing, listening is vital. It is this skill, coupled with the ability to record accurately what is being said, that contributes most to the successful interview.

There are three approaches to interviewing - the informational conversational interview, the general interview guide approach, and the standardized open-ended interview. Often these approaches are referred to as unstructured, semi-structured, and structured interviews respectively.

The **informal conversational interview**, or unstructured interview allows the interviewer maximum latitude both in **what** questions to ask, as well as **how** to ask those questions. The interviewer is entirely responsive to the conversation as it takes place. The questions are open-ended, spontaneous and the conversation is free-flowing. Obviously the data gathered will be different with each interview and is often supplemented with observation data. This approach is most useful in a circumstance where the interviewer can stay with a situation long enough to explore the situation in depth. In this way, he/she can establish a comprehensive, holistic picture of the program over time including information about change and development.

The **interview guide approach**, or semi-structured interview is a predetermined schedule of questions or issues to be explored, but neither the order in which the questions are addressed nor the actual wording of the question need be determined in advance. The interview guide simply serves as a framework for discussion to assure that similar information is covered with each interviewee, but the interviewer has the flexibility to adapt wording and sequence accordingly during the course of conversation. This approach is spontaneous enough that the interviewer has the freedom to explore, probe, and question for relevant information, but structured enough so that time and resources are maximized. Given the skills of the interviewer, this approach is useful in group interviews, where the interviewer serves as a facilitator to keep the conversation focused and yet comprehensive.

The **standardized open-ended interview** is most like a vocal questionnaire. A set of carefully worded questions are arranged in such a way that the interviewer asks the same questions in the same order of all participants. Flexibility is limited using this

Technique Gauges

Management
by Objectives

Cost Moderate/High

Time Commitment High

Ease of Application High

Visitor Burden Low

Training Required Moderate

Value/Benefit Moderate

demeanor is therefore very important. A pleasant appearance and a friendly, interested attitude on the part of the interviewer does a great deal in creating a comfortable relationship with the respondent. Consideration should be given prior to actual interview about the method of recording responses—tape recording, note taking, etc.—so that both interviewer and respondent feel comfortable during the entire interview process.

ADVANTAGES

- Interview techniques are flexible. The interviewer can be directly responsive to the interviewee regarding comprehension, interest, and accuracy;
- Response rates for interviews are usually higher than with questionnaires;
- More complex issues can be addressed using this technique.

LIMITATIONS

- Interviewing can be expensive and time-consuming. Often extensive training is required for those who do not have the skills and experience to conduct successful interviews and interview data analysis;
- There is a tendency, using this technique, for respondents to try and please the interviewer;
- Consistency in responses may be affected by the way questions are worded each time they are asked.

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approach, but the possibility for interviewer bias is also reduced. Probing questions are built into the questionnaire instrument. This approach is very focused and maximizes interviewer time. In addition, this approach minimizes variation between interviews. Due to its standardized format, the data analysis for this approach is often easier, but the types of information obtained will likely be less in-depth that those obtained by less structured approaches.

Regardless of which approach is used, the purpose of interviewing is to understand how participants perceive a program and to capture the complex nature of individual experiences. Interviewing merely provides a way for respondents to express their understanding of a situation in their own words.

APPLICATIONS TO INTERPRETATION

Used to evaluate interpretation, this technique can be used to:

- determine how a program appears and/or feels to visitors; decide what changes visitors perceive in themselves as a result of their participation in a program;
- discover what thoughts and expectations interpreters have about a program regarding its operation, processes, and outcomes;
- gather information about local history and to evaluate the content of that information for resource management decisions.

PROCEDURE(S)

- **Create Interview Schedule**. This involves isolating the objectives to be achieved in the study and creating a list of questions or issues that are to be explored.
- **Write Questions**. After deciding what to ask and for what reasons, the process of deciding how to question begins. This involves decisions about interview format - unstructured, semi-structured, or non-structured. Beyond format, the types of questions to be used must be decided. According to Patton (1980) there are six types of questions and, depending on the objectives of the interview, any assortment of these is possible:
  - experience/behavior questions
  - opinion/value questions
  - feeling questions
  - knowledge questions
  - sensory questions
  - background/demographic questions

The time frame of these questions can vary. Again, depending on the desired outcome, respondents can be asked questions about what they **have** done, **are** presently doing, or **hope** to do. Differentiating past, present, or future frames of reference helps both the interviewer and the respondent clarify perspective.

- **Pretest Interview**. Just as with questionnaires used in survey research, interview questions should be pretested. This is done to isolate areas of procedural bias, and to reveal awkward questions.
- **Conduct Interviews**. A successful interview is one in which the respondent feels comfortable revealing his own perceptions and understandings of a situation. Interviewer appearance and

FOCUS GROUPS

DESCRIPTION AND RATIONALE

A focus group is a small group (normally 8–12 people) formed specifically to discuss a particular question, concern, or problem, and led by a well-trained discussion leader (moderator) who uses a study guide to facilitate the topic of discussion. Focus groups are commonly used in commercial or consumer research and are based on the basic premise that feedback is essential to continuous and successful growth. Focus groups are also referred to as Blue Ribbon Panels, informal review panels, or moderated group discussions and are increasingly becoming recognized for their importance in the service industry.

Among their many purposes, focus groups can: (1) lead to a better understanding of an institution's audiences (existing and potential); (2) help identify planning issues and priorities; (3) provide valuable feedback on existing programs; (4) contribute ideas for future program and service planning; and (5) isolate issues and criteria for evaluation and research.

Focus groups are most effectively used during times of review or change, during the birth or early growth stages of a program, during a phase where the range of issues and reactions have not been thoroughly examined, or when the information sought is complex or ambiguous. Focus groups can be used to help fine tune or improve programs and services as well as help gather information to help establish programs or services. This information might include reactions, expectations, desires, interests, motivations, and so forth. In other words, focus groups are helpful as formative or summative evaluation techniques.

Managers and supervisors are beginning to recognize that focus groups capitalize on the value of group dynamics. Teamwork is emphasized. Sharing information in a focus group interview assures a great deal of internal validity. Not only do focus groups offer an efficient way to interview several constituents in one sitting, but they are designed to examine issues and concerns in a social context – the context in which most consumer decisions are made.

APPLICATION TO INTERPRETATION

For managers and personnel involved in interpretation, the focus group technique can be used to:

- evaluate the message transmitted through both personal and non-personal interpretation,
- anticipate visitor needs for interpretive services; to anticipate areas of visitor dissatisfaction and develop a proactive approach to planning,
- determine how visitors perceive a particular exhibit, brochure, program, etc.,
- measure the strengths and weaknesses of a new exhibit, brochure idea, program proposal, etc.,
- evaluate an approach to or delivery of a particular program from the visitor's perspective.

Technique Gauges

Interviewing

Cost Low/Moderate

Time Commitment High

Ease of Application Moderate/High

Visitor Burden Depends

Training Required Moderate/High

Value/Benefit High

LIMITATIONS

- Focus groups are normally not large enough to provide quantitative conclusions, nor should the information gathered in a focus group be assumed to be scientifically generalizable to a larger population. Follow-up quantitative research is appropriate in some cases to ensure generalizability. Also, two or more focus groups conducted on the same topic or same set of questions helps guard against idiosyncratic findings;
- Basic concepts must already be conceived or the session is likely to be merely a brainstorming session. Presenting broad issues will not be as productive as presenting specific, well-developed concepts for reaction and discussion.
- "Steamroller effect" is possible (i.e. persuasive member(s) can unduly sway opinions/attitudes of others.)

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PROCEDURE(S)

- **Issue Identification**. The formulation of a focus group presumes that a concern, question, or issue has been identified by either the clientele served (in the case of interpretation, the visitor) or by agency personnel. Establishing clear objectives is essential to the success of this technique.
- **Study Guide Development**. In order for the group to efficiently process the information appropriate for problem-solving or decision-making, it is necessary to develop a guide or plan prior to the meeting. This guide might include a series of questions and probes to aid the group discussion. The moderator is often instrumental in helping formulate the study guide. Open-ended questions and general probes are best suited to group discussion. Often, the nature of the issue will require that specific, demographic information be solicited from the participants as well.
- **Participant Selection**. Participants are recruited according to the project objectives, budget, and time constraints of the project. There are a variety of ways to recruit participants depending on the topic and nature of discussion desired. Sometimes it is necessary to advertise for interested participants. Group members can also be selected from a list or roster of appropriate people. Cooperating associations and friends groups can be helpful; however, care should be taken to ensure that the group composition be representative of the population involved. Depending on the issue and the desires of the moderator, it may be necessary to screen interested individuals to limit group size or composition. Unintentional bias should be avoided whenever possible during the recruitment process. It is common practice to pay group participants a nominal fee and/or provide group with refreshments and other inducements (as appropriate) in exchange for their involvement.
- **Room Selection and Moderator Appointment**. Prior to the scheduled meeting time, an appropriate room is selected and moderator designated. Most commercial market research firms, who employ this technique use rooms equipped with one-way mirrors that allow unobtrusive observation. Decisions about room comfort, set-up, and audio- or video-taping possibilities are the responsibility of the moderator.

  The moderator is the key to the success of the focus group method. This person must draw out issues and reactions, stay focused on the topic of discussion, and, at the same time, refrain from making judgments about information that emerges from group interaction. As stated, a carefully developed study guide serves as a tool box of questions, probes, and target-timing techniques for the moderator to use while facilitating the group process.
- **Debriefing and Follow-through**. Following each focus group session, it is appropriate to conduct a short, informal debriefing session to find out if the observers understand new concepts discussed, to find out if the goals of the group were achieved, and to set direction for action or implementation if necessary. The moderator is responsible for compiling a brief report at the conclusion of the meeting which includes an analysis of what transpired in the meeting and recommendations for future activity. The nature of the final report, and a determination of who should act on the results should be discussed **prior** to the meeting.

ADVANTAGES

- Focus group discussions render qualitative information about the success or failure of a program, reactions to a concept, program expectations, feelings toward an issue, and so forth. Focus groups often bring out information missed by statistical studies; the 'why' or reason behind a particular response is often revealed by using this technique. Focus groups are particularly appropriate where the information sought is complex or ambiguous;
- The focus group concept is designed to assess issues and concerns in a social context - the natural context for program decision-making. Participants are encouraged to react and build on one another's ideas;
- The focus group can help generate ideas for future projects/programs. Ideas that don't normally lend themselves to survey research or other quantitative evaluations often benefit from focus group format.

OBSERVATION

DESCRIPTION AND RATIONALE

Observation is a qualitative technique that can be used to capture the interpretive phenomenon as it takes place in the field. Observation can take two forms in terms of involvement: (1) direct observation where the observer is known and functions as an onlooker, or (2) participant observation where the observer takes an active role in the activities or program being studied, and whose identity is not revealed. Useful information can be gathered with minimal burden to visitors or to park personnel and at minimal cost to the park.

The purpose of observational data is to describe a setting or phenomenon as it occurs naturally. Observations can be made of activities that take place in the park setting, the visitors who participate in those activities, and/or the level of satisfaction derived from visitor participation in park activities. Observational data, if sufficiently descriptive (factual, accurate, and thorough yet not obscured by trivia), can be of value to decision-makers who need to understand the impacts of interpretative programs without encumbering visitors.

Observation takes place in the field and the observer is close enough to the situation to understand, in a direct and personal manner, what the program is all about. Though there are a variety of ways to gather observational data (direct, indirect, unobtrusive, interactive etc.), each requires that the observer be carefully trained and prepared for the task. Training can include learning how to write descriptively (how to record field notes and how to separate detail from trivia), how to listen, and how to see a situation perceptively. In essence, observation training is retraining the five senses to respond with accuracy and reliability to an observed situation.

Though training for skillful observation can be as rigorous as that required by many other professions, the quality of information gathered is almost without precedent. That is to say that observing people in a natural setting can reveal a particular quality of information perhaps not discovered using more quantitative techniques. For example, managers who have termed this concept 'Managing By Walking Around (MBWA), find it an invaluable assessment tool. (Peters and Austin 1985)

APPLICATIONS FOR INTERPRETATION

Observation is a tool that can be used to assess interpretation in a variety of ways. Observation can be used to:

- investigate problems associated with public use of park areas, exhibits, trails, and so forth;
- gather data about use and non-use of specific park areas, exhibits, waysides, tours, etc.;
- discover the relationships between the visitor and the interpretive experience;
- examine the success, failure or need for change of a program or exhibit;
- note comments about and determine the relative effectiveness of a program or exhibit;
- observe participant behavior in interpretive programs.

