



Coming of age : an assessment of the status of adult education methodology in museums  
by Bonnie Sachatello-Sawyer

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education  
Montana State University

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Abstract:

Museums are natural providers of educational services for diverse audiences. However, little is known about how museums effectively serve adult audiences through museum programs. Likewise little is known about the methodology upon which adult education programs in museums are based. This study investigated museum educators' understandings of adult education principles and how they use adult education methodology in their design of museum education programs as measured by their responses to the survey instrument that included the Principals of Adult Learning Scale (PALS) (Conti, 1985). The purpose of this study was to survey museum educators to assess the types of formal adult museum programs taking place, to delineate the predominate teaching styles used by museum educators with adults, and to determine how principles of adult education are used in program design and planning.

Data from this study revealed that almost all museums offer programs for adults; however, the primary clientele for museum programs is children. Standard adult programs include lectures and guided tours. Yet, even though most museum education efforts are aimed at children, there are some museums that are implementing more innovative teaching strategies, such as gallery demonstrations, dramatic presentations, and discussion groups that are well-suited to adult learner needs. Cluster analysis indicated that there are two distinct groups of museums, one of which is child-oriented; the other is adult-oriented. Within both groups, there are educators that are receptive to the principles of adult education. The child-oriented museums are most closely aligned to schools, however, whereas adult-oriented museums have developed links with adult community members.

It is recommended that seminars be created and conducted by museum professionals for museum professionals on how to launch and maintain a robust adult education program in a museum setting. These types of seminars should be conducted in collaboration with experts in adult education. Both groups of professionals have a great deal to learn and share with each other. Adult educators can assist museum educators by explaining the theory upon which their successful practice is based.

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of

Doctor of Education

MONTANA STATE UNIVERSITY--BOZEMAN  
Bozeman, Montana

April 1996

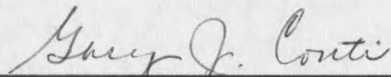
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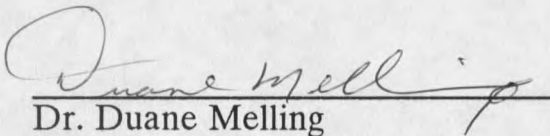
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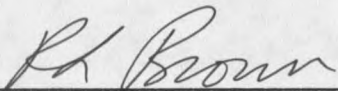
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## ABSTRACT

Museums are natural providers of educational services for diverse audiences. However, little is known about how museums effectively serve adult audiences through museum programs. Likewise little is known about the methodology upon which adult education programs in museums are based. This study investigated museum educators' understandings of adult education principles and how they use adult education methodology in their design of museum education programs as measured by their responses to the survey instrument that included the Principals of Adult Learning Scale (PALS) (Conti, 1985). The purpose of this study was to survey museum educators to assess the types of formal adult museum programs taking place, to delineate the predominate teaching styles used by museum educators with adults, and to determine how principles of adult education are used in program design and planning.

Data from this study revealed that almost all museums offer programs for adults; however, the primary clientele for museum programs is children. Standard adult programs include lectures and guided tours. Yet, even though most museum education efforts are aimed at children, there are some museums that are implementing more innovative teaching strategies, such as gallery demonstrations, dramatic presentations, and discussion groups that are well-suited to adult learner needs. Cluster analysis indicated that there are two distinct groups of museums, one of which is child-oriented; the other is adult-oriented. Within both groups, there are educators that are receptive to the principles of adult education. The child-oriented museums are most closely aligned to schools, however, whereas adult-oriented museums have developed links with adult community members.

It is recommended that seminars be created and conducted by museum professionals for museum professionals on how to launch and maintain a robust adult education program in a museum setting. These types of seminars should be conducted in collaboration with experts in adult education. Both groups of professionals have a great deal to learn and share with each other. Adult educators can assist museum educators by explaining the theory upon which their successful practice is based.

## CHAPTER 1

## INTRODUCTION

Today it is widely understood that each museum has an "educational responsibility to the public it serves" ("Standards," 1990, p. 78). This educational role is recognized both within and outside the museum community. In the same context, adults in America are looking for opportunities to learn as "the baby boom generation has matured into a group of adults with high levels of formal education and a firmly instilled desire to continue their intellectual growth" (Munley, 1986, p. vii). These adult learners are looking to alternative educational resources in ever-increasing numbers, and museums are a natural provider of educational services to these audiences. However, little is known about how museums effectively serve adult audiences. Likewise little is known about the methodology upon which adult education programs in museums are based.

On one hand, there is a prevalent attitude within museums that supports the idea that the "expansion of museum audiences and of public financial support over the last two decades would seem to give little cause for alarm about the perception museum professionals have of adult

learners" (Balfe, 1987, p. 20). Although adult Americans are entering museums and participating in museum programs in record numbers today, there are also some compelling arguments for caring more about adult experiences in museums. By paying more attention to adult experiences in museums, museum educators may be able to entice a greater number to bring their friends to the museum, become regular museum visitors, or join as museum members. Adults harbor the financial resources to make museum programs profitable in a time of diminishing government support. Adults too hold political clout that can be used to the advantage of museums.

The current number of adult programs offered by museums or ratio of adult programs to children programs is not known. In one of the only studies done of museum program options for adults, Mary Hyman (1976) noted that with regard to science centers "80% of all educational programming reported is for children, 20% for adults" (p. 8). This evidence she stated would clearly indicate that the "science centers have justifiably been considered 'children's museums' by the general public" (p. 9). Hyman also discovered that lectures were the most prevalent form of adult programs in museums. These types of programs, however, allow for little interaction and active learning. On the other hand, discussion groups, "one of the most accessible and informal types of adult programming" were offered least frequently (p. 22). Her findings are

consistent with those of Merriam and Caffarella (1991), who argue that the "andragogical model of instruction has not been used much in actual practice. Adult learning in formal settings, for the most part, is still instructor designed and directed" (p. 26).

Little work has been done in the museum field to ascertain where the optimum learning situations are created in museum programs for adults. Staff evaluations often assess museum programs in "relation to formal education programs," and, as a result, museum "students' are assumed to be children or adolescents, or treated as if they are" (Balfe, 1987, p. 20). All too often, adult programs in museums are designed based on formats that have been created for success with school-age students. Adult needs are not always recognized as being distinct from children's. This might well be linked to the lack of experience that some museum educators have had with adult education programs or the lack of training some museum educators have with adult learning theory and methodology.

A review of the past 10 years of program presentation topics at the American Association of Museums (AAM) meetings, other conference proceedings, and articles published in the Journal for Museum Education revealed little material that focused on adult education methodology and its implications in practice at museums. This void is acknowledged by several sources. Adrienne Horn (1979) conducted a study comparing

touring methods for adults. She noted at the time that she found no other published studies regarding teaching methods used for museum tours with adults (p. 87). Little has been published since then, but that which has appeared has aided many museum professionals.

Many institutional evaluations of visitor use of exhibits have added to the field's knowledge of how adults approach different display elements. They indicate that adults frequently backtrack among displays, visit the same exhibit component more than once, and are engaged in exhibits with a social component. Museum evaluations such as described by Ferguson (1994) have also shown that adult groups frequently split up in exhibits to explore on their own. Many similar case-study evaluations have been conducted, and this data, which is both published and unpublished, has helped institutions shape the way exhibit elements are planned, designed, and organized.

The same evaluative techniques are more infrequently utilized and published with regard to formal or informal museum adult education programs. Those that do exist tend to be case studies or descriptions of programs occurring at a single institution, and they offer little analysis as to what the results mean for museum education in general (Mims, 1982, p. 4). The problem may well lie in the fact that while there are countless excellent adult education programs ongoing in museums, all too often the program administrator or educator does not have the time to write up an

analysis of the teaching strategies employed or of the student experiences. The problem may also be that museum educators do not view themselves as researchers but rather as active practitioners.

Another possibility is that adult programs are not a priority of many museums and, thus, they choose to focus their efforts on children. The result, however, is that there is little information available to museum educators regarding effective adult education practices in museums.

Many questions beg to be answered about what the museum profession knows about what kind of learning experiences adults prefer in museum education programs. What is an excellent museum program for adults? What teaching strategies are employed? How is adult education methodology used when designing and planning museum programs? Are museum educators aware of their teaching style? Where are museum educators learning to improve their programs for adults? How can this information be used in combination with that which makes museums unique to contribute to adult learning?

While there is increasingly more research being conducted in the field of adult education, almost all is studied in formal learning settings. Few scholars have looked at adult programs in more informal settings such as museums. Without doing so, "much adult education research lacks a research-to-practice application when deciding what problems and questions need to be investigated" (Dale & Conti, 1992, p. 1). A better

understanding of informal adult learning activities might help professional adult educators to facilitate learning more effectively both in natural social settings and in more structured environments" (Darkenwald & Merriam, 1982, p. 153). A better understanding of adult learning experiences in museums may also cause adult education theories to be revised to fit museum settings. Conditions for learning in museums may be markedly different and require a specific forum. They may even warrant their own learning theories.

As Gertrude Hornung (1986) notes, "Art museums have been recognized as sources for curriculum development but one of the museum's weakest areas is in its relationships with people, particularly with adults and adolescents" (p. 26). This statement could be true for all museums. This dearth exists in part as American museums are still in the early formative stages of evaluating adult audience experiences in museums. However, now is the time for museum professionals to be concerned and prepare to change the way they view adult programs in museums. Museums must recognize that adult participation is important to the future well-being of the institution. Thus, the scarcity of research on adult education in museums is deserving of attention.

### Problem Statement

To fully maximize adult learning experiences in museums, museum professionals need to understand the basic tenets of adult education methodology and their personal orientation toward teaching adults. Currently, there is a scarcity of information published presenting a theoretical background for adult education in museums, and few opportunities are available to assist museum educators to assess their orientation toward the use of adult education methodologies.

### Purpose

The purpose of this study was to survey museum educators to assess the types of formal adult museum programs taking place, to delineate the predominate teaching styles used by museum educators with adults, and to determine how principles of adult education are used in program design and planning. Data from this study were used to describe the status of adult museum programs in the United States, the types of behaviors museum educators exhibit when teaching, and how well they utilize principles of adult education in learning situations.

### Research Questions

This study investigated museum educators' understanding of adult education principles and how they use adult education methodology in their design of museum education programs as measured by their responses to the survey instrument that includes the Principles of Adult Learning Scale (PALS) (Conti, 1985). Five primary research questions were asked through the survey:

1. What types of formal educational programs are presently designed and planned for adult audiences in museums?
2. What are the strategies or behaviors most often used by museum educators when teaching adults?
3. What teaching styles do museum educators support based on PALS?
4. How familiar are museum educators with principles of adult education?
5. What relationships exist between museums based on types of programs, demographic variables, and acceptance of adult learning variables?

### Significance of the Study

As museums react to the societal demand for lifelong learning opportunities, museum educators will undoubtedly be re-assessing their audience's needs and altering programming accordingly. This study may aid museum educators as a group to understand what needs to be done to move toward creating better teaching experiences aimed at adults to consequently improve adults' learning experiences. Better understanding of effective teaching strategies and adult learners can enable museums to look at their educational resources in new ways. They may be able to organize their programs, improve teaching and subsequently learning, and capitalize on their investment in education. Success is achieved when adult educators meet three distinct sets of needs and goals--that of the individual, institution, and society (Knowles, 1970, p. 22). Lasting programs of worth emerge when the museum's mission, vision, educational philosophy, and methodology all merge.

Serious investigation of the ways museum programs are designed for adults and the ways adults best learn in them is needed to document the impact of museum education and reveal how it can be more effective. Museum education "needs to build its own substantial base of scholarly research with which to explain and justify its practices as well as to substantiate and promote new ideas" (Mims, 1986, p. 4). Knowledge

about museum educators' understanding of adult education methodology could be used to suggest the implementation of professional workshops, discussion groups, or forums. This information may also be used in the planning of workshops for all museum staff on identifying teaching style or philosophy or effective teaching and learning strategies for adults. Such knowledge can be used to help assess museum programs for adults and suggest ways that adult educators might improve their teaching strategies or teaching style.

#### Definition of Terms

Adult: "A person who has reached the maturity level where he or she has assumed responsibility for himself or herself and sometimes for others, and who is typically earning an income" (Hiemstra, 1976, p. 15).

Adult Education Program: Primarily denotes "short term learning experiences that are responsive to learner needs and are implemented outside of the traditional educational system" (Grotelueschen, 1980, p. 82).

Learning: "Learning is a change in human capability that can be retained" (Grinder & McCoy, 1985, p. 22)

Formal Learning: Formal learning occurs as a result of a planned activity that people engage in to broaden their knowledge or

experience. Formal learning programs include lectures, classes, field trips, workshops, and tours.

Informal Learning: Informal learning is self-directed and occurs all the time both consciously and unconsciously through observation and experience. Informal learning programs in museums include interaction with floor demonstrators, exhibits, or activity cart facilitators.

Methods: Methods are "the ways in which people are organized to conduct an educational activity, such as travel groups, study groups, discussion groups, or independent study" (Hiemstra, 1976, p. 69)

Museum: A "museum is an organized and permanent non-profit institution, essentially educational or esthetic in purpose, with professional staff, which own and utilizes tangible objects, cares for them, and exhibits them to the public on some regular schedule" (American Association of Museums [AAM], 1973, pp. 8-9). Art, history, and natural history museums, science centers, zoos, arboretums, botanical gardens, and historic homes all fall within this definition.

Teaching Strategies: The activity through which the teacher or learning facilitator assists the adult student in acquiring new knowledge or skills. Of all the activities described in previous literature, the term strategy relates best to the term technique as described by

Verner. It is through specific strategies, selected by the facilitator, that the learner or participant becomes involved in the formal learning process. If the strategy is effective, the participant should be stimulated to continue learning in the future (Seaman & Fellenz, 1989, p. 5).

Teaching Styles: The instructor's "distinctive qualities of behavior that are consistent through time and carry over from situation to situation" (Fisher & Fisher, 1979, p. 245)

## CHAPTER 2

## RELATED LITERATURE REVIEW

A review of adult education methodology as it applies to museums requires an examination of adult education principles as defined through research and a review of museum education programs as they pertain to adults. This chapter is divided into two sections. The first includes an examination of the characteristics of adult learners and current theoretical framework surrounding adult education. The second section reviews museum programs for adults. It includes a discussion of the current trends in museum education pertaining to adults and the involvement of museum educators in creating adult programs.