Technique Gauges

Focus Groups

Cost Low

Time Commitment Moderate

Ease of Application Moderate

Visitor Burden Low/Moderate

Training Required Low

Value/Benefit High

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PROCEDURE(S)

Basically, determinations must be made regarding which observational methods will be best suited to the program or exhibit to be evaluated. Appropriate data gathering strategies must be developed and schedules set for formal observation and recording. A careful training of observers is essential to the success of this technique.

A variety of observation strategies can be used to gather managerially relevant data. Depending on the nature of the problem and the type of data needed, a choice can be made from the following approaches:

Statistical Evidence - program attendance, other visitor use data;

Physical Evidence - tile and carpet wear around exhibits, wear on books or exhibit materials, trail wear, fingerprints/noseprints on exhibit glass, graffiti;

Archival Evidence - permits, newspapers and media coverage (content analysis), trail logs, diaries/journals/letters, sales records, number of complaints/compliments by public, return visits, guest books, license and registration information;

Participant Observation - clothes/shoes/jewelry/tatoos, body language/facial expression, proximity and clustering, language and conversation, time dedication/interest, non-participation;

Contrived Observation - Taping (video and/or audio), still photography, time-lapse photography;

These approaches can be applied in a overt or in a covert manner. The manner in which the observation takes place will affect both the validity and reliability of the data collected. Covert observation assumes that observers act as a participant and in no way reveal that they are gathering information from other participants. On the other hand, participants are fully aware they are being studied during overt observation. Patton (1980) describes four different observer roles along the overt/covert spectrum: complete participant, participant as observer, observer as participant, and complete observer. In most cases the strategy chosen by the observer is directly related to the nature and complexity of problem being observed.

ADVANTAGES

- Direct and personal contact with the situation allows the observer to see and understand the context in which the experience is taking place. "Understanding the program context is essential to a holistic perspective" (Patton 1980:125);
- Observation allows the evaluator to isolate phenomena that otherwise may not become available in interview or questionnaire evaluations;
- Visitor Observation is relatively inexpensive when compared to strategies which employ interviews or survey questionnaires.

LIMITATIONS

- Observation will not render complete information about the visitor. Because visitor psychology is difficult to assess using this technique, caution is advised against stereotyping visitors;
- There is a tendency when using observation for evaluators to be attracted to the strange or atypical instance. This type of selective perception can bias results.

CONNOISSEURSHIP AND CRITICISM

DESCRIPTION AND RATIONALE

This technique draws from the fine arts. Connoisseurship is the art of appreciation. It does not necessarily imply liking or preference for what is observed, but rather an awareness of the qualities and the relationships between those qualities (Worthen and Sanders 1987). Just as a wine connoisseur relies on his experience and training to distinguish subtle differences in quality based on knowledge of body, color, bouquet, flavor, and so forth, the techniques of interpretive connoisseuship are based on the trained and perceptual acuity of the evaluator. The greatest strength of this technique lies in its ability to turn observation into statements about quality.

"If connoisseurship is the art of appreciation, criticism is the art of disclosure" (Eisner 1985:92). Criticism assigns some level of judgement to the item or process being evaluated. Criticism is not however, negative appraisal, and it is not simply description. It is the interpretation and evaluation of what is observed—a recognition of special qualities that might otherwise go unnoticed. "What a critic strives for is to articulate or render those ineffable qualities constituting art in a language that makes them vivid" (Eisner 1985:92).

Interpretive critics, similar to art or theater critics, are able to talk in special ways about what they observed. They have the skills required to experience, analyze, and describe the expressive qualities of interpretation. Critiquing is the art of looking, seeing, hearing, listening, experiencing and, most importantly, helping transfer that information into better, more effective interpretation.

APPLICATIONS TO INTERPRETATION

A qualitative method, this evaluation technique renders valuable information for interpreters about the content, quality, and presentation of their program. This method can be used to assess the subtleties of an interpretive program in a manner similar to the way in which art, literature, or theater performance as critiqued. This serves to:

- to improve the appreciation of interpretation;
- to improve the standards by which interpretation is judged;
- to acknowledge the complexities of an interpretive program and to make the appreciation of those complexities possible;
- to ascertain the differences in content provided to visitors as a function of the concerns, methods, and characteristics of the interpreter

PROCEDURE(S)

- **Recognize Assumptions**. Because the function of critical narrative is to help people see, understand and appraise the character and quality of a practice and its consequence, the following assumptions should be recognized: (Specific training may be required.)
  - that individuals doing the connoisseuring/critiquing are individuals who are able to see the interactions among the characteristics that occur in complex social situations;

Technique Gauges

Observation

Cost Low

Time Commitment Moderate/High

Ease of Application Moderate

Visitor Burden Low

Training Required Moderate

Value/Benefit Moderate/High

Lewis, W.J. 1989. Some Thoughts on Critiquing. *Journal of Interpretation*. 13(1): 19–20.

Lewis, W.J. 1975. The Fine Art of Interpretive Critiquing. Washington, DC: National Park Service, Division of Interpretation.

Worthen, Blaine R. and Sanders, James R. 1987. *Educational Evaluation*. New York: Longman.

- seeing requires more than looking. Seeing is the ability to discern what is significant given a particular frame of reference.
- situations can be described in a variety of ways, through the use of numbers, literary prose, poetry, visual narratives (video), cinematography, or still photography.
- the function of the description is to help someone or some group better understand the situation being described.

- **Structure Written Criticism.** A written criticism, devised to appraise the quality of a practice and its consequences, comprises three components (Eisner, 1985). Defined separately below, these three components are often integrated within a single document:
  - Descriptive - a vivid and factual description of the situation being evaluated. This description is both factual (numbers, quotes, physical characteristics) and artistic (metaphors, literary description, poetic).
  - Interpretive - an accounting of the interactions perceived in the situation. The interpretive component answers questions like: Why do these activities occur? What explains this particular episode? Why is this interpreter so effective? The effort is not merely to describe the situation but to interpret its processes.
  - Value Judgements - a valuative activity which appraises or evaluates the events by using appropriate criteria - appropriate for the specific situation being evaluated.

  Since the needs of the audience for whom the criticism is written vary, the way in which the criticism is written will vary accordingly. The message should relate directly to the needs of the audience - the funding agency, the administrative group, etc.

ADVANTAGES

- The greatest strength of criticism as a technique to evaluate interpretation lies in its ability to translate trained observation into statements about interpretive quality.
- This method capitalizes on human judgment and is relatively easy to implement. Usually a recognized 'expert' with appropriate credentials is chosen to conduct this type of evaluation.

LIMITATIONS

- Reviewers of this technique comment that it is little more than personal judgement; that often the expertise of the reviewer or critic is merely presumed. However, training, experience, and refined perceptual capabilities play a crucial role in the success of this technique.
- The demands for fairness and justice are often more rigorous in public program evaluation. Some justification is often necessary to supplement the critic's comments.
- Because criticism is speaking in special ways about programs, some view its value merely as literature rather than as a true measure of interpretive value.

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Technique Gauges

Connoisseurship and Criticism

Cost Moderate

Time Commitment Low/Moderate

Ease of Application Moderate

Visitor Burden Low

Training Required Moderate/High

Value/Benefit Moderate

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ANNOTATED BIBLIOGRAPHY

The following annotated bibliography is arranged alphabetically by primary author. Each citation is accompanied by an annotation and one or more keywords which reference the field(s) from which each was drawn: education, fine arts, management/marketing, recreation and tourism. Other keywords (research, communications, and interpretation) are used where appropriate.

It would be impossible to capture the entire body of knowledge about interpretation and evaluation and for this reason it is suggested that the reader supplement this bibliography with current periodicals and research studies as they become available, for example, Journal of Environmental Education, Museum News, Visitor Behavior, Journal of Interpretation, and so forth.

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Keywords: **Communications, Management**

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Abstract: A criteria for a system of label evaluation is set forth in this report. The xix criteria discussed are followed by a description of four-step evaluation system to evaluate the content, style, and impact of labels on the visitor. Finally, validation of the evaluation system and future uses of the study are discussed.

Keywords: **Research, Interpretation**

Bitgood, S.C. 1987a. Some Questions on Exhibit Evaluation. *Visitor Behavior*. 2(1): 3.

Abstract: The author provides answers to nine important evaluation questions.

Keywords: **Research**

Bitgood, S. and Carnes, G. 1987. Professionals' Attitudes Toward Exhibit Evaluation. Technical Report No. 87-80. Jacksonville, AL: Psychology Institute, Jacksonville State University.

Abstract: This report discusses the importance of exhibit evaluation, some of the goals of evaluation, benefits of evaluation, and so forth according to a survey conducted of 250 professionals who deal with visitors in exhibition-type facilities.

Keywords: **Museums, Research**

Bitgood, S. and Gregg, G. 1986. A Brief Review of the Research on Signs and Labels: Where are the Data? *Visitor Behavior* 1(3): 4.

Abstract: This is a brief review of literature eximining 15 characteristics of effective signs and labels.

Keywords: **Research**

Bitgood, S.C., Finlay, T., and Woehr, D. 1986. Design and Evaluation of Exhibit Labels. Technical Report No. 87-40c. Jacksonville, AL: Jacksonville State University.

Abstract: This study argues that the design and evaluation of exhibit labels should be based on sound scientific principles and measurement. The criteria for good exhibit labels is discussed. The methodology of evaluation labels and the variables that influence visitor reading are also discussed.

Keywords: **Research, Museums, Interpretation**

Bogdan, R.C. and Biklen, S.K. 1982. *Qualitative Research for Education: An Introduction to Theory and Methods*. Boston: Allyn and Bacon.

Abstract: This book begins with a broad discussion of what qualitative research is and its relationship to education, including both theoretical and historical concepts. In the subsequent chapters these concepts are applied to actual practice, detailing design, data gathering, fieldwork relationships, data analysis, and discussion of findings. The final chapters address special cases of qualitative research in education.

Keywords: **Education, Research - Evaluation**

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Abstract: This paper summarizes both the "common sense folklore" about giving feedback as well as the researchers' conclusions about effective feedback, and will identify implications for practice and research from each.

Keywords: **Communications, Education, Research**

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Abstract: This study explores the evaluation techniques and methods prescribed by Shettel et al., 1968 to question the usefulness of a goal-referenced approach to studying visitor behavior in relation to didactic exhibit exposure.

Keywords: **Museums, Research**

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Abstract: The author emphasizes the need for defining exhibit goals and objectives in measureable terms. She describes and analyzes approaches to measurement, including tests, questionnaires, interviews, archives, observations, and physical trace measures.

Keywords: **Museums**

Bednarz, D. 1986. Quantity and Quality in Evaluation Research: A Divergent View. *Evaluation and Program Planning*. 8: 289–306.

Abstract: This paper illustrates some of the differences and subtleties between quantitative and qualitative approaches to evaluation. The author describes how these incompatibilities may be overlooked by researchers in their effort to synthesize the two approaches in evaluation research.

Keywords: **Research**

Bennett, D.B. 1984. Evaluating Environmental Education in Schools: A Practical Guide for Teachers. *Environmental Education Series 12*. Paris, France: UNESCO.

Abstract: This teacher's guide offers a general approach to environmental education evaluation and a practical knowledge about the area of educational evaluation. An introductory section explains both the use of the guide and use of a four step evaluation process. Practical aspects of evaluation are highlighted in six chapters through specific questions related to a scientific evaluation process for environmental education.

Keywords: **Education, Recreation**

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Abstract: This book was written in the belief that leadership is the pivotal force behind successful organizations. The authors distinguish leadership from taking charge and provide theories and strategies for successful leadership.

Keywords: **Management, Communication**

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Abstract: The author discusses professionalism in interpretation as a combination of integrity, dedication, and workmanship.

Keywords: **Interpretation**

Bitgood, S.C. and Korn, R. 1987. Selected Bibliography: Design and Evaluation in Museums. *Visitor Behavior*. 2(1): 9.

Abstract: A short bibliography of the application of evaluation in museums.

Keywords: **Museums, Bibliography**

Bitgood, S.C. 1988. Visitor Evaluation: What Is It? *Visitor Behavior*. 3(3): 6–7.

Abstract: This article summarizes some of the distinctions made by those who argue research and evaluation are distinct.

Keywords: **Research**

Cameron, D. 1968. Effective Exhibits: A Search for New Guidelines, The Evaluator's Viewpoint. *Museum News*. 46(5): 43-45.

Keywords: **Museums**

Cameron, D. 1967. How Do We Know What Our Visitors Think? *Museum News*. 45(7): 31-33.

Abstract: The museum and its audience as a communication system is discussed. Audience research is said to provide the feedback loop necessary to locate exhibit and program weaknesses and modify their output. Ways of collecting audience information are outlines along with some do's and don'ts of this process.

Keywords: **Museums, Communication**

Carlson, S.B. 1985. *Creative Classroom Testing*. Princeton, NJ: Educational Testing Service.

Abstract: The introduction of this work is designed to aid evaluators in writing test items to meet instructional objectives. Both content objectives and behavioral objectives are covered. The major portion of the book includes examples and discussion of 10 basic designs suggested for assessment and instruction.

Keywords: **Education**

Cherem, G.J. 1977. The Professional Interpretor: Agent for An Awakening Giant. *Journal of Interpretation*. Vol 2(1): 3-16.

Abstract: Through the use of a giant metaphor the author discusses interpretation—why it is done, types of interpretation and interpretors, training needed and the process. In addition, he proposes a model which further explains the nature of interpretation. A much cited work, this article, written in anticipation of a growth in interpretive services, has become a legend in its own right.

Keywords: **Interpretation**

Cherem, G.J. 1980. Is Interpretation at Museums and Visitor Centers "Legible" to the Public? In *AIN 80 Program Papers: Integrating Cultural and Natural Interpretation*. pp 155-159. ED 197940.

Abstract: This paper focuses on the nonverbal information intentionally and unintentionally communicated to visitors in interpretive environments such as museums and visitor centers. The visitors interpretive experience is described in terms of both verbal and nonverbal communication followed by a discussion of the influences of nonverbal communication on the quality of visitor experience.

Keywords: **Interpretation, Museums, Communication**

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Keywords: **Interpretation**

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Abstract: This paper concentrates on evaluating the impact of the many educational programs aimed at recreational visitors to zoos. The author examines the educational role of zoos by looking at non-reactive or unobtrusive measures as a means to evaluate the education of recreational zoo visitors.

Keywords: **Recreation, Education**

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Abstract: The project report/training guide includes an evaluation assessment model fashioned after the Center for Assessment and Training (CAST) model. This model is designed to measure seven dimensions of performance: motivation, productive competence, respect and empathy, cultural awareness, emotional maturity, ability to adjust, and interaction skills. A discussion of each and measurement indicators are included in this report.

Keywords: **Management**

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Keywords: **Museums**

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Abstract: This paper examines the mentor-protege relationship. The extensive annotated bibliography was used to provide suggestions as to how mentor-protege relationships might serve as a evaluative tool for interpretation.

Keywords: **Management, Education**

Braley, M. and Hanna, J. 1980. The Use of Interpretation as a Management Tool. In *AIN 80 Program Papers: Integrating Cultural and Natural Interpretation*. pp. 88-92. ED 197940.

Abstract: The purpose of this paper was to discover ways interpretation has been used as a management tool. Federal natural resource related agencies, state park systems, and a small group of professional interpreters served as the population of this study. A questionnaire was used to collect data . Findings categorized interpretation as a management tool in both general and specific examples.

Keywords: **Interpretation, Management**

Bray, D.W., Campbell, R.J., and Grant, D.L. 1974. *Formative Years in Business: A Long-Term AT&T Study of Managerial Lives*. New York: John Wiley and Sons.

Abstract: The intent of this book is to communicate clearly and concisely the information drawn from the Management Progress Study, a research study on the life of managers in the Bell System. Contained in this book is a discussion of the assessment center technique as it is used to simulate and evaluate qualities necessary for effective managers.

Keywords: **Management**

Brockman, C.F. 1978. Park Naturalists and the Evolution of National Park Service Interpretation through WW II. *Journal of Forest History*: 22(1): 24-43.

Abstract: This article is an historical assessment of the growth of National Park Service interpretation from the early 1900's to World War II. Following an in depth historical analysis, the author compares interpretive techniques of yesterday with those used today.

Keywords: **Interpretation**

Cable, T.T., Knudson, D.M., Udd, E. and Stewart, D.J. 1987. Attitude Changes as a Result of Exposure to Interpretive Messages. *Journal of Park and Recreation Administration*. 5(1):47-60.

Abstract: This article documents the changes in attitudes as a result of exposure to interpretive messages. The authors feel that such an approach could help agencies use interpretation as a management tool. The model used to measure attitudes and the application of this method as an evaluation tool are both discussed. The article concludes with a discussion of policy considerations.

Keywords: **Interpretation, Communications, Research**

Callecod, R. and Gallup, B. 1980. Applying Research Methods to Interpretive Program Planning and Evaluation. In *AIN 80 Program Papers: Integrating Cultural and Natural Interpretation*. pp 172-177. ED 197940.

Abstract: This paper describes methods and procedures currently being utilized by the Hennepin County Park Reserve District to obtain empirical data relative to outdoor recreation and interpretive programming needs and user satisfaction. The authors also explain a number of research methods which can be used to obtain valid and useful data including on-site surveys, mail and telephone surveys, unobtrusive methods such as time-lapse photography, behavioral mapping and license and registration data.

Keywords: **Interpretation, Management**

Dick, R.E., McKee, D.T. and Wagar, A.J. 1974. A Summary and Annotated Bibliography of Communications Principles. *Journal of Environmental Education*. 5(4): 8-13.

Abstract: This annotated bibliography contains 57 sources. The principles of communications and related fields pertinent to environmental education and interpretation are covered in this bibliography. The principles are summarized according to: communication or source factors, communication or message factors, receiver or audience factors.

Keywords: **Communication**

Dockser, L.S. 1989. An Evaluation of Play: Past, Present and Future. *Visitor Behavior*. 4(1): 13-14.

Abstract: This study was conducted to determine whether or not to improve the design and implementation of future exhibits in the Please Touch Museum for Children in Philadelphia. The author describes the open-ended interview procedure used to evaluate the 'free play' objectives of the present exhibits. This particular evaluation led the staff to identify broader issues about the kinds of learning being promoted by the museum.

Keywords: **Research - Evaluation, Museums**

Edginton, C.R., Compton, D.M., and Hanson, C.J. 1980. *Recreation and Leisure Programming: A Guide for the Professional*. Philadelphia: Saunders College.

Abstract: In the final sections of this text information is provided regarding the process of evaluation that is essential to achieving overall program effectiveness. One section focuses on defining terms and clarifying the purpose of evaluation. This is followed by a presentation of a comprehensive evaluation plan designed for any leisure service delivery system. Another section focuses on the roles, competencies, and hazards encountered by the evaluator in the evaluation process, and finally, various approaches to evaluation are discussed.

Keywords: **Recreation, Management**

Eisner, E.W. 1985. *The Art of Educational Evaluation*. Philadelphia: The Falmer Press.

Abstract: The articles that constitute this book reflect a personal, autobiographical view of educational evaluation. This book regards teaching at its best as an art and educational evaluation as a process that can profitably employ the methods and perspectives of those who appraise the work of artists. The author refers to his work as 'work in progress - stimulus for thought. The articles contained here explore qualitative evaluation, specifically connoisseurship and criticism as it applies to education.

Keywords: **Art, Education**

Eisner, E.W. 1979. *The Educational Imagination: On the Design and Evaluation of School Programs*. 2nd ed. New York: MacMillan.

Abstract: The author first discusses educational curriculum as it exists today - its orientation, the social forces that influence curriculum and the traditional aims and objectives of curriculum planning. He goes on, however, to describe the art of teaching, and the assumptions, principles and procedures used in educational connoisseurship and criticism. He describes what critics do and applies the concepts borrowed from fine arts.

Keywords: **Art, Education**

Eisner, E.W. 1985. *The Role of Discipline-Based Art Education in America's Schools*. Los Angeles: The Getty Center for Education in the Arts.

Abstract: The function of art in the schools is discussed. The discipline-based art education concept is defined as comprising four major components: production, criticism, history and culture, and aesthetics. In the final pages of this booklet, the role of evaluation of discipline-based art education is discussed.

Keywords: **Art, Education**

Cousins, J.B. and Leithwood, K.A. 1986. Current Empirical Research on Evaluation Utilization. *Review of Educational Research*. 56(3): 331-364.

Abstract: This paper reviews empirical research conducted during the past 15 years on the utilization of educational evaluation results. A conceptual framework is developed that lists 12 factors that influence use: six of these factors are associated with characteristics of evaluation implementation and six with characteristics of decision or policy making. The study concludes with a discussion of six general elements that seem to influence evaluation utilization.

Keywords: **Education, Research**

Cronbach, L.J. 1982. *Designing Evaluations of Educational and Social Programs*. San Francisco: Jossey-Bass.

Keywords: **Education, Recreation**

Crossley, J.C. and Hudson, S.D. 1983. Assessing the Effectiveness of Employee Recreation/Fitness Programs: A Practical Approach. *JOPERD*. October: 50-51.

Abstract: This article addressed manager's need have to analyze and therefore justify their employee fitness programs. This practical and empirical approach gathers data to construct an employee profile, then measures employee perceptions of the effectiveness of the program. A benefit scale is used to rate aspects of the program. The article includes a discussion of implementation of the approach and analysis of results.

Keywords: **Recreation, Management**

Dailey, C.A. and Madsen, A.M. 1983. *How to Evaluate People in Business*. New York: McGraw-Hill, Inc.

Abstract: This books describes how to identify evidence of superior personnel performance. Chapters include: improving judgement of others, training and performance review techniques, hiring and promotion politics, and work accountability. The what and why of effective personnel evaluation is discussed in the final chapter.

Keywords: **Management**

Daniels, A.C. 1985. Performance Management: The Behavioral Approach to Productivity Improvement. *National Productivity Review*. Summer: 225-236.

Abstract: This article looks both at the art and science of performance management - What should employees be doing and how can they be motivated to do it? The author discusses the elements of performance management and includes a brief comment about the importance of feedback as a means of evaluating employee performance.

Keywords: **Management**

Dawes, R.M. 1972. *Fundamentals of Attitude Measurement*. New York: John Wiley & Sons.

Keywords: **Communication**

Derr, R.E. 1974. Interpretation for Recreation. *Trends*. April/May/June: 13-18.

Abstract: This article examines four concepts that affect interpretation in recreation areas: Attraction to the site precludes the need to sell the area with interpretive advertising; Mass visitation affords the managing agency the opportunity to convey the interpretive message to several individuals on a reoccurring basis; The comfort and familiarity experienced by the visitor on-site opens interpretive channels not normally feasible in strange environments; and Acclimatization takes precedence in an area where initial inspiration may be the key to effective interpretation.

Keywords: **Interpretation, Management, Recreation**

Godbey, G. 1978. *Recreation, Park and Leisure Services: Foundations, Organization, Administration.* Philadelphia: W.B. Saunders.

Abstract: Written as a text to serve the teaching of recreation and park administration, this book contains a chapter on evaluation based on the concepts of need.

Keywords: **Recreation, Management**

Goodale, T.L. and Witt, P.A., eds. 1980. *Recreation and Leisure: Issues In An Era of Change.* State College, PA: Venture Publishing.

Abstract: Included in this book are several essays on qualitative research and measurement of program success using qualitative methods.

Keywords: **Recreation, Management**

Gourd, A. 1988. Interpretation and Communication. In *Interpretation and Tourism - Ottawa/88.* Proceedings of A National Conference on Heritage Interpretation. pp 19-22.

Abstract: This article defines interpretation and then discusses interpretation as a means of communication; a means of stimulating, inspiring, and provoking visitors.

Keywords: **Communication, Interpretation**

Griest, D.L. and Mullins, G.W. 1984. Managing Conflict: A Process for Increasing Use of Interpretation as a Management Tool. *Journal of Interpretation.* 9(1): 19-32.

Keywords: **Interpretation, Management**

Griggs, S.A. 1981. Formative Evaluation of Exhibits at the British Museum (Natural History). *Curator.* 24(3): 189-202.

Abstract: The methodology of formative exhibit evaluation is discussed and compared to that of summative exhibit evaluation in museum settings.

Keywords: **Museums, Research**

Griggs, S.A. 1984. Evaluating Exhibitions. In J. Thompson, ed. *Manual of Curatorship: A Guide to Museum Practice.* London: Butterworth's.

Abstract: The author discusses the general processes involved in an evaluation, including front-end analysis (evaluating plans, ideas, and concepts for the proposed exhibit, formative evaluation (testing mock-up exhibit elements), and summative evaluation (assessing results of installed exhibit). Different assessment techniques are described such as structured and unstructured interviews, in-depth interviews, and formal market research.

Keywords: **Museums, Research - Evaluation**

Guadagnolo, F. 1985. The Importance-Performance Analysis: An Evaluation and Marketing Tool. *Journal of Park and Recreation Administration.* 3(2): 13-22.

Abstract: This paper examines the applicability of Importance-Performance Analysis in the evaluation and marketing of recreation services. The Importance-Performance Analysis (I-P) offers features that allow management to develop action strategies without being versed in complicated statistical analysis. Displaying the data on a four-quadrant action grid visually provides information for upgrading or adjusting services.