Characteristics of Adult Learners

Adults "need and want to learn" (Seaman & Fellenz, 1989, p. 2). They "engage in an educational activity because of some innate desire for developing new skills, acquiring new knowledge, improving already assimilated competencies, or sharpening powers of insight" (Brookfield, 1986, p. 11). While several studies suggest all adults are learners, very few participate in formal adult education programs (Tough, 1979).

Better-educated adults with stable financial resources are more likely to participate in adult education opportunities than other segments of the population as noted by Johnstone and Rivera (1965) and Aslanian and Brickell (1980). This participant profile is the same for museum visitors (Hood, 1981).

Demographics reveal that in America today there are more adults than youth, and these adults have attained more education than at any other time in history (Merriam & Caffarella, 1991, p. 6.). As the extent of "previous education is the single best predictor of participation in adult education, the rising educational level of the adult population is a contextual factor of considerable import" (p. 8). However, this education is often highly-specialized given the demands of the workplace, and many adults lack a general liberal understanding of the sciences, arts, and humanities.

Adults too are living longer and as a result have different learning needs at different times in their lives. Developmental psychologists have shown that, while all individuals are different, there are some generalizations that can be made about adults learning interests in different stages of life. For young adults (ages 18-35) there is a need to establish themselves in work and at home. For middle-aged adults (ages 35-55) new found interests are common in health and civic activities, having established the basic family and professional relationships. For

older adults (ages 55 and over) there is a pattern of interest in culture and their living memory as they enjoy new leisure time. These stages have also been referred to as "seasons" by Daniel Levinson (1977). As he notes, "There is the idea of seasons: a series of periods or stages within the life cycle. The process is not a simple, continuous, unchanging flow. There are qualitatively different seasons, each having its own distinct character" (p. 6). As adults mature through life experiences, they are more receptive to different types of learning experiences at different times in their lives.

Economics is also influencing the characteristics of adult learners. The information age, the dependence on other nations for goods and services, and the rapidly changing nature of jobs requires adults to acquire more knowledge and a diversity of skills over a lifetime (Merriam & Caffarella, 1991, p. 11). A growing number of adults are pursuing second and third careers in this economic environment. As workplace duties and responsibilities change, skilled, self-motivated, adaptable adult learners are able to make work-related transitions easier.

### An Overview of Adult Education

Adult education encompasses a wide variety of programs servicing a plethora of adult needs. It has been described as "large and amorphous" without set boundaries such as age or mission (Merriam &

Caffarella, 1991, p. 62). In general, adult education encompasses a variety of experiences aimed at improving the skills, knowledge, and abilities of adults after their formal schooling is completed. Some adult education experiences consist of formal programs designed to provide training to receive or renew a specific certification, others provide social experiences, and yet others are geared to those adults that participate in learning experiences simply to broaden their understanding of the world around them (Houle, 1961). Many are self-directed (Knowles, 1975). Adult education experiences have traditionally emphasized applied knowledge rather than theoretical and the acquisition of skills instead of the knowledge of facts.

Merriam and Caffarella (1991) have divided adult education programs into three types of learning activities: formal, non-formal, and informal. Formal learning experiences are provided by universities or schools and usually lead to a degree or certification. Non-formal learning experiences are organized by institutions outside of the formal school network. Churches, libraries, and museums all fall under this group. Informal learning experiences are self-directed and are often derived from day-to-day experiences. There are not well defined barriers, though, between the three groups. As seen today, some formal programs are offered by non-formal institutions and vice-versa. For example, it is not uncommon for a museum to offer a class for college

credit, an informal learning demonstration, and a volunteer discussion all within the same day.

Providing meaningful educational opportunities for individuals that embody a diverse range of interests, feelings, attitudes about learning, and abilities is unquestionably challenging. Adult programs that satisfy all adults' expressed needs are exceptional given the diverse characteristics that are found within a group. However, with good planning, adult programs that are appropriately presented can pique adults' interests, inspire learning, and realize a measure of excellence.

#### Adult Needs in a Learning Experience

Research conducted in the 1960s confirmed that adults bring a different set of problems to a learning situation. In 1961, Cyril Houle conducted a landmark study regarding what motivates adults to learn. From his research, he found that adults have three learning orientations: goal-oriented learners, activity-oriented learners, and learning-oriented learners. They tended to be grouped accordingly with the most motivated to learn when they needed to accomplish a specific task or goal and with the smallest group learning for learning's sake.

Over the past 40 years, the study of how adults learn has burgeoned to provide a wealth of information about adult needs in a learning experience. They have been proven to be qualitatively different

than children's. One significant study by Allen Tough in the early 1970s identified that much adult learning is self-directed (Tough, 1978). His survey of adults revealed that an average person conducts 7 learning projects in the course of a year with an average of 100 hours spent on each of these learning efforts. Tough (1979) found that 80% of these learning projects were undertaken independently of formal classes or programs. These learning experiences were usually set up by the learner in order to gain some new knowledge or skill. Tough noted in a public address given at George Washington University in 1977,

As you know, as with a real iceberg, the highly visible portion above the surface of the water is only a small fraction of the total bulk of the iceberg. The same is true of adult learning. The highly visible part that we have all paid attention to for years is the people learning in classes, courses, correspondence courses, conferences, workshops, and so on.

A landmark study conducted by Johnstone and Rivera in 1965 also showed that self-education was much more prevalent than anticipated (p. 37).

Generally, "self-directed learning" describes a process in which individuals take the initiative with or without the help of others in diagnosing their learning needs, formulating learning goals, . . . and evaluating learning outcomes" (Knowles, 1975, p. 18). It does not necessarily follow a pattern similar to formal learning. Research by Spear and Mocker (1984) and Danis and Tremblay (1988) have

demonstrated that there are many variables, including circumstance, happenstance, and motivation, that provide clues about how adults learn on their own. While Tough's research suggests that pre-planning for these types of learning experiences is common, Danis and Tremblay found that few self-directed learning activities were done with a great deal of pre-planning. Evidence and understanding of adults as active self-motivated learners are especially important to museums. As informal resource centers, museums are dependent on adults' interest in learning and their subsequent motivation to seek out unique experiences.

Other research efforts have shown that many adults need to connect new ideas with those they have already mastered. This need to "crystallize intelligence" by making use of what has already been learned in many cases increases with age (Knox, 1981). For adults, "experience is a resource for learning and when experience is ignored, the adult perceives it as a rejection of him or herself as a person" (Knowles, 1973, p. 45). Roger Hiemstra (1981) has echoed the sentiments of Knowles in defining some of the basic tenets relating to adults that need to be understood when planning adult programs. His tenets, which are based on research findings, are:

- \* Intelligence does not decline with age.
- \* Adults learn rapidly when building from past experiences.
- \* Adults may have problems unlearning things, but are capable of doing so.

- \* Adults do not like competitive class situations.
- \* Many adults experience anxiety in new learning situations.
- \* Adults experience success in an active learning situation.
- \* The physical well-being of adults affects their ability to learn. (p. 63)

Adults also need to take responsibility for their learning (Knowles, 1975). As independent individuals, adults need to be able to direct experiences in ways that enable them to maximize the learning opportunity as identified by Knowles (1975), Merriam (1982), and others. While some adults are in a better position to take charge of their learning experiences than others, it is a common desire for adults to want to be in control of their learning destiny. In providing independence in a learning situation, adult educators are recognizing that "the primary focus of the learning process is on the individual, as opposed to the larger society" (Brockett & Hiemstra, 1991, p. 27).

Adult learning tends to be life-centered, enabling adults to learn new skills that they can use. They are often interested in learning something they can use immediately. For adults, it is important that the learning experience be practical and applicable to their daily lives.

## Teaching Adults

Educational theorist Malcolm S. Knowles (1970) proposed that an adult model for learning (andragogy) shows that adults have a tendency to be self-directed learners who bring a rich resource to their learning in the form of their previous experiences. Hence for adult program planners, he perceives their role "as a dual one. First and primarily, they are designers and managers of the processes facilitating acquisition of the content by the learners. . . . Secondly, their role is to be content suppliers or resources" (p. 26). Andragogues, he notes, use more resources in their teaching than traditional teachers. He also argues that "when the principles of andragogy are translated into a process for planning and operating educational programs, the process turns out to be quite different from the curriculum planning and teaching processes employed in youth education" (Knowles, 1970, p. 54). He identifies a seven-phased process for implementing adult programs:

- \* The establishment of a climate conducive to adult learning.
- \* The creation of an organizational structure for participative planning.
- \* The diagnosis of needs for learning.
- \* The formulation of directions of learning (objectives).
- \* The development of a design of activities.
- \* The operation of the activities.
- \* The rediagnosis of needs of learning (evaluation). (p. 54)

In formal learning situations, Knowles (1970) and others argue that it is the teacher that plays the greatest role in creating the environment for learning (p. 41). The approach the teacher takes in the teaching-learning process has a tremendous impact on how adults feel about learning and their ability to accomplish learning goals. The power of the teacher in a learning situation cannot be underestimated.

Given adult needs in a learning situation, much attention has been focused on the most effective and appropriate approach to teaching adults. There are three generally-recognized methods of organizing these learning experiences: the teacher-directed mode, learner-centered mode, and collaborative mode (Seaman & Fellenz, 1989). In the collaborative mode, the emphasis is placed on "what the learner is doing" (Conti, 1985, p. 7). The teacher's primary responsibility is to facilitate student learning by letting the student set the direction and hence accept responsibility for it (Kidd, 1973). In the collaborative mode, adults have the ability to set their own learning goals (Knowles, 1970). They can also take responsibility for them. Paulo Freire's (1970) model for education is based on the collaborative approach. He regards the teacher as a person who stimulates the learning process through dialogue rather than the embodiment of knowledge. Arguing that education is not a neutral process, he proposes that teachers assist learners to identify and clarify problems and locate resources.

In a learner-centered environment, the learner actively participates in creating and directing the learning experience. The teacher serves as a facilitator who provides resources and ideas. Knowles consistently argues for a learner-centered approach to teaching. As Knowles (1980) states:

The ideal learning situation is when a group is small enough for all participants to be involved in every aspect of planning every phase of the learning activity. The teacher, of course, retains responsibility for facilitating the planning by suggesting procedures and coordinating the process. But conditions are likely to be right for this maximum degree of participation only in small courses, action projects, workshops, and club programs. With larger groups the ideal situation can be approximated, however, by imaginative use of subgroupings. (p. 226)

The teacher-centered mode, however, "is the approach most people visualize when they think of learning" (Seaman & Fellenz, 1989, p. 24).

In this case, the responsibility for planning learning experiences, selecting materials, and goals is felt to be solely the teacher's discretion. In teacher-centered experiences, it is the teacher that determines the learning objectives for each student.

Given these three broad approaches, the learner-centered and collaborative modes are often considered to be the most effective with adults (Conti, 1989; Smith, 1982; Tough, 1979). Others have argued for different approaches, depending on the support needed by learners.

Pratt (1988), for example, identifies four ways of looking at the teacher's role which ranges from a highly-directed teacher setting to a

learner-directed setting and which varies on the degree to which learners are capable of providing their own direction and support (Merriam & Caffarella, 1991, p. 26). Given the situation, the ideal mode may vary.

### Teaching Styles

It has been argued that "the behavior of a teacher probably influences the character of the learning environment more than any single factor" (Knowles, 1970, p. 41). Teachers bring to the teaching-learning process their own sets of values, beliefs, and attitudes relating to teaching and learning (Heimlich & Norland, 1994, p. 40). Furthermore, they bring a set of personal behaviors that the teacher demonstrates time after time that directly influence student responsiveness and learning and that are known as teaching style (Fisher & Fisher, 1979, p. 245). An individual's teaching style is "consistent for various situations" and distinguishes one teacher from another (Conti, 1990, p. 3). Teaching style is "defined by the internal qualities of the teacher that affect classroom behaviors" (Conti, 1989, p. 4). This style is a reflection of an individual's teaching philosophy. While it may be refined over time as one's attitudes and beliefs change, an individual's style is generally predictable and stable.

Individual teachers demonstrate different teaching styles. While each style is not mutually exclusive, teacher behaviors can be generally

grouped so as "to understand and perhaps explain certain important aspects of the teaching-learning process" (Fisher & Fisher, 1979, p. 254). Teaching style is determined by a variety of factors including a teacher's experience, personality, philosophy, perceptions of learners, and background. A "knowledge of one's own style can allow the teacher to better understand how each of these has contributed to his/her overall behavior in the classroom" (Conti, 1989, p. 7). It can make a difference in how one approaches a group of learners.

A valid and reliable tool for measuring teaching style is the Principles of Adult Learning Scale (PALS). PALS was developed by Gary Conti (1979) and is based on principles of adult learning. It was designed specifically to measure "the degree to which adult education practitioners accept and adhere to the adult education learning principles that are congruent with the collaborative teaching-learning mode" (Conti, 1982, p. 1). The collaborative mode provides for an equal partnership between the teacher and learner in the learning experience.

The PALS 44-item instrument is a summative rating scale using a modified Likert scale. Through self-scoring, respondents indicate their preference for teaching based on a described action. The Likert scale allows adjustments for frequency, and scores can range from 0 to 220. The mean for the instrument is 146 with a standard deviation of 20.

The total score gives an indication of a teacher's expected behavior in a classroom setting. High scores on PALS indicate a preference for learner-centered teaching experiences while low scores on PALS are indicative of a preference for teacher-directed learning experiences. Scores in the middle are expected when both teacher-directed and student-centered approaches to teaching are used.

Through research, teaching styles have been proven to be related to adult achievement (Conti, 1985). Both teacher-centered and learner-centered teaching behaviors have demonstrated a high degree of success in different situations. In practice, Conti found that a teacher-directed approach was more effective in a GED class. Students had better success with the GED examination when the teacher-directed approach was employed. However, with Adult Basic Education (ABE) and English as a Second Language (ESL) classes, the learner-centered approach was more effective. In the tribal colleges, both approaches were effective and consistency was a key factor.

As recent research has shown that teaching style makes a difference in student achievement, it is important for teachers to be aware of their teaching style and its effect upon their audiences. Conti and Wellborn (1986) argue:

The secret to improving student achievement is not just in identifying the unique characteristics of each student such as learning style, but rather it includes a thorough analysis by

teachers of their behaviors and the consequences of their actions. More importantly, it demonstrates the importance of practicing a teaching style which consistently treats adults with dignity and respect. (p. 23)

Self-examination is not only important for individual educators, but also for the profession at large. All too often, "teachers, as a group are not able to clearly state their beliefs about teaching" (Conti, 1990, p. 79). Some of the basic questions that need to be addressed include: "What is our [my] view of the nature of the learner? What is the purpose of the curriculum? What is our [my] role as a teacher? What is our [my] mission in education?" (p. 79).