Keywords: **Management, Recreation, Research - Evaluation**

Guttentag, M. and Struening, E., eds. 1975. *Handbook of Evaluation Research.* London: Sage Publications.

Keywords: **Research**

Fee, D. 1987. Feedback and the Focus Group. *Executive Update*. June: 27-31.

Abstract: If organizations live or die according to how well they respond to their environments, then an essential staple of a healthy association is feedback. This article discusses the types of feedback mechanisms (specifically focus groups) and how audience research influences organizational decision making.

Keywords: **Management**

Feldman, R.L. 1977. Effectiveness of Audio-Visual Media for Interpretation to Recreating Motorists. *Journal of Interpretation*. 3(1): 14-19.

Abstract: The motorized vehicle is an important part of today's outdoor recreation experience. Recreationists who are driving for pleasure are a "captive audience", with high potential for learning about their natural and cultural environments. This study compares two media designed for these recreationists—the tape cassette and the brochure—in terms of their effectiveness in (1) educating recreationists about their environment and (2) including recreationists to walk on suggested trails. It was found that either medium can be superior, depending on the measure of effectiveness and the characteristics of the population.

Keywords: **Interpretation, Recreation, Education**

Field, D.R. and Wagar, A.J. 1973. Visitor Groups and Interpretation in Parks and Other Outdoor Leisure Settings. *Journal of Environmental Education*. 5(1): 12-17.

Abstract: Following a short discussion about the importance of audience information, the authors discuss several items that can hamper the effectiveness of interpretation. They then discuss five principles for effective interpretation.

Keywords: **Interpretation, Recreation**

Foley, J.P. 1980. *Policy, Planning and Evaluation of Interpretive Programs*. Ottawa: Canadian Wildlife Service.

Keywords: **Interpretation, Management**

Foley, J.P. and Webster, R. 1981. *National Evaluation Strategy*. Interpretation Program Paper prepared for the Canadian Wildlife Service.

Abstract: This paper describes the overall strategy, the process, and framework used by the Canadian Wildlife Service to evaluate its interpretation program. This strategy includes planning for an evaluation, steps included in the evaluation process, and an outline for a program review.

Keywords: **Interpretation, Research - Evaluation**

Furr, H.L. 1986. The Importance-Performance Analysis of Customer Satisfaction. Presented at the Resort and Commercial Recreation Association Leisure Research Symposium, January 14, 1986.

Abstract: In this paper, the Saliency Measurement technique or Importance-Performance Analysis is compared to three other customer satisfaction measurement approaches. The procedure of importance-performance analysis is discussed as a method to render crucial information about participant behavior in leisure activities. Market segmentation and decision strategies using the Importance-Performance analysis are also discussed.

Keywords: **Recreation, Tourism, Management, Marketing**

Godbey, G., Guadagnolo, F. and Derr, J. no date. Evaluating Neighborhood Parks Using a Marketing Technique: Does an Ideal Park Exist? Unpublished paper completed by the Northeastern Forest Experiment Station, USFS.

Abstract: Focus groups, a questionnaire, and Importance-Performance Analysis were all used in this study as evaluation techniques to determine the importance of various attributes or features considered important in neighborhood parks.

Keywords: **Research - Evaluation, Recreation, Marketing**

Hicks, E.C. ed. 1986. An Artful Science: A Conversation About Exhibit Evaluation. *Museum News*. 64(3): 32-39.

Abstract: This article documents conversations about exhibit evaluation with Mind Borun, Roger Miles, chandler Screven, Harris Shettel, and Alan Friedman.

Keywords: **Museums**

Holmaas, J. and Schiffman, S. 1980. Effective Exhibits: What to Plan-And How to Plan. In *AIN 80 Program Papers: Integrating Cultural and Natural Interpretation*. pp 137-144. ED 197940.

Abstract: The author defines and differentiates museums in terms of the location of their basic resources and then goes on to describe the process of exhibit planning and its evaluation.

Keywords: **Interpretation, Management, Museums**

Howell, R.L. 1987. Measure Your Effectiveness—Evaluate! In *Tourism and Recreation: A Growing Partnership* Symposium Proceedings: 24-29. Sagamore Publishing.

Abstract: Evaluation as an integral part of the planning process is discussed initially in this article, followed by a description of the two general types of evaluation - formal and informal. Several examples help explain the differentiation. A discussion of several specific evaluation studies summarizes the need for effectiveness measurement.

Keywords: **Research, Management, Recreation, Tourism**

Hunt, J.D. 1978. Interpretation: A Crucial Factor in Agency Image. *Journal of Interpretation*. 4(1): 21-23.

Abstract: This paper looks at the role of both audiences and interpretation in image formation. The term image is defined and the relationship between image and interpretation is explored.

Keywords: **Interpretation, Management**

Irving, R.L. 1986. *Preferences of State and National Park Visitors For Interpretive Methods: Implications for Program Attendance*. Humboldt State University: Unpublished thesis.

Abstract: This paper is essentially a literature review and bibliography created to assess the preferences of visitors for interpretative methods, specifically campfire programs. An excellent bibliography is provided.

Keywords: **Interpretation, Management, Bibliography**

Jacob E. 1988. Clarifying Qualitative Research: A Focus on Traditions. *Educational Research*. 17(7): 16-24.

Abstract: This paper argues that the major source of confusion about the nature of qualitative research arises from the fact that qualitative research (as alternative to positivism) is discussed as if it is one approach. This paper describes briefly and compares six traditions from the disciplines of psychology, anthropology, and sociology. These traditions are human ethology, ecological psychology, holistic ethnography, cognitive anthropology, ethnography of communication, and symbolic interactionism. The author concludes the argument by stating that we may increase our understanding of qualitative research by focusing our discussions at the level of traditions.

Keywords: **Education, Research**

Ham, S.H. 1983. Cognitive Psychology and Interpretation: Synthesis and Application. *Journal of Interpretation*. 8(1): 11-27.

Abstract: Interpretive researchers and practitioners may gain new insights from research on human cognition. The results of several experiments from cognitive psychology are discussed in relation to interpretation for non-captive audiences. Five propositions for future work are offered. Potential applications of cognitive psychology to designing interpretive presentations are discussed.

Keywords: **Interpretation, Communications**

Hammitt, W.E. 1978. A Visual Preference Approach to Measuring Interpretive Effectiveness. *Journal of Interpretation*. 3(2): 33-37.

Keywords: **Interpretation**

Hayward, D.G. and Larkin, J.W. 1983. Evaluating Visitor Experiences and Exhibit Effectiveness at Old Sturbridge Village. *Museum Studies Journal*. 1(2): 42-51.

Abstract: This study compares visitor perceptions of a renovated historical house and an outdoor museum. Evaluation was divided into five major areas: (1) visitor preferences; (2) ratings of exhibit quality; (3) visitor reports; (4) learning; and (5) sense of community. This study shows the importance of using several criteria when evaluating exhibitions.

Keywords: **Museums, Interpretation**

Hayward, J., and Marston, A. 1982. Pre-Test of Exhibit Panels. Research Notes for Sugarlands Visitor Center, Great Smoky Mountains National Park. Amherst, MA: Environment and Behavior Research Center, University of Massachusetts.

Abstract: This report summarizes a pre-test of four exhibit panels for a new exhibit at the Sugarlands Visitor Center. This pre-test was intended to provide advance information about visitor reactions to the exhibit panels, to help inform some of the final production decisions. Included in this study is a discussion of measures of exhibit effectiveness: enjoyment, learning, attitude change, and behavior change.

Keywords: **Interpretation, Museums**

Hendee, J. 1972. No, to Attitudes to Evaluate Environmental Education. Guest Editorial in *Journal of Environmental Education*. 3(3): 65.

Abstract: The author debates the preoccupation that environmental educators have with using attitude change as a criteria for evaluating environmental education effectiveness. His arguments are supported by his suggestions to renew a focus on creative concepts and objective information. He suggests that evaluation should concentrate on measuring related information and behavioral variables.

Keywords: **Communication, Education, Interpretation**

Herbert, M.E. 1981. The Water Pushes It and the Wheel Turns It. *Curator*. 24(1): 5-18.

Abstract: In an effort to better understand the impact of the Nova Scotia Museum exhibits on visitors a project was devised to systematically observe school children as they interacted with museum exhibits. A tape-recorder was used to record comments by these students as they interacted with the exhibits.

Keywords: **Museums, Research**

Herman, J.L. ed. 1987. *Program Evaluation Kit, 2nd Edition*. Newbury Park: Sage Publications.

Abstract: This kit contains nine books written to guide and assist practitioners in planning and managing evaluations. It offers detailed advice, clear definitions, and useful procedures. The volumes contain information about how to focus, design, and implement evaluation techniques, how to utilize qualitative methods, and how to measure performance and analyze data.

Keywords: **Management**

Krueger, R.A. 1988. *Focus Groups: A Practical Guide for Applied Research*. Newbury Park, CA: Sage Publications.

Abstract: This book was developed after an extensive literature search; observation of both masters and novices as they engage in focus groups; and experiences in classes, workshops, and seminars designed to help nonresearchers develop the requisite skills for moderating focus groups. The book is developed around three themes: 1) an overview of focus groups; 2) strategies for actually conducting focus groups interviews; and 3) discussion of several issues that are often of concern to both researchers and users.

Keywords: **Management**

Kuehner, D. and Kuehner, B. 1976. W.I.A. Position Paper on the Role of Interpretation in the Organization. *The Interpreter*. 8(1): 12–14.

Abstract: This paper is a summarization of ideas presented at the 1976 Spring Conference on Interpretation. The article discusses the ten major roles of interpretation as discussed by the participants of this conference.

Keywords: **Interpretation, Management**

Leiderman, S. and Lah, D. 1985. *The California Conservation Corps: Assessing the Dollar Value of its Work*. Philadelphia, PA: Public/Private Ventures.

Abstract: This study reviews various methods for valuing the work of the California Conservation Corps (CCC). It is a part of an overall evaluation of the CCC Program. The report reviews seven methods for calculating work value within the context of conceptual and operational concerns.

Keywords: **Management**

Levin, H.M. 1981. Cost Analysis. In Nick Smith, ed., *Techniques for Evaluation*. Beverly Hills: Sage Pub.

Abstract: The purpose of this book chapter is to provide a casebook of cost effectiveness techniques and studies that might be utilized by a fairly wide audience of administrators and evaluators in order to gain a better understanding of how cost-effectiveness analysis might be used to improve decision making.

Keywords: **Research, Marketing**

Lewis, W.J. 1980. *Interpreting for Park Visitors*. Eastern Acorn Press.

Abstract: Written for the new seasonal park interpreter, chapters in this book help define interpretation and serve to explain the principles and the applications of interpretation.

Keywords: **Interpretation, Communication**

Lewis, R.F. 1982. *Media Evaluation Manual*. Halifax, Nova Scotia: Parks Canada.

Abstract: This manual provides a framework to evaluate interpretive media with techniques which can be completed by an interpreter. The manual is divided into nine booklets: an introduction; seven booklets each dealing with the evaluation of a separate medium (pamphlets, signs, AV presentations, exhibits, visitor centers, low power radio, self-guided trails); and test writing guidelines.

Keywords: **Interpretation, Research**

Lewis, K.L. 1980. Evaluating by the Use of Instructional Objectives. In *AIN 80 Program Papers: Integrating Cultural and Natural Interpretation*. ED 197940. pp 96–100.

Abstract: Evaluating interpretation by the use of instructional objectives is a systems approach. It requires the ability to integrate organizational goals, interpreter personal goals and objectives, visitor objectives, and environmental parameters into a new and coherent hierarchy of objectives which interpreters can use as standards against which to measure their effectiveness. This paper discusses the importance of training and the factors limiting adoption of instructional objectives as a viable evaluation technique for interpretation.

Keywords: **Interpretation, Education**

Jarrett, J.E. 1986. Learning From Developmental Testing of Exhibits. *Curator*. 29(4): 295-306.

Abstract: A good example is provided of the use of formative evaluation during the developmental phase of a permanent exhibition's planning and development at the British Museum of Natural History. The author stresses the critical role of visitor feedback in the design of effective exhibits. Evaluation focused on the visitor's ability to comprehend and paraphrase key exhibit concepts as a basis for refining this content. Interviews were used to study visitor preconceptions and understanding.

Keywords: **Museums, Research**

Kerlinger, F.N. 1986. *Foundations of Behavioral Research*. New York: Holt, Rinehart, and Winston.

Abstract: This book covers the general qualities of scientific behavioral research. Parts 1 through 5 of the book provide a conceptual and mathematical foundation for behavioral research and the remainder of the book uses these foundations to attack problems of design, measurement, and observation and data collections.