### Teaching Strategies and Methods

While the teaching style of an educator can be predicted from situation to situation, teaching strategies are altered by the educator depending on the circumstance. Teaching strategies enable the program planner to organize a group in such a way so as to maximize the learning experience. Different teaching strategies have proven to be more effective with different groups of adults or individuals. Clubs, discussion groups, or classes may create a better learning arena for smaller groups; lectures or symposiums may be more effective for larger groups.

Different methods may be used within a given situation. Small group sharing and active hands-on learning experiences can easily be created in

a small group setting. While lectures are predictable teaching strategies used with large groups, the methods a lecturer uses may vary from situation to situation.

The teacher has a varying amount of control over the program using these various strategies. For example, in a lecture the speaker has total control over the program. Teaching strategies where the teacher has a great deal of control include lectures, symposium, and demonstrations. The teacher has less control when using such strategies as a dialogue, debate, or interview (Seaman & Fellenz, 1989, p. 54).

While the adult literature suggests that adults prefer those strategies that are more learner-centered, each type of teaching strategy has its own strengths and limitations. Lectures meet the needs of those adults who prefer to listen rather than discuss and are relatively easy to plan.

Demonstrations, on the other hand, are not as easy to develop, but "they can convince those who might otherwise doubt a thing could be done" (Seaman & Fellenz, 1989, p. 68).

With smaller groups of adults, other types of teaching strategies may be employed. In addition to those listed above, it is possible to create what Seaman and Fellenz (1989) call "action" and "interaction" strategies, which can be described as teaching activities that require active learner participation. Action strategies include simulation games, role playing, case study analysis. Interaction strategies include

discussions, participatory training, committees, and "buzz" groups. All of these teaching strategies utilize the teacher as a facilitator and require most members of the group to take part in the learning experience in order for it to be successful.

### Adult Learning

Recent research on adults has focused more on adult learning than on program planning. The field has expanded to embrace the study of how and what adults learn and other factors that influence adult learning as studied by Kidd (1973), Brookfield (1986), Fellenz and Conti (1989), and Dale and Conti (1992). It has been argued that there are three factors influencing this trend toward adult learning research. They are "the continued development of the concept of andragogy, the struggle with the concept of self-directedness in learning, and increased emphasis on learning how to learn" (Fellenz & Conti, 1989, p. vii).

Learning is shaped by many factors including the teacher, his or her teaching style, the teaching strategies employed, the environment, abilities and receptiveness of the learner, and time. As Seaman and Fellenz (1989) noted, "One cannot discuss learning without considering the people involved and how their personal characteristics, that is, needs, background experiences, competencies, goals, learning styles, and

attitudes, affect their learning" (p. 7). Learning has been referred to as a "constructive process" as a result (MacKeachie, 1988, p. 10).

Most educators agree that adults learn in different ways and, thus, optimal conditions for one learner may not best serve another. This argument supports the notion of providing a wide variety of experiences and teaching strategies so as to serve the greatest number of adults in the best possible environment. Learning style theory recognizes that adults learn in different ways but purports that these variations can be grouped to explain general optimum learning situations for different kinds of adults. There are many different ways to group learning styles relating to cognitive, affective, and physiological modes (Reiff, 1992). For example, Bernice McCarthy's (1986) 4Mat System of Teaching-Learning Styles identifies four major types of learners:

- \* Type One Learners perceive information concretely and process it reflectively. They learn by listening and sharing ideas.
- \* Type Two Learners perceive information abstractly and process it reflectively. They like facts and detail.
- \* Type Three Learners perceive information abstractly and process it actively. They are skills oriented and learn by doing.
- \* Type Four Learners perceive information concretely and process it actively.

All four types of learners have been found to be equally present in a group. Her learning style instrument like that of Gregorc's (1979)

measures the way individuals think and how they process information. They focus on how the mind works.

Other cognitive-based learning style inventories measure the speed to which an individual resolves problems or identify the ways that individuals prefer to process information. For example, the Barbe and Swassing (1979) test measures individual preferences for processing information visually, auditorially, or kinesthetically. The test reveals that where one individual may recall information better when presented orally, others may recall information better when they can read it. The idea of multiple intelligences, pioneered by Gardner (1992), shows that individuals have a range of intelligences, some of which are more dominate than others. His intelligences include bodily-kinesthetic, linguistic, logical-mathematical, musical, spatial, interpersonal, and intrapersonal.

Affective-based learning style theories illustrate how different individuals approach learning situations psychologically. While some adults appear to use emotions in a decision-making process, others are more logical and practical. The differences can be tested using the Myers-Briggs Inventory (Myers & McCaulley, 1990). Psychological learning style theories focus on the environment for learning, the physical needs of an individual, and whether there is a preference for learning

alone or in a group. The Dunn and Dunn Learning Style instrument tests for preferences in this area (Dunn & Dunn, 1978).

Learning styles are a factor to consider when selecting appropriate teaching strategies for a given situation. This basic format may well serve as a good basis for creating educational programs in museums and exhibits. For teachers of adults, it requires an understanding of how they learn themselves, their teaching style, and how they can select different teaching methods or strategies to meet the needs of different types of learners in an exhibit or classroom setting. It is known that "adults with certain learning styles prefer different teaching strategies" (Seaman & Fellenz, 1989, p. 52). For example, Cawley, Miller, and Milligan (1976) found that "the more analytic learner tends to be more sedentary, sees a teacher as a source of information, prefers complexity, is achievement oriented and competitive and prefers social distance" (p. 104). By contrast, a kinesthetic learner prefers to have an active, hands-on role in the learning experience. If "learning is directed only toward one type of learner, the others are not receiving the message" (Gunther, 1990, p. 290).

### Museums and Adult Learners

Museums are educational centers that use objects as a basis for teaching and learning. They provide a rich resource for numerous learning opportunities including self-directed contact with objects, meeting spaces for engaging intellectual and social experiences, a context in which to mark changes in the natural and cultural world, and forums for new ideas and for experiential learning activities. In America, there are many different kinds of museums. Art museums, history museums, natural history museums, science centers, zoos, arboretums, botanical gardens, and historic homes all fall within this definition and today play significant roles in the learning experiences of many Americans.

As Joel N. Bloom and Ann Mintz noted in 1992, "the increasing importance of informal learning in our lives has led us to emphasize the broad educational significance of the museum visit" (p. 73).

Excellent museums and museum programs can arouse visitors' interest and inspire them to continue learning after the experience. As John Cotton Dana, founder of the Newark Museum, wrote almost a hundred years ago,

A good museum attracts, entertains, arouses curiosity, leads to questioning and thus promotes learning. It is an educational institution that is set up and kept in motion--that it may help the members of the community to become happier, wiser, and more effective human beings. Much can be done toward a realization of these objectives--with simple

things--objects of nature and daily life--as well as objects of great beauty. . . . A museum can help people only if they use it; they will use it only if they know about it and only if attention is given to the interpretation of its possession in terms they, the people will understand. (Newark Museum, 1959, p. 9)

Museums can inspire learning in many different ways, whether it is through permanent and temporary exhibitions; written materials including newsletters and magazines; public programs including classes, lectures, film series, demonstrations, docent tours, concerts, and conferences; or outreach electronic tools including video tape, World Wide Web home pages, or CD-ROM. Museums are also places "to which people can bring their art and artifacts, their ideas, their events, thereby creatively contributing to the museum program or exhibitions" (Oppenheimer, 1983, p. 16).

There are over 5,000 museums in the United States. While many American museums have a long and rich history, the majority are relatively new institutions. Only 4% were established prior to 1900. More than 75% were established after 1950, and 40% of those came into existence since 1970 (Museums Count, 1994, p. 24). This recent boom reflects a growing national interest in alternative learning environments such as museums, clubs, and training centers. It also denotes a rapid expansion of positions in museums for professional researchers, administrators, educators, and fund raisers.

Many people choose to visit museums frequently. American museums attract more than 500 million visits per year; this is the equivalent of two visits per American per year (p. 33). However, while many people visit often, it is also known that others do not.

Adults enter museums voluntarily. They enter "asking questions that emerge from every part of experience, sifting unknowns and uncertainties, sorting their weights and values" (Carr, 1990, p. 70). They come with a host of previous experiences that they can integrate or add to their museum experience. Some enter with expectations based on what they have read or heard about the museum experience.

Information picked up through an exhibit or program must be assessed with reference to an existing body of knowledge.

Adult museum-goers span the range of educational levels and learning styles. However, national studies have shown they tend to be well educated with professionally-oriented occupations and higher than average incomes. They also tend to be civic-minded individuals that like to participate in a wide variety of cultural events and educational experiences (Gunther, 1990, p. 157). For adults that choose to visit museums in their leisure time, there are six key motivators that have been identified: the opportunity for social interaction, the need to do something worthwhile, a comfortable environment, the challenge of new experiences, the opportunity to learn new things, and the chance to

actively participate (Hood, 1983, p. 51). In a 1981 museum audience study conducted in the Toledo metropolitan area by Marilyn Hood, frequent museum visitors identified the three most important reasons to visit a museum as the opportunity to learn, having a challenge of new experiences, and doing something worthwhile in leisure time (p. 54). These motivators are similar to others identified in successful adult learning experiences as identified by researchers such as Houle (1961) and Brookfield (1986).

#### Museum Education: Formal or Informal

Museum education is often classified under the rubric of "informal education," "informal learning," or "nonformal education." These terms help to distinguish museums from schools, which can be defined as "formal education." However, more distinctions can be made to distinguish museums experiences in and among themselves.

"Informal learning" in museums is self-directed. For visitors, it occurs all the time, consciously and unconsciously, through observation and experience. It does not "necessarily involve instruction" (Madden & White, 1982, p. 39). Informal learning in museums includes such activities as interaction with exhibits, self-guided tour programs, floor demonstrators, or activity carts facilitators.

The more "formal education" experiences usually occur as a result of a planned activity that people engage in to broaden their knowledge or experience. Museum-sponsored lectures, film series, classes, field trips, workshops, and pre-arranged tours fall within this category. Participation in these formal programs requires advance planning on the adult's part. These programs also usually have a finite beginning and end.

#### A Historical Review of Museum Adult Education Programs

American museums have been recognized as "centers for education and public enlightenment" for almost 100 years (Alexander, 1978, p. 11). Early educational efforts on the part of museums involved providing informational labels for objects and training interpreters or "docents" to enhance visitors' learning experiences primarily for school children. Museums provided educational opportunities for those that had few available to them and educational options for those out of formal schooling. To improve access to museums, in the 1880s New Yorkers petitioned the Metropolitan Museum of Art and American Museum of Natural History to open on Sunday so that working men could visit (Newsom & Silver, 1978, p. 14).

By the turn of the century, Henry Watson Kent, assistant secretary of the Metropolitan Museum of Arts, developed and advertised a

complement of educational programs included gallery lectures, publications, programs for school-age visitors, and radio programs. In 1907, Benjamin Ives Gilman of the Museum of Fine Arts, Boston hired a docent to lead one-hour interpretive tours. Many museums, including the Boston Museum of Fine Arts and Cincinnati Museum of Art allowed local adult groups to use museum space for programs and club meetings. The "impulse inside the museums was matched by a late-nineteenth century impulse on the part of the American public that spurred the establishment of lyceums, Chatauquas, reading groups, clubs for middle- and upper-class women, settlement houses, scholarly and professional societies, mechanics' institutes, and even country fairs" (Newsom & Silver, 1978, p. 14).

Museum education programs reacted too as Americans experienced an increase in leisure time and access to automotive transportation over the ensuing decades. Lawrence Coleman described the burgeoning of small museums in 1927:

Numerous historical House Museums and Trailside Museums of natural history or archeology, closely related to their location, expected the motorist on the expanding highways. They represented a trend toward small museums outside urban centers and were harbingers of new ways of adult education in an era of more plentiful leisure. (p. 260)

In the 1930s, the Works Progress Administration (WPA), labor unions, and private foundations such as Carnegie and Rockefeller, assisted and

encouraged museums nationwide to offer programs specifically for adults. For example, WPA funds paid artists to teach workshops and classes in museums on a regular basis, the Syracuse Museum provided workshops for men on relief, and the Metropolitan Museum began to focus gallery programs on the unemployed. The Depression also encouraged some museums to provide free admission so unemployed persons could take advantage of the subsidized adult programs (Grinder & McCoy, 1985, pp. 13-14). As more and more Americans began to visit museums, the educational value of them was recognized. When the Museum of Modern Art opened in November of 1929, it was considered by the trustees and director to be "an educational institution" (Stubblefield & Keane, 1994, p. 205).

In the 1940s, following the end of World War II, museum education programs expanded as men returned from war and women sought interesting volunteer positions in museum education programs to occupy themselves. The primarily volunteer staff led tours and programs aimed at children. The post-war era had a tremendous impact on museum education, however, as museums changed to thrive in a market economy. Museums started to look at their audiences and change their programs to a mix that the museum "customer" wanted (Zeller, 1996, p. 50).

Museums experienced a heyday in the 1960s and early 1970s as prosperity, increased leisure time, and burgeoning government support enabled new museums to be founded every 3 days. At the same time, museum education efforts expanded and improved as national awareness of diversity among cultures, disabled access, and women's issues translated into multi-varied internal and outreach programs designed to serve a wide variety of audiences. Museums also began to organize programs that serviced non-museum goers or those otherwise unable to come to the museum. They were creating programs that adhered to a stronger sense of social responsibility. In 1967, the American Association of Museums (AAM) urged the development of expanded educational services that brought in "new and nontraditional audiences" (p. 14). However, even with these changes, museum programming continued to be heavily oriented toward children's needs.

In 1973, the American Association of Museums created the Standing Professional Committee on Education to provide a voice for those in the field of museum education within the larger context of museums. In 1976, the committee sponsored "Learning Theories Seminars" and encouraged museum educators to record and publish their experiences with programs and visitors in museums. This was the impetus for several publications. A publication dealing specifically with adults, Museums, Adults and the Humanities, was published by the

American Association of Museums in 1981. It was the result of a series of seminars held in 1979-1980 which featured acclaimed adult educators including Knowles, Knox, and Hiemstra among others.