Keywords: **Research**

Kibler, R.J., Cegala, D.J., Miles, D.T. and Barker, L.L. 1974. *Objectives for Instruction and Evaluation*. Boston: Allyn & Bacon.

Abstract: The authors begin by describing the various purposes of evaluation. Subsequent chapters contain discussion of norm referenced vs. criterion referenced evaluation. Concluding chapters discuss the steps for implementing criterion referenced evaluation systems. Appendices supply more detail about instructional objectives; rationale for the use of evaluation, various types of evaluation, and related taxonomies.

Keywords: **Education**

Kirwin, J.A. 1983. An Analysis of the Effectiveness of Interpretive Signing on the Accuracy of Visitor Perceptions in an Impressionistic Style Exhibit. *Texas A&M University: Unpublished thesis.*

Abstract: This study examines the usefulness of an interpretive sign on increasing visitor knowledge of an impressionistic art style exhibit. Specifically, the study answers whether or not a structured introduction to an unstructured exhibit enhances visitor knowledge about an exhibit. Study also contains discussion of relevant socioeconomic factors.

Keywords: **Interpretation, Research**

Kool, R. 1985. Behavioral or Cognitive Effectiveness: Which Will It Be? In *Musee et education: Modeles didactiques d'utilization des musees*. Montreal: Universite du Quebec, Societe des Musees Quebecois.

Abstract: The author reports and discusses the results of an evaluation of a large natural history exhibition. Results indicate that exhibits having more "reality" (large open dioramas, sounds, smells, etc.) are best in terms of behavioral measures of effectiveness but less effective in a cognitive sense. Data is presented which indicate an inverse relationship between behavioral and cognitive effectiveness. The data also indicate that those exhibits that "get their ideas across quickly" are more effective than exhibits from which it takes longer to tease out the important information.

Keywords: **Museums, Research**

Kraus, R. and Allen, L. 1987. *Research and Evaluation in Recreation, Parks, and Leisure Studies*. Columbus, OH: Publishing Horizons.

Abstract: This text is designed to focus directly on recreation and leisure, and research and evaluation as closely integrated concepts in the process of scientific inquiry. Included is a wealth of basic information about the research process and the scientific method as well as detailed guidelines for conducting research and evaluation studies. The premise here is that evaluation is a form of research and that it requires a sound conceptual basis and precise data-gathering and analytical techniques to be effective. The book is divided into three sections: an introduction and definition of the processes involved; a discussion about design and implementation; and a series of specialized aspects of research and evaluation.

Keywords: **Recreation, Management, Research**

Machlis, G.E. ed. 1987. *Interpretive Views*. Washington, D.C.: National Parks and Conservation Association.

Abstract: This work is an edited collection of essays. Authors from within the parks, from the national office, from universities, from concessioners, and others discuss their theories about the state-of-interpretation. The book concludes with a reflective look at policy implications.

Keywords: **Interpretation, Management, Bibliography**

Mackintosh, B. 1986. *Interpretation in the NPS: A Historical Perspective*. Washington, D.C.: National Park Service.

Abstract: This historical perspective looks at the origins and history of interpretation from before the National Park Service to the challenges of the 1980's. This work also describes relatively recent directions in interpretation in both the Park Service and in other agencies. A great number of quotes, examples, organizational charts, and pictures help illustrate the tremendous scope and many dimensions of interpretation.

Keywords: **Interpretation**

Madaus, G.F., Scriven, M. and Stufflebeam, D.L. 1983. *Evaluation Models: Viewpoints on Educational and Human Services Evaluation*. Boston: Kluwer-Nijhoff.

Abstract: Stufflebeam's Improvement-Oriented Evaluation or CIPP model is discussed in this text along with other approaches to educational evaluation.

Keywords: **Education, Research**

Mahaffy, B.D. 1970. Effectiveness and Preference for Selected Interpretive Media. *Journal of Environmental Education*. 1(4): 125-128.

Abstract: The author begins this article by discussing the purposes of evaluation. He continues by discussing an empirical study done which compared the effectiveness of three media types at a State Park in Texas. He states that the principle of acquiring a personal perspective appears to be the key in developing appreciation, understanding, and stimulation in an environmental education experience.

Keywords: **Interpretation**

Marsh, J.S. 1985. Heritage Interpretation Evaluation: Needs and Methods. In *Proceedings of First World Congress on Heritage Preservation and Interpretation*. Edmonton: Heritage Interpretation International.

Abstract: This paper introduces the subject of heritage interpretation evaluation. The author defines the term evaluation and states clearly eight reasons for evaluation. This paper draws primarily on existing literature and covers reasons for, approaches to, and methods for evaluating.

Keywords: **Interpretation**

Marsh, J.S. ed. 1986. Natural and Cultural Heritage Interpretation Evaluation. In *Proceedings of a Conference sponsored by the Ontario Section of Interpretation Canada and the Environmental and Resource Studies Program of Trent University*. Ottawa, Canada: Interpretation Canada.

Abstract: Each of the essays in this proceedings address the need for and methods for evaluating public interpretation services based on the premise that the need for public justification and improvement of natural and cultural heritage interpretation has never been greater.

Keywords: **Interpretation, Bibliography**

Lewis, W.J. 1989. Some Thoughts on Critiquing. *Journal of Interpretation*. 13(1): 19-20.

Abstract: The author discusses the need for critics to be specific and constructive when critiquing interpretative activities.

Keywords: **Interpretation, Art**

Lewis, W.J. 1975. *The Fine Art of Interpretive Critiquing*. Washington, D.C.: National Park Service, Division of Interpretation.

Abstract: This series of four video tapes uses excerpts from actual interpretive activities at Independence National Park and Yellowstone National Park to illustrate critiquing methods used by experts.

Keywords: **Interpretation, Art**

Littlejohn, S.W. 1978. *Theories of Human Communication*. Columbus: Charles E. Merril.

Abstract: The author defines and discusses the nature of communication theory. Specifically, the chapter on Information Theory discusses sender/receiver models of communications. A section on Contexts of Communication discuss the dynamics of interpersonal and group communication in various human organization scenarios.

Keywords: **Communications**

Loomis, R.J. 1987. *Museum Visitor Evaluation: New Tool for Management*. Vol. 3. Nashville, TN: American Association for State and Local History.

Abstract: This is a textbook on museum visitor evaluation. Much of the book focuses on the museum visitor, but the book also aims to provide useful visitor information to a number of different people, including directors and other administrators, educators, exhibit designers, special events coordinators, public relations personnel and so forth. The book chapters address: (1) some of the best ways to record and report visits or attendance, (2) how to identify the different types of visitors, (3) how to determine whether or not specific exhibits are working as planned, and (4) whether or not the intended educational program is reaching the intended audience.

Keywords: **Museums, Interpretation**

Loughrey, A. 1983. *Evaluation of Interpretation Programs of Parks Canada and the Canadian Wildlife Service*. Ottawa: Department of Environment.

Keywords: **Interpretation**

Lundegren, H.M. and Farrell, P. 1985. *Evaluation for Leisure Service Managers: A Dynamic Approach*. Saunders College Publishing.

Abstract: A textbook approach to evaluation, this book defines evaluation and describes various evaluative approaches, evaluation designs and models, and evaluation plans.

Keywords: **Recreation, Management**

Lydecker, T.H. 1986. Focus Group Dynamics. *Association Management*. March.

Abstract: Focus groups are discussed in this article as a rich source of consumer opinion. The focus group concept is discussed as a qualitative and valuable tool for evaluating products and services.

Keywords: **Management**

Machlis, G.E. and Field, D.R. 1974. Interpreting Parks for Kids—Making it Real. *Trends*. April/May/June: 19-25.

Abstract: The purpose of this paper is to aid in connecting interpretive programs with children. The authors discuss interpretation as a communications process, and follow up by describing the developmental phases of childhood. In the concluding section, the authors describe three approaches to interpretation that are appropriate to children.

Keywords: **Interpretation, Communication**

McLaughlin, M.W. and Pfeifer, R.S. 1988. *Teacher Evaluation: Improvement, Accountability, and Effective Learning*. New York: Teachers College.

Abstract: Evaluation of teachers' performance rests at the heart of general concerns about the quality of teaching and instruction available in today's schools. Yet disagreements with the form and process of most teacher evaluation strategies make performance assessment difficult. This work discusses the problems associated with teacher evaluation, procedures for enabling teacher evaluation, and suggests processes and procedures aimed at improving teacher performance. Four school district case studies are used to illustrate the various evaluation systems.

Keywords: **Education, Research**

McManus, P.M. 1986. Reviewing the Reviewers: Toward a Critical Language for Didactic Science Exhibitions. *International Journal of Museum Management and Curatorship*. (5): 231–226.

Abstract: The focus of this article is on the educational and communicative effectiveness of two didactic science exhibitions in London. Four reviews of these exhibits are discussed by the author and criticized for not providing the feedback needed for future planning. The author suggests a critical analysis procedure inforporating descriptive, interpretive, and normative evaluation techniques. Visitor interation is the focus of attention.

Keywords: **Art, Museums**

McMillan, J.H. and Schumacher, S. 1989. *Research in Education: A Conceptual Introduction*. Glenview, IL: Scott, Foresman and Company.

Abstract: This book presents a comprehensive and accurate, yet relatively nontechnical, introduction to the principles, concepts, and methods currently used in educational research. Part one discusses the fundamental principles of education research, part two covers quantitative research designs and methods, and part three describes qualitative research designs and methods. The final two parts of the text present evaluation research designs and methods and a discussion of the communication of educational research.

Keywords: **Education, Research**

Mendell, R. ed. 1984. *Leisure Today: Selected Readings*. Volume III. Reston, VA: AALR and AAPHERD.

Abstract: This series of five evaluation papers addresses the various purposes, approaches, models, methods, and problems associated with evaluation of leisure programs.

Keywords: **Recreation, Management**

Merriman, T. 1980. Using the Arts in Interpretation. In *AIN 80 Program Papers: Integrating Cultural and Natural Interpretation*. ED 197940. pp 42–46.

Abstract: According to Freeman Tilden, the chief aim of Interpretation is not instruction but rather, provocation. This paper explores when and how to employ the arts in interpretation.

Keywords: **Interpretation, Art**

More, M.E. 1983. *A Guide To Effective Interpretation: What the Forest Service Can Learn from Marketing Research*. Washington, D.C.: U.S. Forest Service.

Abstract: This guide looks at a variety of ideas, techniques, and concepts from the broad field of marketing that could be useful to interpretative services. The guide is approached from the standpoint that visitors are consumers and that marketing strategies can be selected to improve services and to increase public understanding.

Keywords: **Interpretation, Marketing**

Martilla, J.A. and James, J.C. 1977. Importance-Performance Analysis. *Journal of Marketing*. 41(1): 77-79.

Abstract: Importance-performance analysis offers a number of advantages for evaluating consumer acceptance of a program. This articles discusses this low-cost, easily-understood technique that can yield important insights into what direction a firm should devote more attention and identify areas that my be consuming too many resources. The author describes how an importance performance grid can facilitate the usefulness of decision making.

Keywords: **Management, Marketing, Research**

Martin, B.H. and Taylor, D.T. 1981. *Informing Backcountry Visitors: A Catalog of Techniques*. Gorham, NH: Appalachian Mountain Club.

Abstract: This catalog is a comprehensive set of information and education techniques used to communicate with people who visit backcountry areas for recreation. Eighteen techniques, including both personal and non-personal approaches, are described thoroughly. Descriptions include summary of effectiveness, popularity, cost, advantages and disadvantages. Production details, training, maintenance requirements, impact on visitors and tips for the most successful use of each technique are also described.

Keywords: **Recreation, Education, Interpretation**

Maynard, M.K., Mullins, G.W. and Heywood, J.L. no date. Unobtrusive Observation: A Method for Studying Your Visitor. Paper compiled for the Ohio Department of Natural Resources. Columbus, OH: Ohio State University.

Abstract: Unobtrusive visitor observation is one tool which holds promise for yielding systematic descriptions of visitor characteristics and behaviors, while being fairly straightforward and relatively inexpensive to apply. A review of literature is included in this unobtrusive observation study of visitors to four nature preserves.

Keywords: **Research - Evaluation**

McDonough, M.H., Field, D.R. and Gramman, J. no date. Application of Social Science Research to Interpretation: The Northwest Experience. Unpublished report completed for the National Park Service, Cooperative Park Studies Unit, University of Washington, Seattle, Washington.

Abstract: The purpose of this paper is to describe the role social science research can and has played in the design of interpretive programs for diverse publics in the Northwest, and to speculate on some social science research needs in the field of interpretation.

Keywords: **Interpretation, Research**

McDonough, M.H. 1986. Communication Channels in Recreation Research. In *A Literature Review*. Washington, D.C.: Presidents Commission on American Outdoors.