In the late 1970s, national attention was drawn to the fact that Americans were enjoying increasingly longer life expectancies. Museum audience surveys also revealed that few older adults visited museums. For these reasons and others, there was a burgeoning during the late 1970s to early 1980s of new museum programs created specifically for older adults. For example, the Smithsonian through its Senior Series program took on the task of providing services to older adults that could not travel to the Smithsonian. The staff's experience with these outreach programs revealed that "informal lecture discussions combined with object handling, demonstrations, activities, and personal chats" (Sharpe, 1984, p. 3) were critical to a successful experience. They noted that acknowledging participants' experience was essential to success as was adapting the program design to meet different needs. This report provided some of the first published findings suggesting teaching strategies for adults in museums based on practice and research. Presentation techniques that had proven to be successful with older adults were published in the Museum Education Roundtable Reports in the fall of 1984.

The Brooklyn Museum, "proud of its firm community roots and of its response to community change," also created a model outreach program for older adults during the late 1970s (Heffernan & Schnee, 1981, p. 31). They offered a series of programs in neighborhood senior centers that varied from slide lectures to art classes. Many programs were led by museum volunteers that the staff trained to be responsive to the "cultural recreational, intellectual, and physical needs of older adults" (p. 32). A review of the program showed that "the most significant result of the program was the creative artistic expression that it generated, particularly on the part of senior citizens not usually involved in arts activities" (p. 32). Another museum program offered by the Lyceum in Richmond, Virginia, was "designed to teach Alexandria's history . . . by encouraging older adults to share their life experiences" (Sharpe, 1984, p. 10). In this outreach program, the program presenters showed slides, passed objects through the audience, and invited audience members to share their recollections.

In 1984, the AAM-appointed Commission on Museums for a New Century completed a report on the importance of museums to American culture and what they contribute to the quality of human experience (Museums for a New Century, 1984, p. 11). The report cited the need for museums to get involved in educational reform efforts and admonished museums not to relegate education departments solely to the

service of school children. Specifically with regard to adult education, they noted:

- \* Adult participation in educational programs has increased significantly. Adult education is the fastest-growing type of education today, and education is the most common adult discretionary activity outside of the home.
- \* Thirty-five percent of all students enrolled in higher education are more than 24 years old; 70 percent of those are part-time students.
- \* Midcareer training programs have increased in popularity.
- \* Education is regarded as one of the many commodities competing for the consumer dollar. Educational establishments are increasingly asked to deliver custom-tailored products on demand. They are asked to be accountable and to revise programs to meet the needs of consumers. (p. 25)

In general, they concluded that "informal, voluntary education is gaining credibility as more and more people, especially adults, look for ways to improve their skills, increase their personal knowledge or simply enjoy their more abundant leisure" (p. 25).

Following the 1984 AAM annual meeting, a colloquium of educators met to discuss what Museums for a New Century meant for museum education. Participants looked to a major change in "museum education as a shift in focus from programs and activities for school groups to larger issues concerning all aspects of museum learning" (Jensen & Munley, 1992, p. 357).

One of the most significant adult education demonstration projects in museums was sponsored by the Kellogg Foundation from 1982-1988.

The Kellogg Foundation sponsored national colloquia with 12 museums to discuss museum education issues relating to adults, and participating museums were to undertake demonstration projects in their communities. In 1986, the Exploratorium in San Francisco, the Field Museum of Natural History in Chicago, and the Smithsonian Institution in Washington, D.C., completed programs funded by the Kellogg Foundation that were designed to clarify and improve their programs for adults. Each program was unique to the administering institution. At the Exploratorium, museum staff invited staff from other institutions to come and learn more about their philosophies, standards, and procedures for producing successful exhibit and programs. The Field Museum sponsored workshops for museum staff on the value of museums to learning. The Smithsonian focused on a series of 12 demonstration projects designed to contribute knowledge regarding museums as learning centers.

In the 1980s and into the 1990s as museums began to win large grants for exhibit and educational programming initiatives, granting agencies began to demand accountability for program impact through evaluation. Naturalistic studies of visitor use of exhibits became increasingly common. Museums were asked by funders how they educated the public.

Adult education literature has suggested in the past that most program planners rely on past experiences to create new program ideas. This practice has been characterized as "flying by the seat of the pants" (Pennington & Green, 1976). This is a common practice in museums; however, in recent years increased attention has been placed on audience surveys and the visitor experience. This outside evaluation has been encouraged by AAM and the Institute of Museum Services through the Museum Assessment Program as a means of better serving museum audiences. Audience evaluations have provided more information and direction for generating new programs. Subsequent changes in museum education seen on a national level are more informal programs, affective learning objectives, as well as more family and adult programming (Franco, 1992, p. 100).

Prior to 1970, there was virtually no research conducted on adults in museums (Zetterberg, 1969, p. ix). In a 1972 study of Adult Education in Community Organization, museums were excluded because they appeared to offer an insignificant number of adult educational activities. A landmark study conducted in 1975 by Mary Hyman of the Maryland Academy of Sciences focused on the status of adult programs in science centers. Through a survey of museum professionals, she deduced that since 80% of all educational programming was geared toward children, these types of museums were largely considered to be

children's museums. As she discovered, lectures were the most prevalent form of adult programs in museums. These types of programs, however, allow for little interaction and active learning. On the other hand, the discussion group, "one of the most accessible and informal types of adult programming," was offered least frequently (p. 22). Her findings are consistent with those of Merriam and Caffarella (1991), who argue that the "andragogical model of instruction has not been used much in actual practice. Adult learning in formal settings, for the most part, is still instructor designed and directed" (p. 26).

Nowlen argues that "in practice, the most widespread needs assessment procedure in adult education consists of offering educational opportunities and then noting how many and what types of adults enroll" (Nowlen, 1980, p. 31). The second most common survey used to evaluate educational program is the interest inventory. Recently, a number of researchers have experimented and successfully used a number of different research methodologies to evaluate adult visitor experiences in exhibits. Mark St. John and Samuel Taylor have used naturalistic observation techniques derived from anthropology, Judy Diamond used techniques from ethology, and John Koran utilized methods from educational research (Diamond, 1992, p. 188). Similar techniques need to be explored and utilized to evaluate adult education programs in museums.

In 1992, the American Association of Museums published its "first major report on the educational role of museums" (AAM, 1992, p. 3) entitled Excellence and Equity: Education and the Public Dimension of Museums. It is considered to be an unprecedented document. In this report, it was argued that there should be an educational purpose in every museum activity. The task force that created the report defined museum education in its broadest sense--one that involved a museum-wide commitment to public service. It was stated,

Museums have a vital place in the broad educational system that includes formal institutions such as universities, schools, professional training institutes and informal agents of socialization such as the family, workplace, and community. Museums have the capacity to contribute to formal and informal learning at every stage of life, from the education of children in preschool through secondary school to the continuing education of adults. (p. 9)

The report sets forth 10 goals, including expanding and using learning opportunities to achieving diversity, as benchmarks for museums to note their progress into active educational centers.

While Excellence and Equity is designed to provide benchmarks for the formal museum educational activities to document work accomplished in this regard, little is known about informal learning activities that take place in museums and the types of impact they have on adults. Some of these experiences are documented through exhibit evaluations or visitor surveys, but little is known about where and how

excellent learning experiences take place and when the adult becomes immersed in an experience. Adult learning literature suggests that museums can have the right environment for these activities to thrive in, and attendance data certainly suggests they are having a measure of success. However, this area remains open for discussion and research. Discussions are beginning to take place. Questions that have recently been addressed at AAM-sponsored seminars on current issues in museums included: "What do we know about learning in museums so far? What do we need to know about learning in museums? How does it impact educational efforts?" (AAM Learning in Museums Seminar, 1995).

### The Role of Museum Educators

Today, museum educators "serve as advocates for museum audience" ("Standards," 1990, p. 78). At many institutions, they are charged to communicate the museum's mission to diverse audiences ranging from the young child to older adult. Museum educators play active roles in creating the educational underpinnings or "take-away" messages in exhibits, supporting the interests of museum visitors, and in building the "environment and the programs that encourage high-quality experiences for all visitors" (AAM Standing Professional Committee on Education, 1992, p. 62). Museum educators also interpret collections and share curatorial research with their adult public. This is accomplished in

a myriad of different ways including interpretative tours in galleries, field programs, classes, lectures, study groups, outreach trunks, seminars, and workshops.

Apps (1981) "found that the best adult educators were those that showed an interest in students, possessed a good personality, had an interest in the subject matter, had the ability to make the subject matter interesting, and were objective in presenting subject matter and in dealing with students" (Galbraith, 1990, pp. 4-5). Good museum educators are expected to have all of these skills and more. They are expected to have experience dealing with culturally diverse audiences, strong communications skills, knowledge of principles and practices of public programs, and knowledge of current museum education theory. If "you think about outstanding museum educators; you will realize that not only are they multifaceted people but that their approaches vary. Some are excellent researchers; others are excellent administrators, others are creative program or exhibit inventors" (White, 1992, p. 52).

Excellent museum educators of adults arouse visitors' interest and inspire them to continue learning after the experience. They encourage adult visitors to get involved with objects, make meaning of them, and articulate their own understanding of them in the context of the visitor's experiences. They experiment with creative approaches to teaching and learning in order to understand more about this dynamic in informal

settings. Excellent museum educators also organize and facilitate a wide variety of programs that serve the range of adult needs and expand audiences. They understand that they have an obligation to the public they serve, which today is defined by an overwhelming majority of adults in most institutions.

### The Status of Museum Educators

Museum educators' responsibilities and status within museums vary from institution to institution. In 1986, the Getty Center for the Arts undertook a case study of the status of museum education in 20 art museums. Among their generalizations, this report concluded:

- \* There is a lack of consensus among museum professionals regarding the basic aims of museum education.
- \* Adequate resources have not been made available for professional preparation in museum education.
- \* Museum education lacks a sufficient intellectual base and theoretical foundation including that of scholarly models in the universities.
- \* Museum educators have little or no technical training in research or evaluation methods relevant to their professional tasks.
- \* Museum educators seem to lack a well-defined vision of their responsibilities and the methodologies necessary to develop new audiences for the museum. (Eisner & Dobbs, 1986)

This bleak picture of the profession remains as one of the only studies of museum educators.

### Training and Resources Available to Museum Educators

Like many other adult education providers, most museum educators begin with little formal training relating to adult education. This pattern is found repeatedly in the field. Training of museum educators takes shape in a variety of different forms depending on the individual and the museum. Some museum educators receive training and a degree through an accredited museum education or museum studies program, but this is the least common training tool employed. More often than not, museum educators are trained on the job. Informal apprenticeship to a master museum educator or administrator is common. This type of training has its positive aspects. Museum educators can also draw upon previous personal experiences as a learner or program coordinator to develop expertise. However, "some aspects of agency leadership depend on larger perspectives on the societal context and desirable directions. Comparative understanding of other segments of the field and national settings contribute greatly to such breadth of perspective" (Knox, 1993, p. 3). As professionals, museum educators should also be able to articulate their own personal philosophy toward teaching and learning in museums.

Sharing of resources and information between museums is encouraged by many institutions and supported through advances in telecommunications and increasing numbers of publications on museum

education. The subject of adult education or adult learning, however, until very recently has been infrequently addressed. Professional support can be found through associations such as the Museum Education Roundtable or the AAM Standing Professional Committee on Education, and discussions are beginning to center on how adults use museums to further their learning experiences. Some valuable written information is available through the Journal of Museum Education and related newsletters. In these published articles, museum professionals write for their peers. The articles typically describe a successful program created and administered for a particular institution. This sort of sharing allows for program sharing and replication at other institutions. However, few articles are written by scholars in educational psychology or methodology. Few, too, are quoted in the articles. Nowlen (1980) argues:

Few practitioners are familiar with historic trends in the field of adult and continuing education, because past and emerging trends are usually taught in graduate courses on adult and continuing education but seldom appear in professional association meetings or in casual professional reading. (p. 21)

### Conclusion

Just as adult education is proliferating within the United States, so too are museums and museum education programs. The question remains, however, how well are museums serving adults. The argument

can be made that based on ever-increasing national attendance figures for museums, they are doing extraordinarily well as expected. However, what do museum educators know about teaching adults? What kinds of methods and techniques are they using? Recent literature does not clarify these questions; it only demonstrates the lack of material that has been published regarding adult education programs in museums.

Knowles has suggested that the teacher is the most important variable in a learning situation. As Conti (1985) has argued, "If those entrusted with this crucial position are to function as professionals, they must be aware of what they do and why they do it" (p. 11). Museum educators should understand and be able to explain their philosophy toward teaching adults. Teaching style evaluation tools such as PALS can help to identify teaching styles. Museum educators should also be aware of how their actions reflect their underlying set of beliefs that they use both in teaching and in program planning. As Jerold Apps stated:

From time to time, we face decision points as teachers.  
What is the best way of presenting this information? In  
what ways might I use certain technology? What is the basis  
for my decision to share this information but not that?  
Knowing our foundations--becoming conscious of what we  
believe and value--can help us to make these and similar  
decisions (Apps, 1989, p. 17).

An educational theory or philosophy exists to explain why certain activities work in practice. It "forms a frame of reference" and guides decision-making" (Hoy & Miskel, 1991, p. 5). Practice, on the other

hand, allows for the testing of educational theories and provides an arena for examining historical and new ideas about teaching and learning (Merriam, 1982). "Effective practice . . . draws upon tested knowledge from various scholarly disciplines" (Knox, 1980, p. 2). "The art and science of adult education are complementary: The art focuses on the goals and humanistic values that guide professional practice; the science focuses on research-based generalizations and orderly procedures that enable practitioners to perform effectively" (p. 2).

Museum education "is achieved through the thoughtful application of audience analysis and principles of teaching and learning to the processes of interpretation, exhibition, and--where appropriate--to collecting and research" ("Standards", 1990, p. 78). Notwithstanding, museum educators often fail to gain internal and external acceptance of their programs because they are not able to effectively articulate their philosophy of teaching and learning. Rectifying this situation will require museum educators to examine and clarify their attitudes to teaching, understand their teaching style and how it translates into adult programs. To start this process, a snapshot of museum educators as a group was taken by administering the Principles of Adult Learning Scale to all registered through AAM. This information should provide more information about museum educators' attitudes toward teaching adults and how well they meet adult needs in learning situations.

## CHAPTER 3

## METHODOLOGY

To examine questions relating museum educators' practices and preferences for teaching adults, this descriptive study required the development of a survey. Descriptive research "reports the way things are" by collecting data to "answer questions concerning the current status of the subject" (Gay, 1992, p. 249). The survey was sent to all museum educators that are members of the American Association of Museums or the Association of Science-Technology Centers. It was divided into two sections. The first section of the survey sought information on the types of adult education programs presently available in museums and how museum educators design and plan programs for adults. The second section sought information on museum educators' preferences for teaching adults.