Abstract: This particular chapter discusses communication as a critical tool in recreation resource planning and management. Issues and problems are examined, case studies are described, and a bibliography is provided.

Keywords: **Communication, Interpretation, Recreation**

McKendry, J. ed. 1988. *Interpretation: Key to the Park Experience*. Washington, D.C.: National Parks and Conservation Association.

Abstract: Volume four of a nine volume set, this book contains four sections. The first focuses on the value of interpretation. The second focuses on the expanding responsibilities of interpreters and implications for the role of interpretation in the National Park Service. Part three examines the role of interpretation's counterparts—cooperating associations and concessions. Part four provides final conclusions and recommendations.

Keywords: **Interpretation, Recreation**

National Park Service. 1975. *A Personal Training Program For Interpreters*. Arlington, VA: National Recreation and Park Association.

Abstract: Designed as a training package for seasonal and permanent interpretive rangers, this syllabus and accompanying videotape set describe the components of interpretation and provide questioning, structuring, and responding strategies for use by interpreters. Also included is a self-evaluation checklist.

Keywords: **Interpretation, Education**

National Recreation and Parks Association and National Park Service. 1975. *Personnel Training Program for Interpreters*. Arlington, VA: National Recreation and Park Association.

Abstract: This somewhat dated document discusses the National Park Service interpretation training program. This manual reviews the components of interpretation (the park, the visitor, and the interpreter), and describes a series of strategies (questioning, structuring, and responding) that can be applied to interpretive training.

Keywords: **Interpretation, Education, Management**

Neulinger, J. 1981. *To Leisure: An Introduction*. Boston: Allyn and Bacon, Inc.

Abstract: Included in this text are related sections on evaluation research and psychological research as applied to leisure science.

Keywords: **Recreation, Communications**

Nevo, D. 1983. The Conceptualization of Educational Evaluation: An Analytical Review of the Literature. *Review of Educational Research*. 53(1): 117-128.

Abstract: This article reviews evaluation literature through an analytical framework comprised of ten dimensions: 1) the definition of evaluation, 2) its functions, 3) the objects of evaluation, 4) the variables that should be investigated, 5) criteria that should be used, 6) the audiences that should be served, 7) the process of doing an evaluation, 8) its methods of inquiry, 9) the characteristics of the evaluator, and 10) the standards that should be used to judge the worth and merit of an evaluation.

Keywords: **Education**

Nowak, P.F. 1984. Direct Evaluation: A Management Tool for Program Justification, Evolution, and Modification. *Journal of Environmental Education*. 15(4): 27-31.

Abstract: The author defines direct evaluation and describes how it can be used in place of other more scientific means of evaluating. Program justification, program evolution, and program modification are all described as ways in which program success can be viewed.

Keywords: **Management**

Oestreicher, L. 1986. "Barking Dogs" and the Visitor: Museum Evaluation and the Search for Effective Exhibits. *Journal of the Washington Academy of Sciences*. 76(2): 133-138.

Abstract: An interview with Harris Shettel offers a glimpse of what he believes museum evaluation is and what it should be. Shettel talks of what led him to recognize the need for museum evaluation and the need for consistent criteria for devining the "good" exhibit. Three categories for evaluating exhibits (aesthetic, intrinsically interesting, and didactic/educational) are explained, as are three measures of didactic effectiveness (attracting, holding, and communicating with the audience). Shettel describes what he believes to the the ideal museum evaluation project and discusses the obstacles which seem to hinder the use of formal evaluation.

Keywords: **Museums**

Moses, Epstein and Wiseman, Inc. 1977. *Assessing the Impact of Interpretive Programs*. Paper prepared for the Division of Interpretation and Visitor Services. Washington, DC: National Park Service.

Abstract: The authors of this study examines different ways interpreters, interpretive program supervisors, and managers can assess the impact of interpretation on visitors. The document is designed to illuminate key issues in the measurement of interpretive program impact, and to suggest a mechanism for resolving these issues. The study is designed to introduce activity monitoring approaches, and by using examples, suggest how they can be applied in parks. The study considers only personal services interpretation. Eight summary recommendations are provided and a discussion of the distinction between evaluation and monitoring is provided.

Keywords: **Interpretation, Research**

Mott, W.P. Jr. 1976. An Administrator Looks at Interpretation. *The Interpreter*. 8(1): 6–7.

Abstract: The author supports the philosophy that park and recreation departments at all levels of government must accept the responsibility of interpreting to the public the delicate interrelationships that exist among our natural, cultural, historical, and recreational resources. He stresses the importance of education as a critical element of interpretation.

Keywords: **Management, Interpretation**

Mott, W.P. 1989. Interpretation—Much More Than Getting the Story Across. *Courier*. 32(2): 1.

Abstract: The author comments briefly on the changing responsibilities of interpretation for the 21st century.

Keywords: **Interpretation, Management**

Mullins, G.W. 1984. The Changing Role of the Interpreter. *Journal of Environmental Education*. 15(4): 1984.

Abstract: Interpretation, as a facet of the environmental learning field, is discussed in terms of the issues it might face in the 21st century. Issues of definition, role clarification, need for evaluation, direction for change, quality of interpreter education, and interpretive research are addressed.

Keywords: **Interpretation, Management**

Mullins, G.W. and Schultz-Spetich, B.L. 1987. Importance-Performance Analysis. *Visitor Behavior*. 2(3): 3, 12.

Abstract: An introduction is provided to describe the importance-performance technique of evaluation. Then, the application of this type of analysis is described as it relates to visitors of a park system in Ohio.

Keywords: **Research, Recreation**

Munley, M.E. 1986. Asking the Right Questions: Evaluation and the Museum Mission. *Museum News*. 64(3): 18–23.

Keywords: **Museums**

National Park Service - Park and Recreation Technical Service Division, Western Regional Office. 1983. *Marketing Parks and Recreation*. State College, PA: Venture Publishing, Inc.

Abstract: This book is written for public and non-profit recreation and park agency managers who are interested in increasing user satisfaction, expanding clientele, increasing revenues, saving money, and building a constituency. Included is a section on the evaluation of client-oriented marketing.

Keywords: **Marketing, Recreation**

Putney, A.D., and Wagar, J.A. 1973. Objectives and Evaluation in Interpretive Planning. *Journal of Environmental Education*. 5(1): 43–44.

Abstract: The effectiveness of interpretation has seldom been evaluated. For the most part interpreters rely on personal enthusiasm, communication skills, and the opinions and experience of other interpreters as a measurement of their skill. The authors state that the absence of clearly articulated objectives is one problem in evaluating interpretation. The authors propose a strategy for clarifying and defining objectives to facilitate easier evaluation.

Keywords: **Interpretation**

Reid, W.J. and Audrey, D.S. 1978. Obtaining the Consumer's Point of View. In William C. Sze and June G. Hopps, Eds. *Evaluation and Accountability in Human Service Programs*. Cambridge: Cheakham Pub. Co.

Keywords: **Management/Marketing, Research – Social Science**

Rigler, E. 1987. Focus on Focus Groups. *ABA Banking Journal*. March: 98–100.

Abstract: Focus groups are discussed as a simple yet useful tool for gathering information and making decisions.

Keywords: **Management**

Risk, P.H. 1980. *Final Narrative Report: Evaluation of Interpretive Services in Thirty Selected Sites in the North Atlantic Region*. Washington, D.C.: National Park Service.

Abstract: This is a final report of a study conducted under a contractual agreement between the NPS and the author to determine the quality of personal and non-personal interpretation in the North Atlantic Region. Following a discussion of the various aspects of interpretation, this report ends with 16 suggested recommendations. Among these recommendations are several for enhancing evaluation techniques.

Keywords: **Interpretation, Research**

Risk, P.H. no date. Assessment and Enrichment of Environmental Interpretive Services in National Park Service Areas of the Pacific Northwest. Final Narrative Report prepared for the National Park Service and Michigan State University.

Abstract: The topic of this paper is quality control of interpretive services. The emphasis however, is on those situations, conditions, and practices which contribute to less than desirable quality of interpretive programs. The main thrust of this report is toward those interpretive services which involve direct visitor–interpreter contact, i.e. personal interpretation.

Keywords: **Interpretation, Management, Research**

Ritter, J.T. and Dame, D. 1989. The Role and Responsibility of Interpretation. In *International Perspectives on Cultural Parks: Proceedings of the First World Conference*. Mesa Verde National Park, Colorado 1984. Denver, Co: National Park Service and Colorado Historical Society.

Abstract: This article elaborates the rationale behind the need for and the responsibility of interpretation. The authors discuss separately the importance of communicating with the public about the need for cultural resource protection. Dame describes three major responsibilities of National Park interpretive programs as they relate to enriched visitor experience.

Keywords: **Interpretation, Management**

Roggenbuck, J.W., Hammitt, W.E., and Berrier D.L. 1982. The Role of Interpretation in Managing for Recreational Carrying Capacity. *Journal of Interpretation*. 7(1): 7–20.

Abstract: Key components of the recreation resource carrying capacity strategy are identified. Interpreters can assist in carrying capacity management by gaining public preference information to help formulate management objectives and help visitors formulate realistic expectations about an area. Suggestions are made regarding how interpreters might best perform these tasks. Tests of the effectiveness of past interpretive efforts are reported.

Keywords: **Interpretation, Management, Recreation**

Patton, M.Q. 1980. *Qualitative Evaluation Methods*. Beverly Hills: Sage Publications.

Abstract: This book combines suggestions about methods for qualitative evaluation and suggestions about how to think about methods and evaluation. The author reviews the history of the development of evaluation research and presents both theory and practical suggestions for the application of qualitative evaluation methods.

Keywords: **Research, Education**

Peart, B. 1984. Impact of Exhibit Type on Knowledge Gain, Attitudes, and Behavior. *Curator*. 27(3): 220–237.

Abstract: Five exhibit variations ranging from abstract (one dimensional, lacking objects) to concrete (three dimensional, with objects) were studied to determine which of the five experimental types had the greatest effect on knowledge gain, attitudinal change, attracting power, holding power, and interaction.

Keywords: **Research, Museums**

Perfrement, R.L. 1980. Interpretive Management Communications. In *AIN 80 Program Papers: Integrating Cultural and Natural Interpretation*. ED 197940. pp 1–5.

Abstract: This paper describes interpretation as a facet of management, not a distinct and separate entity. It is argued that interpretation is a means to behavioral modification and control while at the same time a means to assist visitors in gaining a better understanding and appreciation of the resource. Interpretation is defended as an integrated and significant component of a total park management program.

Keywords: **Interpretation, Management, Communications**

Peterson, D. and Bitgood, S.C. 1986. The Red Mountain Museum Road Cut: And Evaluation of Visitor Behavior. Technical Report No. 86–75. Jacksonville, AL: Psychology Institute, Jacksonville State University.

Abstract: This evaluation report examines the Red Mountain Museum road cut exhibit in Alabama to determine how well it met its educational objectives. This was accomplished by studying the behavior of visitors to the museum. The evaluation procedures employed a combination of unobtrusive observation and timed visits.

Keywords: **Research, Interpretation**

Pettus, A. 1976. Environmental Education and Environmental Attitudes. *Journal of Environmental Education*. 8(1): 48–51.

Abstract: The author discusses environmental attitudes as a complex combination of social, economic, ecological and psychological factors. He cites the attitude studies of Rosenberg and Hoveland (1960) to distinguish between affective, cognitive, and behavioral responses. He also cites an Arizona Study which attempted to measure the change in basic values/attitudes of those presented with conservation ideas in environmental education.

Keywords: **Communications**

Popham, W.J. 1975. *Educational Evaluation*. Englewood Cliffs, NJ: Prentice Hall.

Abstract: This work discusses much of the early work done in educational evaluation and then identifies guidelines regarding the uses of educational objectives in evaluation. Included is a thorough discussion of the cognitive, affective, and psychomotor taxonomies.

Keywords: **Education, Research**

Screven, C.G. 1984. Educational Evaluation and Research in Museums and Public Exhibits: A Bibliography. *Curator*. 27(2): 147–165.

Abstract: This bibliography is a revision of an earlier one (1979) which was compiled in response to the rapidly growing effort to make the educational potential of exhibits more accessible and understandable to visitors. It contains two sections: Part I contains items that deal directly with museum or park/zoo environments; Part II contains selected lists of texts, research and theoretical papers originating from outside the field (psychology, communication, education, etc.).

Keywords: **Research, Bibliography, Museums**

Screven, C.G. and Gessner, K. eds. 1988. *ILVS Bibliography and Abstracts*. 2nd Edition. Milwaukee, WI: International Laboratory for Visitor Studies.