Instrument

Several steps were taken to develop an instrument for museum educators to assess their program planning procedures and preferences for teaching adults because "a too often neglected procedure [in survey

research] is the validation of the questionnaire in order to determine if it measures what is was developed to measure" (Gay, 1992, p. 226). To begin with, a literature review was undertaken to see if any other surveys had been created and administered to museum educators. One survey was found which was created by Mary Hyman of the Maryland Academy of Sciences. In July of 1975, she devised and administered a survey to determine the extent of adult and continuing educational programming in the member institutions of the Association of Science-Technology Centers (ASTC). Her survey instrument was reviewed with an eye toward adapting some of her questions so that they could be used to compare results 20 years later. Suggestions for survey questions were also elicited from faculty in the College of Education at Montana State University. Dillman's (1978) suggestions for survey questions as published in his book, Mail and Telephone Surveys: The Total Design Method, were also reviewed.

Questions relating to the first section of the survey were formulated based on the first research question which sought information related to the types of formal educational programs which are presently designed and planned for adult audiences in museums. In an effort to compare the responses to those asked in the similar 1975 ASTC-sponsored survey of museum educators conducted by Mary Hyman, several questions on that survey were re-addressed. To see if there had

been any significant change in the types of adult programs offered in museums or the types of collaborative efforts museums undertook with other institutions, similar questions to the Hyman survey were added.

In the first section of the survey, museum educators were also asked to describe the methods they used to design and plan museum programs for adults. In addition, museum educators were invited to describe what elements they thought made up an excellent program for adults and what success they had with programs for large and small adult groups. Related to this, respondents were asked to list any museum of which they were aware that was offering excellent adult programs.

Questions were introduced relating to the type and size of the respondent's museum, the amount of experience the respondent had working in a museum setting, and what resources they used to create adult programs.

The second section of the survey addressed the following four principal research questions: (1) What are the strategies or behaviors most often used by museum educators when teaching adults? (2) What teaching styles do museum educators support based on PALS? (3) How familiar are museum educators with adult education methodology? (4) Is there any relationships between museums based on types of programs, demographic variables, and acceptance of adult learning variables? The

questions on the second section of the survey were modified from The Principles of Adult Learning Scale (PALS) (Conti, 1985).

PALS is a 44-item survey instrument that was designed to assess a respondent's teaching style. Using a 6-point Likert rating scale, respondents could indicate the frequency with which they practice the action described. With a summative rating scale, there was a reliable means by which to discriminate among individuals' responses. The Likert scale offered a quick and easy method to assess a range of behaviors. The 6-point scale included the following choices: 0 = Never, 1 = Almost Never, 2 = Seldom, 3 = Often, 4 = Almost Always, and 5 = Always.

Based on principles put forth in adult education literature, the PALS instrument had already proven to be valid and reliable in assessing adults' attitudes and opinions relating to teaching adults in formal classroom situations. Its reliability and validity were established by juries, observations, and statistical analysis, and it had previously been used in over 30 research studies. Several of these studies have described teaching practices in aspects of continuing education. Others have explored the relationship between teaching style and student outcomes. In order for PALS to be used to assess informal educators practices, however, it had to be slightly modified. The word "classroom" was replaced by "museum program." On question 19, the word "written tests" was replaced with "evaluations." Museum educators were also asked to

think of their experiences with more formal museum programs such as teaching docents, teacher workshops, or adult classes when responding.

PALS scores seven different factors relating to an adult's teaching style. High scores on PALS indicate support for the learner-centered approach to teaching; low scores indicate support for a teacher-directed style. Scores near the mean of 146 for the instrument illustrate a combination of teaching behaviors that use both learner-centered and teacher-centered behaviors.

PALS can be divided into seven factors. The first factor deals with learner-centered activities. These questions relate to teachers' preferences for "evaluation by formal tests and a comparison of students to outside standards" (Conti, 1983, p. 9). The respondents who favor teacher-centered classroom styles control the teaching setting by determining objectives for each student, support "formal testing over informal evaluation techniques, and rely heavily on standardized tests" (p. 9). They also tend to promote middle class values. For the learner-oriented instructors, the classroom focus is on the "learner and learner-centered activities" (p. 9).

The second factor in PALS deals with the idea of personalizing instruction. Learner-centered teachers tend to "personalize learning to meet the unique needs of each student (and) objectives are based on

individual motives and abilities" (p. 9). Lecturing, consequently, is viewed as a poor way to present information.

The third factor relates to the adult education principle of building on adults' prior experiences. Respondents that support this idea "take into account their students' prior experiences and encourage students to relate their new learning to experiences" (p. 10).

The fourth factor in PALS focuses on a teacher's approach to assessing student needs. Respondents that score high in this area make an effort to find out what each student wants to learn and needs to know. Obtaining this information typically requires individual student conferences and informal counseling.

The fifth factor addresses the issue of climate in the classroom. In a learner-centered classroom environment "dialogue and interaction with other students are encouraged (and) periodic breaks are taken" (p. 10). Risk-taking is also supported and errors are understood as part of the learning process.

Factor 6 in PALS assesses teacher attitudes toward student participation in the learning process. These questions in PALS deal with the amount of involvement the teacher perceives that the student should have in determining the "nature and evaluation of the content material" (p. 10). Those that "score high in this area have the students identify the

problems that they wish to solve and allow the students to participate in making decisions about the topics that will be covered in class" (p. 10).

Factor 7 in PALS deals with issues of teacher flexibility. To maximize the personal development of a student, learner-centered teachers are flexible. They "view personal fulfillment as a central aim of education" (p.10). They adjust the "classroom environment and curricular content to meet the changing needs of the students" (p. 10).

#### Population and Procedures

The survey instrument was carefully reviewed and field tested. It was first reviewed by several Montana State University (MSU) College of Education faculty. After corrections and alterations were made, 25 pilot surveys were then distributed to participants at the American Association of Museums' 1995 Annual Meeting in Philadelphia. The purpose of the pilot survey effort was to assess the clarity of the instructions and to see if these professionals could offer any other suggestions to improve the instrument. Several of the respondents were interviewed following their completion of the survey to assess the survey's ease of use, applicability to the museum profession, clarity, and completeness. Other respondents chose to provide written comments at a later time. All comments and suggestions relating to the survey were recorded and compiled. Modifications to the survey instrument were made accordingly.

Following the pilot-testing of the survey, corrections were made and a final draft copy of the instrument was sent to the American Association of Museums' Education Committee Chairman and to the Board of Directors Chairman of the Museum Education Roundtable. Both organizations were asked to endorse the survey by writing a cover letter to accompany the instrument itself. Both organizations agreed to do so, and the cover letter and the survey instrument were finalized and printed.

Getting access to mailing lists of museum educators proved to be difficult. No general list of all museum educators was available. Given this limitation, the survey was sent directly by mail to all 540 museum educators that were registered with the American Association of Museums (AAM). The survey was also sent to 332 museum directors of institutions that are members of the Association of Science-Technology Centers (ASTC). Attached to the survey in this case was a note asking the director to pass the survey instrument on to the director of education. Museums that make up the membership of these two organizations encompass a broad range of institutions including historical homes, zoos, botanical gardens, science centers, aquariums, as well as general art and natural history museums. Museums from all the regions of the country are members of these two organizations, and the inclusion of both organizations' membership bases ensured that a variety of types

of museums would be included in the study. In the 1989 survey of museums undertaken by the AAM, it was noted that there are 8,200 museums in the United States and that 55% of those are historic sites or history museums, 15% are art museums, and 15% are science-related. Museums are distributed throughout in a similar proportion to the population (Museums Count, 1994, p. 23).

The surveys were mailed in October of 1995. Of the 872 surveys mailed, 109 were returned. It was anticipated that many of those surveyed would not respond. Many of these educators are overwhelmed with day-to-day responsibilities and may elect to forgo completing the survey as a result. Others may not have completed the survey because it was lengthy. Many probably chose not to return the survey because they did not offer adult programs or they were not involved in the planning and design of adult programs. It is also probable that some surveys were not sent to the appropriate staff person.

Because only 12% percent of the survey instruments were initially returned, a second group of museum educators were called and asked to fill out and return the survey. Fifteen surveys were returned. To see if the group that responded originally to the instrument were different from the non-respondents whose participation was solicited with a follow-up call, *t*-tests were run on all variables to see if the scores of the latter 15 museum educators were significantly different.

A t-test for independent samples allows the researcher to calculate whether there is a significant difference between the means of two groups at a selected probability level of .05 (Gay, 1992). This statistical test was run for all 124 cases, and the t-test scores demonstrated that there were no significant differences in PALS scores. There were also no significant differences in survey responses for the other items except in the case of questions 6, 11, and 19. Because these questions deal with multiple numbers of variables and only account for a small portion of the survey, these two groups are considered to be the same. Given that the means of the two groups did not differ significantly, it can be extrapolated that the data collected is representative of museum educators at large even though a large number did not return the survey.

The raw data collected from all 124 surveys was entered into a dBase program, and a SPSS/PC Advanced Statistics V2.0 software package was used for data analysis. Statistical analysis of the data included frequency of responses, distribution of PALS total scores and factor scores, descriptive statistics of the demographic information, and cluster analysis of all demographic and program style variables.

Descriptive statistics "permit the researcher to meaningfully describe many, many scores with a small number of indices" (Gay, 1992, p. 218). The four primary types of descriptive statistics are "measures of central tendency, measures of variability, measures of relative position,

and measures of relationship" (p. 388). Measures of central tendency were used to determine the typical scores on PALS.

Cluster analysis describes a wide variety of multivariate statistical procedures. It is a statistical technique that enables data to be grouped in similar groups called "clusters" that have been found to have similar characteristics. Thus, cluster analysis is a valuable tool "to adult educators for inductively identifying groups which inherently exist in the data" (Conti, 1996). The "key to using cluster analysis is knowing when these groups are real and not merely imposed on the data by the method" (Aldenderfer & Blashfield, 1990, p. 76). Using the SPSS Quick Cluster method, a researcher can easily and efficiently calculate any clusters within a data set and then eliminate those that are not viable. Cluster analysis was used on all museum program and PALS variables to see if any significant groups could be found within the data.

## CHAPTER 4

### ANALYSIS OF DATA

Data for this study were collected from museum educators from a specifically designed instrument that sought to survey the present state of adult education methodology in museums. The survey was designed so that the data could be compared to a previous study of adult education programs in museums. Survey questions were aimed at revealing the profiles of educators in museums and their practices with respect to adult education.

#### A Snapshot of Respondents

Surveys were returned from a wide variety of museums from all parts of the United States. Of the 124 institutions represented in the survey, 33 are art museums, 2 are historical homes, 15 are history museums, 13 are natural history museums, 27 are science centers, 6 are general museums, 4 are university museums, 2 are botanical gardens, 2 are arboretum, 4 are zoos, 12 are aquariums, and one is a children's museum. Of these institutions, 21% could be classified as small institutions with an annual operating budget of less than \$500,000,

45% could be classified as medium-sized with an annual operating budget between \$500,000 and \$3 million, and 34% could be classified as a large institution with an annual operating budget of more than \$3 million.

Staff sizes varied greatly. The number of full-time education staff ranged from 1 to 250 at these institutions with an average of 9 full-time staff. Part-time staff ranged from 1 to 250 in number as well for an average of 13. Education-related volunteers ranged from 1 to 600 with an average of 67.

Of those museum educators that completed the survey, 94% noted that they offered some type of adult museum program. Only 6% of those responding did not offer any type of adult program. When asked what percentage of their total museum education programs are designed for adults, families, and children, an average of 27% were reported to be designed for adults, 24% of programs were designed for families, and 49% were designed for children. A third of those responding reported that less than 15% of all museum programs they designed were for adults. Less than 10% of those responding offered as many programs for adults as children. Thus, educational programming in museums tends to be child-oriented.

### Adult Museum Program Types

Several questions on the survey were designed to address the first research question relating to the types of adult programs taking place at museums. Forty-four percent of respondents noted that they offered some type of non-credit course with responses ranging from 1 to 150 such courses annually. The survey data revealed that an average of 38 non-credit courses per year are offered with a third of the museums offering 5 or fewer. The average attendance at these programs was 30 adults. Data showed that instructors of non-credit courses in museums are typically staff or outside professionals. Credit courses by comparison are only offered at 26% of the museums. Fifty percent of these institutions offer three or less such credit courses annually.

Lectures have traditionally been a common program offering in museums. Survey data showed that 68% of those museums responding offer lectures regularly. The average annual number of lectures was 16 with a mean attendance of 93. Symposiums are also frequently conducted. Thirty-seven percent of museums offer some kind of symposium. Typical attendance at these adult programs is 148 adults with an average of 13 symposiums being offered annually.

Field trips are another popular adult museum program. Thirty-seven percent of all museums responding noted that they offer

field trips for adults. Museums offer anywhere from 1 to 600 field trips annually with an average attendance of 35. Most of these trips are led by staff and outside professionals, but some are offered by volunteers and docents at a small number of institutions. Half of these trips have less than 25 participants.

While field trips and classes are standard programs at many institutions, the most frequent adult program in museums is the guided tour. Survey data showed that 57% of those responding provide guided tours for adults. The numbers offered by museums are staggering, ranging from 200 to 6,500 annually. Eight percent of these museums conduct more than 1,000 adult tours annually while the average number was 456. The size of these tour groups is large with a typical attendance of 31. Most are conducted by staff, volunteers, and docents.

Gallery demonstrations, dramatic presentations, and films are not offered by many museums, but these programs are well-attended where available. Thirty percent of the participants responding indicated that they offer gallery demonstrations. On average, 120 are conducted annually for an average audience of 53. By comparison, 25% of the museums offer dramatic presentations. The number presented annually varies from 1 to 5,000. Over 50% of these institutions put on seven or fewer such performances each year. Three institutions surveyed reported that they presented more than 1,000 such programs annually. Staff

typically participated in these programs for a mean audience of 175. Films are regularly presented at 25% of the responding museums. An average of 34 are shown annually to an average audience of 111 adults.

One of the least common programs offered by museums was discussion groups. Discussion groups are only offered by 13% of responding museums. Typical attendance in these programs is 25 adults. Of the few museums that offer them, however, the average number of programs available annually is 40. The least common adult museum program is field schools. Only 7% of museums reported administering a field school. Of those, an average of 9 such programs are offered annually for a typical audience of 22. Staff and outside professionals most often create and teach these programs.