Abstract: This bibliography contains books, reviews, articles, and theses/project reports on behavioral, educational, and communication aspects of museum and exhibition planning. Most entries involve empirical research or theoretical/methodological materials that derive from or are applicable to empirical research. Systematic evaluation is one of five major content categories.

Keywords: **Research, Communications, Museums**

Shannon, C. and Weaver, W. 1949. *The Mathematical Theory of Communication*. Urbana: University of Illinois Press.

Abstract: This book contains a detailed discussion of the classic Shannon–Weaver communications model. The component parts of this model—sender, channel, noise, receiver—are described as they relate to interpersonal communication.

Keywords: **Communication**

Sharpe, G.W. and Gensler, G.L. 1979. Interpretation as a Management Tool. *Journal of Interpretation*. 3(2): 3–9.

Keywords: **Management, Interpretation**

Sharpe, G. ed. 1976. *Interpreting the Environment*. New York: John Wiley & Sons.

Abstract: This text book is designed to teach the basic principles and applications of interpretation. In the final chapters brief mention is made of educating for interpreter excellence (quality control) and research in interpretation.

Keywords: **Interpretation**

Shettel, H. 1973. Exhibits: Art Form or Educational Medium? *Museum News*. 52: 32–41.

Abstract: This article reviews six studies carried out by the author which present the philosophical and methodological principles of his evaluation work. He argues that testing exhibits formatively and summatively is the only reliable way of determining to what extent exhibits meet their educational goals. The author makes six recommendations which he believes would improve the effectiveness of educational exhibits.

Keywords: **Education, Art**

Shettel, H. 1968. An Evaluation of Existing Criteria for Judging the Quality of Science Exhibits. *Curator*. 11(2): 137–153.

Abstract: This study addresses two basic questions: "What are the characteristics of effective exhibits as reflected in the exhibit literature?" and "Is there agreement as to the extent of their implementation within a particular exhibit?". The author identifies sources that address one or more criteria of exhibit effectiveness and sorts these statements in to 15 general categories. These categories in turn produce a rating scale that can be used to judge the quality of a particular exhibit.

Keywords: **Fine Arts, Research - Evaluation**

Roggenbuck, J.W. and Propst, D.B. 1981. Evaluation of Interpretation. *Journal of Interpretation*. 6(1): 13–22.

Abstract: This paper addresses four important questions about the evaluation of interpretation: "Why evaluate?", "What to evaluate?", "When to evaluate?", and "How to evaluate?". The thrust of the paper is to demonstrate the benefits of evaluation and to provide guidelines on how to accomplish effective evaluation.

Keywords: **Interpretation, Research, Bibliography**

Roggenbuck, J.W. 1978. The Field Experiment: A Suggested Method for Interpretive Evaluation. *Journal of Interpretation*. 4(1): 9–11.

Abstract: This paper suggests that the field experiment be considered as one possible solution to the lack of evaluation of interpretive effectiveness. According to the author it would appear that the field study would solve several common evaluation problems and should serve as a practical complement to other more commonly used research designs.

Keywords: **Interpretation, Research**

Rosenfeld, S. and Terkel, A. 1982. A Naturalistic Study of Visitors at an Interpretive Mini–Zoo. *Curator*. 25(3): 187–212.

Abstract: This study investigates the question of how zoos might enhance the informal visitor learning. A combination of animal exhibits and zoo games was developed for this research. The method of evaluation was a combination of observation and tape recorded interviews consisting of sentence fill–ins, open ended questions, and picture–stimulus questions. The article discusses the application and conclusions of this naturalistic method of evaluation.

Keywords: **Recreation, Interpretation**

Rossman, R.J. 1982. Evaluate Programs by Measuring Participant Satisfactions. *Parks and Recreation*. June: 33–35.

Abstract: Leisure satisfaction evaluation is a theoretically sound and usable operational concept that can help program managers evaluate and manage program operations. By design, this concept focuses the evaluation effort on program outcomes. Using participant reported satisfaction data, this evaluation practice is based on participants' actual experience of a program.

Keywords: **Research, Recreation**

Screven, C.G. 1974. Learning and Exhibits: Instructional Design. *Museum News*. 52(5): 67–75.

Abstract: The author outlines some methods and approaches to improve the chances that exhibits will be effective and that encourage visitor attention and learning in museums. Included are the roles of instructional objectives in exhibit planning, exhibit evaluation and measurement, and various examples of applications of interactive teaching.

Keywords: **Museums, Education**

Screven, C.G. 1976. Exhibit Evaluation: A Goal–Referenced Approach. *Curator*. 18(3): 219–243.

Abstract: Based on the assumption that it is possible to communicate substantive ideas, concepts, and values to the average visitor via exhibits, the author outlines some prerequisites for achieving this within the public environment. Evaluation of exhibits which have measurable teaching outcomes (goal–referenced evaluation) is seen as a too for improving the quality of decision making.

Keywords: **Fine Arts, Research – Evaluation**

Screven, C.G. 1979. Evaluation and the Exhibit Design Process: Pretesting Audiences as a Design Tool. *Icographic*. 2(2): 5–7.

Abstract: A general discussion is provided on some of the reasons audience testing may be useful during the planning of the visual and physical design components of exhibits intended for affecting sign usage, audience behavior, learning, attitudes, thinking, etc. Several examples are provided.

Keywords: **Communication, Museums, Interpretation**

Theobald, W.F. 1979. *Evaluation of Recreation and Park Programs*. New York: John Wiley and Sons.

Abstract: This work is based on the premise that decision makers responsible for policy, planning, and coordination of leisure services need better, more definitive information to make intelligent choices. The author synthesizes the approaches to problems in designing and conducting evaluation research in the leisure-service field by (1) describing current literature, methods and evaluation, and (2) identifying weaknesses in current strategies and providing viable alternatives to program assessment. The book includes conceptual frameworks proposed for recreation program evaluation and offers practical techniques for conducting evaluation studies.

Keywords: **Recreation**

Thompson, D. no date. *How to Audit Interpretive Programs: A Training Course for Park Interpreters*. Course syllabus developed for Colonial National Historic Park. Yorktown, VA: National Park Service.

Abstract: This course is designed to train experienced, permanent interpreters in how to audit interpretive programs. The course is divided into three sections: 1) a discussion of the auditing process, guidelines for auditors, and setting objectives; 2) the formal audit; and 3) practice audits. Examples and suggestions accompany information throughout.

Keywords: **Interpretation, Management**

Tilden, F. 1977. *Interpreting Our Heritage*. Chapel Hill, NC: University of North Carolina Press.

Abstract: Considered by many to be the bible of interpretation, this work discusses the definitions, principles, and applications of interpretation. The implication for evaluation of interpretation is evident in both Part 1 and Part 2 of this book.

Keywords: **Interpretation**

Traweek, D.E. and Veverka, J.A. 1978. A Systems Approach to Interpretive Planning. *Journal of Interpretation*. 4(1): 24-28.

Abstract: This paper presents a conceptual view of interpretive systems planning by defining the systems approach as it pertains to interpretation, by discussing the value of the systems approach, and by describing how to prepare an interpretive systems plan.

Keywords: **Interpretation**

Tufuor, J.K. 1981. Changes in Students' Attitudes Towards Conservation Resulting From Outdoor Education: A Case Study. Unpublished Thesis. Vancouver, B.C.: University of British Columbia.

Abstract: This study investigates the nature of change in attitude resulting from a residential outdoor education program, and the aspects of the program which contributed to or appeared to have contributed to the change in attitudes. This report discusses the eight aspects of the program which appeared to have contributed to the positive change in student's conservation attitudes.

Keywords: **Education, Communications, Recreation**

U.S. Army Corps of Engineers. 1984. *Supplements to a Guide to Cultural and Environmental Interpretation in the U.s. Army corps of Engineers*. Vicksburg, MI: U.S. Army Engineer Waterways Experiment Station.

Abstract: This guide presents information for planning, designing, implementing, and evaluating interpretive services at Corps recreation areas.

Keywords: **Interpretation, Recreation**

van der Smissen, B. 1972. *Evaluation and Self-Study of Public Recreation and Park Agencies: A Guide with Standards and Evaluative Criteria*. Arlington, VA: National Recreation and Park Association.

Abstract: This guide serves as a self-study evaluative tool for proper, systematic assessment of total agency operations, plus guidelines for making necessary adjustments and improvements. The guide provides a thorough discussion standards and evaluative criteria. Examples are provided and the purposes of and procedures for their application are described.

Keywords: **Recreation, Research**

Shih, D. 1983. Establishing Evaluative Criteria for Statewide Travel Development. *Pennsylvania Travel Review*. 4(4): 1-3.

Abstract: This article introduces some basic criteria for evaluating the performance of travel development as a public program. The role of evaluation as part of the planning process is discussed as well as the need for and selection of evaluative criteria.

Keywords: **Tourism**

Silvy, V. and Hanna, J. 1979. *Visitor Observation for Interpretation*. Bryan, Texas: Hanna, Silvy & Assoc.

Abstract: The authors describe a system of visitor observation which can serve as a visitor assessment tool and at the same time respect government guidelines regarding limitations on visitor burden. The actual method and its application are discussed. Thorough description of the model is followed by suggestions for future application in an attempt to better understand the role and function of the interpretive process.

Keywords: **Museums, Interpretation, Recreation**

Stake, R.E. 1975. *Evaluating the Arts in Education: A Responsive Approach*. Columbus, OH: Charles E. Merrill.

Keywords: **Art**

Stanley, S.J. and Popham, W.J. eds. 1988. *Teacher Evaluation: Six Prescriptions for Success*. Association for Supervision and Curriculum Development.

Abstract: Six approaches for evaluating teacher performance are prescribed in this text. Each essay is accompanied by a practitioner's point of view which discusses the applicability of each approach.

Keywords: **Education**

Stansfield, G. 1981. *Effective Interpretive Exhibitions*. Cheltenham, England: Countryside Commission.

Abstract: This study is designed to provide guidance in planning and designing interpretive exhibitions. The author synthesizes literature from some 175 sources which have bearing on effective interpretation and communication. An extensive bibliography is included.

Keywords: **Interpretation, Communications, Bibliography**

Szwak, L.B. 1984. Visitor Analysis Pilot Project. Research Report. Washington, D.C.: National Park Service, National Capital Region.

Abstract: This pilot project conducted to test a methodology to gather reliable visitor use statistics for the Statements for Interpretation. The study used observation as the data-gathering technique to survey the characteristics of park visitors and their activities onsite. The findings, discussed in this research report reveal some interesting implications for management operations.

Keywords: **Research, Interpretation**

Taylor, G. ed. 1981. *Evaluation of Interpretation: Proceedings of a Conference at the British Museum (N.H.) London*. Wilmslow, England: Society fo the Interpretation of Britain's Heritage.

Abstract: A compilation of papers presented at the Evaluation Conference at the British Museum, this work combines discussion of evaluation, theory, and methods as they relate to interpretive programs.

Keywords: **Interpretation**

Washburn, W.E. 1985. Do Museums Want Evaluations? *Visitor Behavior*. 2(1):10.

Abstract: This article discusses recent evaluation activity in museum specifically the lack of commitment to psychological testing in museums, as compared to the number of surveys conducting which describe basic visitor characteristics.

Keywords: **Museums**

Washburne, R.F. and Wagar, J.A. 1972. Evaluating Visitor Response to Exhibit Content. *Curator*. 15(3): 243–254.

Abstract: This study addressed the question of whether or not some types of presentation and subject matter are preferred more than others by visitors, and if so, what criteria can be developed to guide the planning of interpretation.

Keywords: **Interpretation, Museums, Management**

Webb, E.J., Campbell, D.T., Schwartz, R.D. and Sechrest, L. 1966. *Unobtrusive Measures: Nonreactive Research in the Social Sciences*. Chicago: Rand McNally and Co.

Abstract: Measuring the success or popularity of a particular exhibit or program by looking at subtle, and often non-traditional indicators is the topic of this book. The first chapter concentrates on the variety and validity of these methods. Subsequent chapters address specific techniques such as physical traces, archival records, and observations.

Keywords: **Research**

Webster, N.B. Jr. 1981. Effectiveness of Interpretive Signs in Increasing the Environmental Knowledge of Campers. Unpublished Thesis. College Station, TX: Texas A&M.

Abstract: This study examines the effectiveness of interpretive signs as a supplemental medium which might reach all campers. The criterion for effectiveness was the change in campers' knowledge concerning the natural features which were interpreted. The testing in this study showed that the use of interpretive signs did significantly increase campers' knowledge, but no testing was done to explain why.

Keywords: **Communications, Research, Interpretation, Recreation**

Westbrook, R.A. 1980. A Rating Scale for Measuring Product Service Satisfaction. *Journal of Marketing*. 44(Fall): 68–72.