Volunteer training courses are, not surprisingly, commonplace among adult museum programs. Fifty-two percent of museums provide frequent training programs for adults. These training courses, usually taught by staff, range from 1 to 100 in number. Typical attendance at these programs totals 27. Just as volunteer training courses are created for distinct adult needs, so too are teacher workshops. Survey data showed that teacher workshops are developed by 68% of the museums. On average, 8 workshops are put on annually by these institutions to an average audience size of 41.

### Teaching Strategies Used by Museum Educators

To answer the second research question relating to teaching strategies, museum educators were asked what type of adult program they consider to be a particular strength of their museum and why. Types of programs (e.g. lectures, courses, teacher workshops) were identified and counted. Museum educators most often cited excellence in lectures and teacher programs. Twenty references each specifically mentioned these programs. Museum educators consider lectures to be excellent "because they are on-going and cover a wide spectrum of generalized subjects." Lectures attract "potential new audiences," and "they work to give people a greater understanding of the collection and in turn the museum." Another stated, "As a university museum, there is an expectation and interest in thought-provoking, somewhat academic presentations."

Teacher training programs, on the other hand, create "a strong partnership with area educators." Excellent teacher training programs "are designed to meet local needs . . . use best practice . . . [and] link scientists and teachers." As another educator stated, "We model effective methodology so teachers can learn history and how to teach it." We have "a strong partnership with the local university to provide inquiry-based instruction to pre-service teachers." The museum "offers practical

interactive curriculum which can be implemented directly into the classroom and assist teachers in meeting goals outlined by the state." We are "responsive to their needs." It is "a hands-on experience."

Docent training, gallery demonstrations, and field trips were frequently cited as areas of excellence within museum education programs. Each was specifically mentioned at least 10 times by survey respondents. Excellent docent training programs provide a "thorough background in content and techniques." The program is "always full and gets good reviews from the participants." Gallery demonstrations are "fun," "hands-on," and allow "for dialogue between adults and demonstrators." Field trips "offer opportunities to get out of the museum and get a sense for the subject in situ." They are "unique" and "attract new members."

Tours were also mentioned. One museum offered an excellent "introductory tour from the perspective of the director, curator, conservator, and educator daily." Staff is "trained to construct interactive dialogues." Tours are excellent" because we can take these visitors for an in-depth look at a part of the collection." Dramatic presentations were also cited several times. "Adults say they develop a better understanding of the past after viewing a drama." Visitors "don't expect to see theater in a science museum and it is very effective in that sense."

When asked what types of programs were successful with large groups of adults, the most frequent response was "lectures." Symposiums and tours were often cited as were dramatic presentations, film series, and gallery talks. Workshops, teacher training programs, social events, bus trips, and living history programs were also mentioned more than once. When asked what types of programs were successful with small groups of adults, frequently mentioned were tours, hands-on workshops, and trips. A reoccurring theme was participatory activities that involved "discussion" or interaction between a teacher and an adult.

#### Methods for Designing and Planning Programs

Museum educators design and plan programs in a variety of different ways. Twenty-one percent follow a set course established by tradition. However, three-quarters of those responding indicated that they review the programs that have been successful in the past and design upcoming ones based on this information. Sixty-two percent meet with a group of museum staff to design and plan programs, and 58% indicated that they create programs based on what they think will be interesting to others. Forty-five percent involve past program participants when designing upcoming programs, and 48% involve potential program participants when planning new programs. Sixty-three percent review surveys from previous class participants and create

programs based on their comments. Other ways of designing and planning programs included "looking at other program brochures for ideas," meeting with curators, surveying "adult community groups," working "with advisory committees made up of people we serve." Several educators indicated that they plan programs "appropriate to the learning objectives for our exhibitions," or create programs "when an opportunity arises which shows promise."

Co-sponsoring programs with other institutions is currently popular as it enables institutions to extend their influence and maximize resources. In this survey, museum educators were asked about the types of institutions with which they co-sponsored programs and how many such programs they offered annually. Thirty-seven percent of museums indicated that they co-sponsor programs with other professional organizations. They average six such co-sponsored programs annually. Fourteen percent organize programs with libraries. An average of three programs are co-sponsored annually with government agencies for 26% of those responding. Forty-five percent of museum educators created programs with other museums. A negligible number of museum programs are co-sponsored with hospitals and religious groups. Forty percent of museums partner with universities to offer programs while only 20% partner with city or state parks.

Seventy-two percent of museums indicated that they had conducted a visitor survey in the past five years. Several educators used this information "to adjust times, dates of programs, locations, and length." Others used a visitor survey "to help us to understand even better the types of things people are interested in" and "identify aspects of [the] museum of greatest interest to visitors." Others used it to glean "suggestions on ways to improve" and "determine focus areas for programming and program content." Several educators mentioned that they do not use the information from their visitor survey in program planning and other surveys provided no information applicable to adult programs within museums.

#### What Constitutes an Excellent Adult Program

Museum educators were asked to identify the top three elements that define an excellent museum program for adults. Elements that were mentioned were diverse and wide ranging and can be divided into three categories: mission, audience interest, and adult needs. Most comments related to audience interest and adult needs.

A sample of responses that related to the museum's mission noted excellent museum programs are "linked to the mission" [and] "goals of the site." The subject matter must also be appropriate to the institution and provide an "opportunity to experience elements only found in

museum settings." Solid adult programs have "a clear purpose" and "make participants feel part of the organization and its mission." They "provide an opportunity to get close to real things."

Museum educators frequently commented on audience interests. As they noted, audiences demand "topics of interest to adults," "interesting subject matter," well-paced programs" with "highly-qualified presenters," and thorough planning. Excellent programs address "community needs" and "provide information that adults would like to know." They provide "meaningful content--if adults come, they are anxious to learn." They are "useful."

Museum educators most often commented on adult needs. Adult needs require that programs have a "practical application for [the] audience and be offered in a "physically-comfortable setting." Programs must also be "lively," "flexible," "accessible," "challenge abilities" of participants, provide "social" experiences, and allow "ample room for discussion." Excellent museum programs offer "a variety of formats to attend to different learning styles of adult learners." They "connect learning to human experiences" and "acknowledge and make use of life experiences." All of these needs are commonly identified in adult education settings.

When asked to identify other institutions that were offering excellent museum programs for adults, over 50 different institutions were

mentioned. For example, the San Francisco Museum of Modern Art was cited for its diversity of programs and prestigious presenters. The "content driven" programs at the Virginia Museum of Fine Arts were applauded as were "high quality" efforts of the Missouri Botanical Gardens. Community initiatives were a strength cited at the Chicago Art Institute, and the Sacker and Freer Galleries were mentioned for their ability to attract and sustain new audiences through solid adult programs. Excellence in scope of programs was mentioned in reference to the Cleveland Museum of Natural History, the Minneapolis Institute of Arts, the Science Museum of Minnesota, and the Boston Museum of Science. The California Academy of Science was cited for "putting their very excellent staff in forefront . . . [and continually] updating the topics."

#### Teaching Styles of Museum Educators

The third research question asked about the teaching styles supported by museum educators. Teaching style was measured by PALS. This teaching style inventory is based on principles in the adult education literature. High PALS scores indicate a learner-centered approach to teaching; low score indicate a teacher-centered approach. The mean score for PALS is 146. Museum educators' overall PALS scores ranged from 114 to 176 with an average score of 140.

Table 1. Distribution of PALS Total Scores.

Total Score	Frequency
106-116	5
117-126	12
127-136	24
137-146	25
147-156	16
157-166	10
167-176	4

Survey data thus revealed that museum educators' are widely diverse in their beliefs about teaching. With the average score near the mean, it indicates a fairly normal distribution. PALS scores were also totaled and compared between art museums, history museums, natural history museums, and science centers. The average score for each was 140, 139, 137, and 140 respectively, and thus there was no significant difference between the PALS scores of museum educators from different types of museums.

PALS factor scores are calculated by adding the responses for each item in the factor. Factor 1 is learner-centered activities. Low scores indicate support for the use of formal testing and for the use of standardized tests as a means of comparing learners to established standards. High scores encourage informal evaluation techniques and

classroom behaviors that support adults taking responsibility for their own learning (Conti, 1989). The mean Factor 1 score value is 38 with an standard deviation of 8.3. Museum educators had an average score of 37 with a standard deviation of 6.1.

Factor 2 is Personalizing Instruction. Low scores indicate a preference for competition and teacher-paced learning objectives. High scores demonstrate a willingness to create a learning situation that meets the needs of individual adults. The mean Factor 2 score value is 31 with a standard deviation of 6.8. Museum educators' mean score was 31 with a standard deviation of 4.0.

Factor 3 is Relating to Experience. Low scores indicate a teaching style that provides no recognition of an adult's prior learning experiences. High scores reflect a willingness to take into account adults' prior learning experiences and to encourage adults to build from these experiences. The standard mean of Factor 3 is 21 with a standard deviation of 4.9. Museum educators' average score was 19 with a standard deviation of 3.9.

Factor 4 is Assessing Student Needs. Low scores indicate a lack of instructor interest in finding out what adults need and want to know. High scores indicate a willingness to assess what adults want and need to learn often through individual conferences and informal counseling. The standard mean of Factor 4 is 14 with a standard deviation of 3.6.

Museum educators scored an average of 9 with a standard deviation of 4.5.

Factor 5 is Climate Building. Low scores indicate that teacher is not creating a learning environment that is physically and psychologically comfortable for learners. High scores show that the teacher is concerned about the comfort of the adult in a learning situation. In this environment, adults are encouraged to interact with other students, to take risks, and to not be punished for failures in the learning process. The standard for Factor 5 is 16 with a standard deviation of 3. Museum educators scored an average of 16 with a standard deviation of 2.3.

Factor 6 is Participation in the Learning Process. Low scores indicate little teacher support for allowing adults to identify their own learning problems. High scores reflect a willingness to allow students to identify problems they wish to solve and participate in the topics that will be covered along with the evaluation of the experience. The mean for this factor is 13 with a standard deviation of 3.5. Museum educators scored an average of 13 with a standard deviation of 3.0.

Factor 7 is Flexibility for Personal Development. Low scores indicate a view of the instructor as a provider of knowledge rather than as a facilitator. High scores reflect a view of a teacher as a learning coach. The mean for this factor is 13 with a standard deviation of 3.9.

Museum educators scored an average of 13 with a standard deviation of 2.9.

For all Factors, as a group museum educators scores were near the mean with the exception of Factor 4 which emphasizes assessment. As the group scored one standard deviation off the mean, it suggests that museum educators are not very committed to assessing what adults need and want to learn. This score contradicts the information that museum educators provided regarding use of a visitor survey in program planning.

#### Museum Educators' Ties to Adult Education Methodology

The fourth research question asked about museum educators' familiarity with principles of adult education. The above-mentioned PALS scores would suggest that some museum educators are practicing teaching styles congruent with adult learning principles to some extent and that they are somewhat familiar with adult education methodology. The distribution of the group, however, indicates that an equal number do not accept the adult education approach. Also, a large group in the middle use both learner-centered and teacher-centered approaches to the teaching-learning transaction.

When asked about their training in adult education methodology, museum educators' responses were also mixed. Eighteen percent had taken a class in adult education at a university. Fifteen percent had

attended a museum-sponsored workshop on adult education. However, 78% indicated that experience had taught them what worked and what did not with respect to adult education. One-third had read articles on adult education in professional journals or books while 40% had observed an adult education program someplace else.

Of those responding, museum educators had spent an average of 10 years working in the museum industry. Thirty-six percent held a bachelors degree, 57% held a masters degree, and 7% held a doctoral degree. Two of the 105 educators had a degree in adult education. The majority of degrees held were in a humanities or science-related discipline.

### Groups of Museums

Cluster analysis was used to seek out any relationships that exist between museums based on types of programs, demographic variables, and acceptance of adult learning variables. Using cluster analysis, individual variables can be sorted "into an end group which can then be categorized based on its unique characteristics" (Fellenz & Conti, 1989). In this study, cluster analysis was used to determine if any distinctive groups formed on the basis of participants' responses to the items in Section 1 of the questionnaire. This section included the types of museum programs and the demographic variables. The questions in this section constructed 144 separate variables.

Table 2. Variables on Which Clusters Differed.

Variable	t-value	p	Mean	
			Cluster 1 Child Oriented Museums	Cluster 2 Adult Oriented Museums
Percent of Children's Programs	3.06	.003	52.35	37.37
No. of Lectures	3.60	.001	12.02	24.88
No. of Tours	9.58	.001	44.76	659.29
No. of Demonstrations	3.74	.001	16.90	379.27
No. of Discussions	3.81	.003	4.09	30.50
No. of Volunteer Training Courses	4.28	.001	10.19	31.42
Attendance for Dramatic Presentations	5.27	.001	71.67	281.88
Size of Museum	3.64	.001	2.00	2.63
No. of Volunteers	3.90	.001	44.69	149.38
No. of Years Staff Has Worked in a Museum	2.37	.020	9.66	13.94

All complete survey responses were included in the analysis. Using the quick-cluster process of SPSS, this statistical technique identified two clusters. Following the cluster analysis, t-tests were calculated for each of the 144 variables to see which are related to each cluster and to see "how the variables are associated with the cluster" (Conti, 1996). Cluster 1, which contained 85 museums, consisted of a group that did significantly more children's programs than adult programs. They made up 77% of all responding museums and can be

labeled the "child-oriented museums." Cluster 2, which contained 18 museums, revealed a group that created fewer children's programs and offered more programs for adults including lectures, tours, gallery demonstrations, volunteer training courses, and discussion groups. Museums in Cluster 2 constitute 16% of all museums and can be labeled the "adult-oriented museums." They included more large institutions than the "child-oriented museums." Staff from the "adult-oriented museums" also had more years of experience working in a museum setting and had significantly larger volunteer programs than the "child-oriented museums."

After the two clusters were formed, a  $t$ -test was performed to see if the respondents in these clusters differed in their adherence to adult education principles as measured by PALS. This  $t$ -test comparison indicated that teaching style was not a variable that distinguished one cluster from the other. Different types of museums (e.g. art museums, history museums, science centers) were found in both clusters. A Chi-Square test revealed that the different types of museums were distributed in the clusters as expected. Two distinct types of museum groupings exist, and each has various teaching styles and beliefs about adult education principles equally distributed throughout the group.

## CHAPTER 5

## CONCLUSIONS AND RECOMMENDATIONS

Summary

Today it is widely understood that each museum has an "educational responsibility to the public it serves" ("Standards", 1990, p. 78). This educational role is recognized both within and outside the museum community. In the same context, adults in America are looking for opportunities to learn. These adult learners are looking to alternative educational resources in ever-increasing numbers, and museums are a natural provider of educational services to these audiences. However, little is known about how museums effectively serve adult audiences. Likewise little is known about the methodology upon which adult education programs in museums are based.

Prior to 1970, there was virtually no research conducted on adults in museums (Zetterberg, 1969, p. ix). As Knowles noted in 1962, "Museums have lagged far behind most other institutions in differentiating their adult education function" (Knowles, 1962, p. 172). In 1975, a landmark study conducted by Mary Hyman of the Maryland

Academy of Sciences focused on the status of adult programs in science centers. Through a survey of museum professionals, she found that "80% of all educational programming reported is for children, 20% for adults" (Hyman, 1976, p. 8). This evidence she stated would clearly indicate that the "science centers have justifiably been considered 'children's museums' by the general public" (p. 9). At best, she considered them family-oriented.

In 1995, 20 years after Mary Hyman's survey, this study was undertaken to assess the types of formal adult museum programs taking place, to delineate the predominate teaching styles used by museum educators with adults, and to determine how adult education methodology is used in program design and planning. To examine questions relating museum educators' practices and preferences for teaching adults, this research project utilized a survey that was based on the principles in the adult education literature. It was pilot-tested and sent to all museum educators that are members of the American Association of Museums (AAM) or the Association of Science Technology Centers (ASTC). Several of the questions that were developed reflected those asked in the 1975 Hyman study to see if there was any change in museum educators' responses. To investigate museum educators' preferences for teaching adults, PALS was included in the second section of the survey instrument.

Data from this study were used to describe the status of adult museum programs in the United States, the types of behaviors museum educators exhibit when teaching, and how well they utilize principles of adult education in learning situations.

### Summary of Findings Relating to Current Programs

The first primary research question inquired about the educational programs that are presently designed and planned for adult audiences in museums. The survey data revealed that there are many different types of adult programs in museums, but only a small percentage of the total museum programming is created for adults. This study showed that 27% of all programming is designed for adults, 24% for families, and 49% for children. Survey data from the 1975 Hyman study found that 20% of all programming was created for adults, and 80% was for children. She did not specifically ask about family programming.

Almost all of the museum educators (94%) indicated that they offered some type of adult education program. The survey data revealed that most of these programs fall in one of the following categories: Non-credit classes, lectures, symposiums, field trips, guided tours, gallery demonstrations, discussion groups, volunteer training courses, teacher workshops, film series, and dramatic presentations. Some of these teaching strategies are more commonly offered by museums than others:

lectures--68%, teacher workshops--68%, guided tours--56%, volunteer training courses--52%, non-credit classes--44%, field trips--37%, symposiums--37%, gallery programs--30%, credit courses--25%, dramatic presentations--23%, and films--20%. Field schools (7%) and discussion groups (13%) are least frequently offered. Compared to the 1975 survey conducted by Hyman, she found that of the 40 ASTC-member museums that responded lectures (80%) were the most prevalent form of adult programs in museums followed by film series (70%), guided tours (60%), and field trips (60%). Discussion groups (12%) were uncommon.

When the 1995 data regarding teaching strategies are compared by the average number of adults served per program, the results are strikingly different. For example, for those museums that offer dramatic presentations, on average 97 are conducted annually with an average attendance of 179. Thus, 17,363 people on average participate in a dramatic presentation in a museum that offers such programs. For those museums that offer guided tours for adults, an average of 456 adult tours are conducted annually with an average group size of 31. The total number of adults that participated in a museum tour, where available, was 14,136. Based on the average number of programs and participants, the following number of adults attended the various museum activities: gallery program--6,360, film--3,663, symposium--1,924, lecture--1,488, college credit course--1,102, discussion group--936, field trip--875,

non-credit class--748, and volunteer training course--416. Per institution, only 320 participated in a teacher training workshop and 198 participated in a field school.

When this same data is extrapolated to account for the number of museums that actually offer each of these types of programs, the results are also noteworthy. Given a hypothetical 100 museums, the following numbers of adults would be served in each of the following programs given the survey data: guided tours--791,616, dramatic presentations--399,349, lectures--101,184, gallery programs--190,800, film--73,260, symposiums--71,188, non-credit classes--32,912, field trips--32,375, credit courses--27,550, teacher workshops--21,760, volunteer training courses--21,632, discussion groups--4,160, and field schools--1,386.

### Conclusions

1. Almost all museums offer programs for adults; however, the primary clientele for museum programs is children.
2. Lectures and guided tours are the two most common adult programs offered by museums; however, dramatic presentations are among the most popular.
3. Adults are more likely to participate in a guided tour than any other type of museum program.

4. Even though most museum education efforts are aimed at children, there are some museums that are implementing more innovative teaching strategies, such as gallery demonstrations, dramatic presentations, and discussion groups that are well-suited to adult learner needs.

The survey data suggests that museums are making some effort to define their adult education function even though few museums offer a diverse range of adult programs. Of those responding to the survey, 96% of museum educators said they offer some type of adult program, although the overall percentage of adult programs (27%) is low when compared to children's programs (49%). Given the structured nature of children's programs and the need to accommodate large numbers of school children, this discrepancy is not surprising. It is clear that programming for school children remains the core of most museum education department functions. Museums are looking to schools to bring in a large percentage of their clientele.

The four most common adult programs offered by museum are: lectures--68%, teacher workshops--68%, and guided tours--56%, volunteer training courses--52%. Of these four programs, the only ones offered by more than half of the responding institutions, it is important to examine the motivations of museums for offering them and the segment of the adult audience they serve.

Lectures are cost-effective programs that can be easily administered and serve large numbers of adults. While lectures enable a substantial amount of information to be shared in a short period of time, adults do not prefer lectures over other types of teaching strategies. As Knowles noted, for adult learners "the use of lectures, canned audio-visual presentations, and assigned reading tend to fade in favor of discussion, laboratory simulation, field experience, team projects, and other action learning techniques" (Knowles cited in Hyman, 1976, p. 9).

Given the number of tours offered, adults are more likely to participate in a tour than any other adult program. Guided tours are used extensively by museums to enhance the educational experience of exhibits and have the potential to intellectually inspire adults. Good tour guides, or docents, provide opportunities to engage adults in higher-level thinking problems and while teaching strategies for guided tours are never the same from institution to institution, many museums stress an interrogative rather than a lecture approach. The addition of teaching materials, interactive exhibits, and group participation activities provide an opportunity for innovation and experimentation. Guided tours, however, are usually only available to groups of adults that have made an advanced reservation with a museum. Only at a few institutions are guided tours available on weekends or weekdays at predetermined times for individual adults to join in. Teacher training is offered by most

museums, and this is indicative of the cultivated link between museums and schools.

As museums are looking to schools to bring in a large percentage of their clientele, there is a natural link between museums, teachers, school curriculum, and pedagogy. Teacher training in museums is usually directly linked to programming for school children and is often used as a marketing tool to encourage more school group visits. The amount of teacher training being conducted by museums in recent years has also increased in response to national initiatives to form stronger partnerships between schools and museums. It has been widely recognized that museums offer unique environments for teaching children, and as schools move away from rote textbook memorization to inquiry based learning, federal initiatives have supported museum educators assisting teacher retraining efforts. These workshops by their very nature usually encourage active learning experiences and help teachers build skills based on previous classroom experiences.

As museums increasingly rely on volunteers to provide interpretive and visitor services, it is not surprising that volunteer training is a common adult museum program. Volunteer training can serve as study courses for persistent learners that want to immerse themselves in the content and culture of a museum. As volunteer training programs within a museum typically support every facet of the museum's operation, from

handling store cash registers to museum security, volunteer training programs provide many opportunities for adults to get involved in the day-to-day operations of a museum and learn more about the research, preservation, display, and interpretation of objects. As museums need to entice volunteers to support the museum's program, training is usually flexible and targeted at adult needs as well.

While only half of the responding museums indicated that they offered more types of adult programs than lectures, teacher workshops, guided tours, and volunteer training courses, the survey data revealed that a wide variety of adult programs were offered by a small number of museums. These museums' educational activities went beyond lectures as they experimented with more innovative and active teaching strategies including gallery demonstrations, dramatic presentations, non-credit classes, discussion groups, and field schools. All of these teaching strategies can move the adult learner from a passive role into a more active role and, when incorporating objects and exhibits, they can also provide adult learning opportunities that are unique to museums.

While gallery demonstrations are offered by less than a third of all museums, these programs can be stimulating and easily accessible for the adult learner. These brief ongoing exhibit-floor demonstrations, which are led by volunteers or staff, generally occur on an ongoing basis so adults can choose when or if to participate. When participating in a

gallery demonstration, adults can stay as long as they like and the informal nature of these programs invites adults to ask questions or join an in-promptu discussion. Many offer opportunities for adult to engage in higher-level thinking skills when encouraged by the demonstrator.

Dramatic presentations are not unique to museums, yet their presence within museum education programs is noteworthy with respect to adult learning. Like gallery demonstrations, dramatic presentations can also play an important role in a museum for the self-directed learner. Self-directed learning experiences often have "humble beginnings." They are rarely pre-planned. Instead, some "triggering event" pushes adults to another learning level (Candy, 1991, p. 170). Dramatic presentations offer an opportunity to affect the feelings and emotions of an adult in a way that can make for an indelible learning experience. Show schedules provide choices for the adult viewer, and these types of programs also help to combat museum fatigue as they typically provide seating and a change of pace. While dramatic presentations are offered by only 23% of museums, more adults participate in these programs than any other where they are offered.

Non-credit museum courses provide opportunities for adults to pursue learning goals irrespective of degrees or certificates. Because non-credit courses do not have to satisfy any degree requirements, the instructor is free to create a course based on adult interests and to

modify it accordingly. Using objects from the museum, instructors can create programs that give adults an educational experience that is difficult to replicate elsewhere.

Discussion groups allow adults to have some degree of control over the learning experience and become active learners. As an educational activity within a museum, they can provide thoughtful and intellectual dialogue relating to the mission, research, and curatorial activities over an extended period of time. Yet, discussion groups are rarely offered by museums today, and this finding concurs with Hyman's study in 1975. As she noted, "One of the most accessible and informal types of adult programming" was offered least frequently (p. 22). Discussion groups may not be offered because museum educators are not comfortable setting them up, do not know how to facilitate them or do not have the time to do so. Museum educators may not be able to offer them because they are geared for small groups and hence they are less cost-efficient. Because they are rarely offered, there are not many discussed in other museums' literature for others to emulate.

Field schools provide active learning opportunities for adults to explore some aspect of a museum's mission. They can encourage appreciation for museum activities based on the extended opportunity to understand and learn about them that a field school provides. Field schools are not commonplace educational activities because museums

rarely have all the resources to create one. Field schools usually require museums to have public access to a field site, an active research and education program, and the staff and physical resources to be able to sustain an outdoor field program. Many museums do not have access to this combination of resources.

### Summary of Teaching Strategies of Museum Educators

To answer the second research question relating to teaching strategies, museum educators were asked what type of adult program they considered to be a particular strength of their museum and why. Types of programs (e.g., lectures, courses, teacher workshops) were identified and counted. Museum educators most often cited excellence in lectures and teacher programs. Museum educators consider lectures to be excellent "because they are on-going and cover a wide spectrum of generalized subjects." Lectures attract "potential new audiences," and "they work to give people a greater understanding of the collection and in turn the museum." Teacher training programs were the second most frequently mentioned program. They create "a strong partnership with area educators." Excellent teacher training programs "are designed to meet local needs . . . use best practice . . . [and] link scientists and teachers." As another educator stated, "We model effective methodology so teachers can learn history and how to teach it." Docent training,

gallery demonstrations, and field trips were also frequently cited as areas of excellence within museum education programs. Excellent docent training programs provide "thorough background in content and techniques." The program is "always full and gets good reviews from the participants." Gallery demonstrations are "fun," "hands-on," and allow "for dialogue between adults and demonstrators." Field trips "offer opportunities to get out of the museum and get a sense for the subject in situ." Tours were mentioned several times. One museum offered an excellent "introductory tour from the perspective of the director, curator, conservator, and educator daily." Dramatic presentations were also cited several times. "Adults say they develop a better understanding of the past after viewing a drama."

When asked what types of programs were successful with large groups of adults, the most frequent response was "lectures." Symposiums and tours were often cited as were dramatic presentations, film series, and gallery talks. Workshops, teacher training programs, social events, bus trips, and living history programs were also mentioned more than once. When asked what types of programs were successful with small groups of adults, frequently mentioned were tours, hands-on workshops, and trips. A reoccurring theme was participatory activities that involved "discussion" or interaction between a teacher and an adult.

Museum educators design and plan programs in a variety of different ways. Twenty-one percent follow a set course established by tradition. Sixty-two percent meet with a group of museum staff to design and plan programs, and 58% indicated that they create programs based on what they think will be interesting to others. Forty-five percent involve past program participants when designing upcoming programs, and 48% involve potential program participants when planning new programs. Sixty-three percent review surveys from previous class participants and create programs based on their comments. Other ways of designing and planning programs included "looking at other program brochures for ideas," meeting with curators, surveying "adult community groups," working "with advisory committees made up of people we serve." Seventy-two percent of museums indicated that they had conducted a visitor survey in the past five years, but most were not aimed at program planning.

Museum educators were asked to identify the top three elements that define an excellent museum program for adults. Elements that were mentioned can be divided into three categories: mission, audience interest, and adult needs. Most comments related to audience interest and adult needs. For example, audiences demand "topics of interest to adults," "interesting subject matter," well-paced programs" with "highly-qualified presenters" and with thorough planning. Excellent

programs address "community needs" and "provide information that adults would like to know." They provide "meaningful content--if adults come, they are anxious to learn." They are "useful. Adult needs require that programs have a "practical application for [the] audience and be offered in a "physically-comfortable setting." Programs must also be "lively," "flexible," "accessible," "challenge abilities" of participants, provide "social" experiences, and allow "ample room for discussion."

### Conclusions

5. To accommodate large groups of adults, museums continue to be reliant on adult programs, such as lectures, that allow for little participation but enable large numbers of adults to attend.
6. With smaller groups of adults, museum educators are more accommodating with respect to adult needs.
7. While museum educators frequently mention the need to involve adults in program planning and encourage active participation, the teaching strategies they use most frequently do not readily accommodate adult participation.
8. There is evidence that some museum educators are moving toward the collaborative and learner-centered mode of adult education as they encourage adults to be part of the planning

process and view their primary role as one that identifies and clarifies problems and locates resources.