Abstract: The author examines the suitability of a social science rating, used to measure the satisfaction of the quality of life, for measuring consumer satisfaction/dissatisfaction. This article examines the suitability of the Delighted–Terrible (D–T) scale for consumer satisfaction applications.

Keywords: **Marketing**

Willis, G. ed. 1978. *Qualitative Evaluation: Concepts and Cases in Curriculum Criticism*. Berkeley: McCutchan Publishing.

Abstract: This book is based on the assumptions that educational evaluation is essentially reflection about context and meaning. The volume begins with an introductory chapter which outlines the general topic of qualitative evaluation. The remainder of the book is divided into three sections: 1) concepts, in which are provided both background on the basis for qualitative educational criticism and several closely related issues; 2) cases, in which is given examples of applied educational criticism; and 3) concepts – in which is given a retrospective analyses of some of the major issues raised by the various authors.

Keywords: **Education, Art**

Wittlin, A. 1979. Two Missing Links in Museums: Communicators and Evaluators. *Gazette*. 58(1): 25–27.

Keywords: **Communication, Interpretation, Museums**

VanMater, J. Jr. 1975. The Artist - A Creative Interpreter. *The Interpreter*. 7(4): 18.

Keywords: **Art, Interpretation**

Vaughn, S. 1982. The NPS Annual Interpretation and Visitor Services Report as a Productivity Analysis. Unpublished Paper. Northwest Indiana University.

Abstract: This paper reviews and analyzes the Annual Interpretation and Visitor Contact Report in an effort to provide an accurate productivity analysis, better communication of NPS priorities, and enhanced decision-making and judgments by interpretive managers.

Keywords: **Interpretation, Management**

Vaughn, S. 1985. Interpretation Programs at Indiana Dunes National Lakeshore: An Evaluability Assessment. Unpublished Report prepared for the National Park Service.

Abstract: This paper assesses the potential for effective evaluations of the various components involved in interpretive programs. It sketches organizational goals, describes and models program processes, and proposes both evaluation mechanisms and program changes.

Keywords: **Interpretation, Research, Recreation, Tourism, Management**

Veverka, J.A. 1978. Pacing Interpretive Services: A Concept for Interpretive Planners. *The Interpreter*. 10(2): 16-22.

Abstract: The author discusses the idea of pacing interpretive services as a means to manage the level of enjoyment, knowledge, skill, and/or attitude experienced in interpretation. It is the ultimate goal of the pacing concept to help in the design and presentation of the most complete, meaningful, and professional interpretive services possible for park visitors.

Keywords: **Interpretation, Management**

Wagar, J.A. 1978. Why Interpretation? Meeting the Challenge. *Journal of Interpretation*. 3(1): 6-10.

Abstract: By looking at interpretation in a developmental perspective the author of this article is able to elaborate on answers to why we have come to do the things we do and why are efforts are important at all. He describes interpretation as a combination of natural science and philosophy. Often because interpreters practice one or the other, justification of interpretative programs is difficult. The author discusses the reason why and focuses on the needs for creating clear objectives, marketing the product, and evaluating the outcome.

Keywords: **Interpretation**

Wagar, J.A. 1975. Effectiveness in Interpretation. *The Interpreter*. 7(3): 6-11.

Abstract: According to this author, interpretation has meaning only in terms of the effects it creates within an audience. The author discusses clear objectives, audience attention, and appropriate evaluation as necessary components of effective interpretation. In discussing audience attention, the author includes introductory techniques, suggestions for making the material interesting, audience benefit/cost ratios, audience persuasion, tailoring the presentation to audience needs, and structuring the presentation in a meaningful fashion. For evaluation, the author provides the reader with a checklist that focuses attention on program objectives, the audience, setting, and content.

Keywords: **Interpretation**

Wagar, J.A., Lovelady, G.W. and Falkin, H. 1976. Evaluation Techniques for Interpretation: Study Results from an Exhibition on Energy. USDA Forest Service Research paper PNW-211. Portland, OR: Pacific Northwest Forest and Range Experiment Station.

Abstract: Six techniques for evaluating presentations were studied during an exhibition on man and energy at the Pacific Science Center, Seattle, Washington. A panel of outsiders, suggestion boxes, observed audience attention, and time-lapse photography all proved to be good techniques for evaluation effectiveness.

Keywords: **Interpretation, Research**

GLOSSARY OF TERMS

Affective Domain

Refers to one's positive, neutral, or negative affect toward an object; one's liking or disliking of it. It also refers to other feelings related to the object. (Neulinger 1981:96)

Approach

Is a way of recognizing a situation that needs evaluation. An evaluation approach is a family of evaluation models. Examples include: objectives oriented approach, expertise oriented approach, management oriented approach. (McMillan and Schumacher, 1989)

Assessment

A process involving the utilization of both measurement and evaluation (Theobald 1979:23).

The act of determining the standing of an object on some variable (McMillan and Schumacher 1989:531)

Cognitive Domain

Refers to the knowledge, understanding, beliefs, and expectations concerning the attributes of an object. (Neulinger 1981)

Design

A plan which dictates when and from whom measurements will be gathered during the course of an evaluation; a way of gathering comparative information so that results from the program being evaluated can be placed within a context for judgement of their merit and worth. (Fitz-Gibbon and Morris 1987:9)

Effectiveness

Effectiveness is concerned with the impact or end result of the service on the clientele; indicates how well a service succeeded in fulfilling the purpose for which it was established. Effectiveness attempts to ascertain whether a program is doing the right things in the optimal manner. It is client (benefit) oriented. (Goodale and Witt 1980:332)

Efficiency

Efficiency is concerned with the amount of effort, expense, or waste involved in delivering a service. It deals with the cost per participant and is a work measurement designed to gauge if the program is doing things better or worse. Efficiency is input-output (cost) oriented. (Goodale and Witt 1980: 332)

Evaluation

The systematic process of judging the worth, desirability, effectiveness, or adequacy of something according to definite criteria and purposes. The judgement is based upon a careful comparison of observation data with criteria standards. (Steele and Moss 1970)

The act of rendering judgments to determine value—worth and merit—without questioning or diminishing the important roles evaluation plays in decision making and political activities. (Worthen and Sanders 1987:24)

Making judgments about the results of measurement in terms of specific objectives. (Theobald 1979:24)

Wolf, R.L. 1980. A Naturalistic View of Evaluation. *Museum News*. 58(1): 39–45.

Abstract: In answer to the growing need for accountability, this article reviews the definition of and uses for naturalistic evaluation.

Keywords: **Museums**

Wolf, R.L. and Tymitz, B.L. 1978. *A Preliminary Guide for Conducting Naturalistic Evaluation in Studying Museum Environments*. Washington, D.C.: Smithsonian Institution, Office of Museum Programs.

Keywords: **Museums**

Woodward, W. 1985. Assessing Interpretive Effectiveness of Historic Sites. *Journal of Interpretation*. 10(2): 19–35.

Abstract: Evaluating the effectiveness of public interpretation of the past requires recognizing (1) that history is reconstruction, (2) that such reconstruction must relate to cultural context and chronological sequence, (3) that it should authentically represent the best understanding the evidence will allow, and (4) that it serves the function of memory. In this paper three criteria are identified as a basis for evaluating the interpretive effectiveness of historic sites: comprehensiveness of coverage, sophistication of interpretive intent, and effectiveness of interpretive program.

Keywords: **Interpretation**

Worthen, B.R. and Sanders, J.R. 1987. *Educational Evaluation: Alternative Approaches and Practical Guidelines*. New York: Longman.

Abstract: This book is designed primarily to familiarize readers with the variety of alternative approaches proposed for planning and conducting evaluation and to provide practical guidelines helpful with almost any general evaluation approach.

Keywords: **Education, Research**

Yalow, E., Strossen, R.J., Jennings, D.L., and Linn, M. 1980. Improving Museums Through Evaluation. *Curator*. 23(2): 85–95.

Keywords: **Museums**

Zink, R. 1974. Interpretation Through Art. *The Interpreter*. 7(1): 2.

Keywords: **Art, Interpretation**

Zyskowski, G. 1983. A Review of Literature on the Evaluation of Museum Programs. *Curator*. 26(2): 121–128.

Abstract: The author reviews museum and visitor studies focusing on early research, sociological factors, and current literature. Included is a critical discussion of some of the limitations of conducting research in museums and interpreting the data obtained.

Keywords: **Museums, Bibliography**

Quantitative Evaluation

Data collection is accomplished using a data collection instrument (questionnaire, survey, etc); data appear as numbers, and are tabulated and described statistically; meanings are derived from statistical procedures employed therefore the results are highly dependent on the quality of measurement. (For thorough discussion of quantitative evaluation see McMillan and Schumacher 1989:207-380; Kraus and Allen 1987; and Theobald 1979)

Reliability

The extent to which measures from a test are consistent (McMillan and Schumacher 1989:542)

The stability and consistency of the instrument used to measure or the measure itself. It is the question of whether one obtains the same results on repeated administrations of an instrument, given that test conditions remain the same (Kraus and Allen 1987:132) See also Validity.

Research

The field of inquiry characterized by studies employing scientific methodologies in order to describe phenomena and/or to determine relationships between or among variables. It can be as simple as counting visitors to a park or as complex as determine the type and amount of behavioral change occurring to an individual as the result of a particular activity. (Theobald 1979) See also Assessment.

A systematic, controlled, empirical, and critical investigation of natural phenomena guided by theory and hypotheses about the presumed relations among such phenomena. (Kerlinger 1973:10)

Systematic inquiry aimed at obtaining generalizable knowledge by testing claims about the relationships among variables, or by describing generalizable phenomena. (Worthen and Sanders 1987:23)

Standard

Prescribed criteria of acceptable, desirable, or optimum qualities or performances. They are usually established by consensus of expert opinion. (Theobald 1979:24)

A principle commonly agreed to by experts. (McMillan and Schumacher 1989:544)

Theory

A set of interrelated constructs (concepts) that present a systematic view of phenomena by specifying relations among variables for the purpose of explaining and predicting the phenomena (Kerlinger 1986). Basically, a theory is having a general idea of how things work together as a whole.

Validity

Validity is the accuracy of measurement. It is the question of whether an instrument measures what it seeks or claims to measure. Valid information is not only relevant but also correct. (Kraus and Allen 1987:130)

Value

The total merit and worth of a practice. Not only is it worth doing, but it also achieves the objectives for which it was established.

Worth

The value of a practice in relationship to the values, standards, and practical constraints of a potential adopting site; answers the question "Is it worth doing?", "Should we use it?", or "Do we need it?" (McMillan and Schumacher 1989:456) See also Merit.

A means of providing information for decision making (Cronbach 1982)

(For an excellent discussion of the distinction between evaluation and evaluation research see Worthen and Sanders 1987:23–34)

Feedback

The process of giving back information for the purpose of bringing about change in the behavior of those receiving the information. Effective feedback should be timely, specific, credible, and intentional (though not perceived as punitive) (McLaughlin 1988:46)

Goals

Something to reach out for, or ends to which a design trends. They may be an ideal and a value to be sought after, but are not an object to be attained. A universal statement or a statement of a highly desirable condition toward which a group should be directed can be a goal. (Theobald 1979:24)

Measurement

The quantitative description of behavior, things, or events (mainly, how much of a quality or characteristic an individual item or event possesses). Measurement is simply a process for collecting data on which research generalizations or valuative judgments will be made. (Worthen and Sanders 1987:23)

Merit

The valued characteristics intrinsic to the practice for which there is relatively consistent agreement. Merit answers the question "Does it work?" or "Does it achieve it's intended objective(s)?" (McMillan and Schumacher 1989:538) See also worth.

Model

Evaluation used in specific situation. Several evaluation models exist. Models have advanced organizers, different sources of questions, emphasize different methods, and are grouped into families of models called approaches. See also Approach.

Monitoring

Continuous assessment of program objective achievement during the time a program is in operation. (Theobald 1979:24)

Objective

An aim or end of action, a point to be reached. (Theobald 1979:24)

Visitor Burden

The level to which a visitor is encumbered (physically and/or psychologically) during any particular encounter, for example, during an interview, filling out a questionnaire, etc.

Psychomotor Domain

Refers to the action contemplated or carried out in regard to the object; one's behavior as the result of affective and/or cognitive stimuli. (Referred to as Policy Orientation by Neulinger 1981:96)

Qualitative Evaluation

Data collection is accomplished by a person (or people) rather than an instrument (such as a questionnaire); data appear as words not numbers; the research strategy is inductive in that the researcher attempts to make sense of the situation with out imposing preexisting expectations on the research setting; the approach is holistic and the research setting is as close as possible to a naturally occurring situation. (For thorough discussion of qualitative evaluation see McMillan and Schumacher 1989:381–470; Patton 1980; and Bogdan and Biklen 1982)