In response to the question related to the strategies or behaviors most often used by museum educators when teaching adults, museum educators suggest that they use techniques with which they feel comfortable and feel confident that they can achieve successful results. Their responses emphasized lectures and teacher workshops. While lectures allow for little adult participation, they are easy to administer, cost-effective, enable a great deal of information to be shared, and can accommodate a large number of adults. Teacher workshops are a strength of many institutions because of the amount of time they invest in designing and administering programs for school children. While they often take a great deal of planning and preparation, they subsequently provide a payoff in terms of additional school visits and use of teaching materials that museums have developed.

While museum educators frequently mentioned the need to involve adults in program planning and encourage active participation, the teaching strategies they use most frequently do not readily accommodate adult participation. Given the numbers of adults to serve and the limited amount of time and money available for adult museum programs, it appears that museum educators are emphasizing large group activities,

such as lectures, that provide the biggest payback in terms of numbers served.

With smaller groups of adults, museum educators do accommodate the active learning needs of adults with teaching strategies such as tours, field trips, and classes. Their responses to the question of what constituted an excellent adult program revealed that many museum educators have a strong sense of adult needs and preferences for learning. These small group educational activities, however, make up a small fraction of their overall museum program.

Almost half of the museum educators indicated that they seek information either from past and potential adult participants when planning new programs. This solicitation effort denotes a commitment to creating a solid education program for adults and it is also a positive indicator that some museum educators are moving toward the collaborative mode of adult education. Another indicator that some museum educators support the collaborative mode is found in their responses to the question relating to elements of an excellent adult program. Most comments related to audience interest and adult needs. However, other comments related to the mission and needs of the institution.

It is true that learners' "perceptions of their educational needs and educators' perceptions of those same needs are frequently discrepant"

(Brookfield, 1992, p. 13). For museum educators to "suppress their own convictions about what learners need is for them to deny their reason for being" (p. 13). The key remains in finding a balance, in collaborating and negotiating. Using this approach, museum educators can develop programs with adult learners, while they also communicate the agenda and visions of the institution.

#### Summary of Findings Related to Museum Educators' Teaching Style

The third research question asked about the teaching styles used by museum educators based on PALS. PALS is a teaching style inventory that is based on principles in adult education literature. High PALS scores indicate a learner-centered approach to teaching; low scores indicate a teacher-centered approach. A mean for PALS is 146. Museum educators' overall PALS scores ranged from 114 to 176 with an average score of 140. PALS scores were also totaled and compared between art museums, history museums, natural history museums, and science centers. There was no significant difference between the responses of museum educators with respect to the type of institution they work in.

### Conclusions

9. While the nature of informal education programs suggest that museum educators as a group would embrace the learner-centered approach to teaching, PALS scores show they do not.

10. Museum educators are widely diverse in their beliefs about teaching and learning as are other adult educators.

Museum educators' average PALS scores and their distribution of scores reveal that they are diverse in their teaching style and in their agreement with the collaborative principles widely supported in the adult education literature. As a group, they do not embrace principles of adult education. Rather, like other adult educators, museum educators demonstrate conflicting behaviors as a group.

The nature of informal education programs suggest that museums could inherently embrace the learner-centered approach to teaching. This approach makes sense not only for adults in informal education museum programs but also for people of all ages. Yet the survey results reveal that museum educators as a group are mixed in their approach. Perhaps it is because museum educators teach such a diverse range of learners on a regular basis. It may also be that, as a group, there is not a common-held philosophy on the nature of teaching and learning within museums. Every institution has a different mission, a different audience

make-up, and museum educators interpret their sense of purpose in many different ways.

The "andragogical model of instruction has not been used much in actual practice. Adult learning in formal settings, for the most part, is still instructor designed and directed" (Merriam & Caffarella, 1991, p. 26). In the case of many museums, PALS scores suggest that this statement is true. Results suggest that some museums are using the collaborative mode for designing and teaching adult programs. Other responses, however, suggest that museum education programs at some institutions are still very teacher-centered. The teacher-centered approach is expected and accepted in formal educational programs such as schools. However, the teacher-centered approach is not the preference of self-directed adult learners, whose participation in informal adult programs is vital to their existence. This may well be why some museums have multi-faceted adult education programs and others do not.

#### Summary of Findings Relating to Museum Educators' Familiarity with Adult Education Principles

When asked about their training in adult education methodology, museum educators' responses were mixed. Eighteen percent had taken a class in adult education at a university. Fifteen percent had attended a museum-sponsored workshop on adult education. However, 78%

indicated that experience had taught them what worked and what did not with respect to adult education. One-third had read articles on adult education in professional journals or books while 40% had observed an adult education program someplace else.

### Conclusions

11. Museum educators have acquired their knowledge and beliefs about many principles of adult education through practical experience working with adults.

Through practical experience, museum educators are aware of the principles of adult education and try to incorporate them where possible. Their responses to the question of what constitutes an excellent adult program suggest that they are trying to achieve a balance between the needs of the institution and the needs of adult learners. PALS scores suggest that some museum educators are practicing teaching styles congruent with adult learning principles and that they are somewhat familiar with adult education methodology. For as many educators that have adopted the learner-centered approach, however, there are others that are following a teacher-centered approach. Others use both learner-centered and teacher-centered approaches to the teaching-learning transaction.

With respect to formally surveying audiences, museum educators indicate that about half are making significant attempts to know their adult audiences and plan programs accordingly. They are actively seeking adult input to create more relevant programming. Many are using audience research to provide more information about their current adult audiences and to reach new audiences.

#### Summary of Findings Relating to Museum Grouping

Using the quick-cluster process of SPSS, two clusters of museums were identified using 110 complete cases. Cluster 1, the "child-oriented museums," consisted of 85 museums that did significantly more children's programs and offered fewer lectures, gallery programs, and discussion groups. On the other hand, the 18 "adult-oriented museums" that made up Cluster 2 created fewer children's programs and offered more lectures, gallery programs, and discussion groups. Therefore, 77% of all responding museums are predominantly child-oriented while 16% are adult-oriented museums. The "adult-oriented museums" included more large institutions than the "child-oriented museums." Staff from the "adult-oriented museums" also had more years of experience working in a museum setting and had significantly larger volunteer programs than the "child-oriented museums." However, there was no significant difference

between the PALS scores of the two groups and no difference between the types of museums found in each group.

### Conclusions

12. There are two distinct groups of museums, one of which is child-oriented; the other is adult-oriented.
13. Within both groups, there are educators that are receptive to the principles of adult education.
14. The child-oriented museums are most closely aligned to schools whereby adult-oriented museums have developed additional collaborative relationships with adults.
15. The lack of seed money to experiment with adult learning projects, by comparison to children's programs, is a detriment to the development of innovative adult museum activities.

Mary Hyman concluded in 1975 that science centers as a group are predominantly child-oriented and the recent cluster analysis supports this idea not only for science centers, but for all museums. Most museums are child-oriented and their programs are more closely aligned with formal educational programs such as schools. There is a strong link between most museum programs, school curriculum, teacher-directed learning, and formal assessment measures. For most, it is their primary

reason for existence. The earned revenue from school programs in museums is usually the base funding for the education department.

Adult-oriented museums are distinctive not only for the number of adult programs they offer, but also for the substantial volunteer support they enjoy. This type of support comes from staff acceptance and value of additional adult input and service beyond those in paid positions. It indicates a willingness to collaborate and negotiate with other adults to the benefit of the institution. However, it is important to note that the museum educators at these institutions are not necessarily using the learner-centered approach to teaching. They may be more receptive to it, however.

For some within the group of child-oriented museums, there is a fundamental philosophical barrier that needs to be bridged before these museum educators will ever consider developing their adult education function. Adult education needs to become part of their philosophy of education and they need to be receptive to the potentials of developing such a program. Within this group, however, there is a core of educators that is committed to the principles of adult education and can be expected to be more receptive to further developed adult education activities.

As educational activities within museums continue to develop, it is expected that more museum educators will create more programs that

focus on adult learning needs. Since 75% of all American museums were founded after 1950, most museum programs are less than 10 years old. From their inception, they have focused on serving school groups as their primary audience. They have devoted a great deal of their time and resources to building educational infrastructures that support the needs of schools. The staff has been hired accordingly. It is only after these links have been made with schools and other formal educational systems that museums can devote additional resources to building adult programs. Longer-established museum education programs are typically associated with larger institutions, and they have the benefit of time, additional resources, and staff experience to develop programs that are specifically targeted at adults. While museum educators at these institutions have not necessarily adopted the principles of adult education, they are in a better position to learn from their adult educational activities based on experience.

While most museums presently offer some type of adult program, they are aimed at serving large numbers or efficiently accommodating predetermined adult groups. Unlike children's programs, museums rarely receive financial support to develop adult programs, and so there is little opportunity for experimentation and innovation given the present circumstance of most institutions. National initiatives to promote adult learning are scarce. Historically, the Kellogg Projects in Museum

Education stand out as one of the few national projects devoted specifically toward adult learning needs. More such initiatives are needed for museums to further develop their adult education function.

### Recommendations

Based on the conclusions of this research project, the following recommendations are offered. They are aimed at museum educators, administrators, and professional museum organizations, including AAM and ASTC.

#### Continuing Education for Museum Professionals

It is recommended that seminars be created and conducted by museum professionals for museum professionals on how to launch and maintain a robust adult education program in a museum setting. These types of seminars should be conducted in collaboration with experts in adult education. Both groups of professionals have a great deal to learn and share with each other. Adult educators can assist museum educators by explaining the theory upon which their successful practice is based. Museum educators can share from experience how they have determined and set goals to meet the needs of adult learners and reflect upon their experience. Both can support the body of knowledge that underlies a profession. To assist with this, professional papers should be created

along with resource notebooks that contain ideas for program planners. An example of this type of information is found in Chapter 6.

Articulating the Philosophical  
Foundations of Museum Education

Museum education is often criticized for not having a philosophical foundation. In the past, it has also been criticized for not delineating its adult education function. To counter these arguments, it is recommended that as a group, museum educators formally articulate philosophical foundations. As difficult as this task might be given the diverse nature of museums, it is critical that the field articulate a sense of purpose, set of aims, and a framework of beliefs. The document Excellence and Equity may serve as an excellent starting point. While the field has few historic philosophers, the writings of Benjamin Ives Gilman, John Cotton Dana, and Frank Oppenheimer can provide a basis from which a document can be developed that is useful both to practitioners and those in related disciplines such as adult education.

To begin this process, museum educators need to individually and collectively for their institutions articulate and document their philosophy on museum education. Working together, museum educators also need to document overarching philosophical foundations for the profession at large. Some of the basic questions that need to be addressed include:

"What is our view of the nature of the learner? What is the purpose of

the [museum] curriculum? What is our role as a teacher? What is our mission in education?" (Conti, 1990, p. 79).

### Building a Vocabulary to Describe Museum Education

Just as Knowles offered the term "andragogy" to describe the practice of teaching adults, the field of museum education needs to better describe the unique attributes of museum education for both adults and children, especially with respect to teaching with objects. Teaching with objects lies at the heart of museum education. Regardless of the audience, it is one of the attributes that makes museum education distinctive. Successful methods that teach adults about objects and their relationships to them should be documented and disseminated. It is recommended that this practice as a whole be called "videgogy." This word is derived from the Latin prefix "video" meaning "to see" and Greek suffix "agogos" meaning "leader."

### Improving Links Between Adult Needs and Museum Programs

Many institutional evaluations of visitor use of exhibits have added to the field's knowledge of how adults approach different display elements. They indicate that adults frequently backtrack among displays, visit the same exhibit component more than once, and are engaged in exhibits with a social component. The same evaluative techniques are

more infrequently utilized and published with regard to formal or informal museum adult education programs. While most museums have conducted visitor surveys, only a few were targeted at programming concerns relating to adult audiences. Improved evaluation and increased use of visitor surveys that specifically target adults are recommended to provide institutions with more information about this constituency. The surveys need to get at the essence of adult perceptions about the role of the museum in their community, of their current perceptions of it as an adult education center, and of their perceptions of the ideal learning experience. Evaluations should also identify adult interests for various segments of the adult population including the young professional, the middle-aged, community-minded adult, and the older retiree.

#### Further Research

Often a research project concludes with more questions than answers. This is certainly the case with respect to adult education in museums. While data were collected and analyzed with respect to the types of programs taking place in museums and museum educators' preferences for teaching adults, many questions remain with respect to the nature of adult museum programs and the teaching and learning exchange that takes place. Recommendations for further research and ideas for supporting the practice of adult education stemming from these

findings are still unresolved questions. This research project focused on how museum educators design and plan programs for adults as well as their preferences for teaching adults. To fully address any of the research questions, similar questions need to be answered from participants' perspectives. For example, from the adult participant's perspective what constitutes an excellent museum program for adults? Are they attracted to certain levels of content? Does previous experience with museum programs or specific content areas affect their learning? Are certain learning styles or strategies used more frequently by adult participants? Do certain levels of knowledge or types of critical thinking skills appeal more to museum goers? What learning outcomes do adult participants most enjoy? Does the informal learning environment of a museum offer anything unique to the adult learning experience? Given these questions, it is recommended that further research be conducted with respect to the nature of the adult learner in the museum. A mix of qualitative and quantitative research may provide the most insight.

In recent years, a great deal of research has been done on the nature of the self-directed learner. Evidence and understanding of adults as active self-motivated learners are especially important to museums. As informal learning centers, museums are dependent on adults' interest in learning and their subsequent motivation to seek out unique experiences. Adults choose to participate in museum experiences

voluntarily. They decide when to visit, what programs to spend time with, how fast to pace themselves, and how much time they will spend on these types of experiences. To assess adult experiences in museum programs, a study should be conducted to identify attitudes, values, and preferences for learning when interviewing instructors and program participants that are participating in museum programs in a variety of settings. An analysis of participant responses should help to clarify the strengths of adult museum programs from the learner's perspective. This type of study could also be expected to identify the unique attributes of innovative museum programs for adults and their contribution to lifelong learning. A better understanding of informal adult learning activities will also help professional adult educators "to facilitate learning more effectively both in natural social settings and in more structured environments" (Darkenwald & Merriam, 1982, p. 153). It may also cause adult education theories to be revised to fit museum settings. They may even warrant their own learning theories related to the practice of adult education.

While none of the programs described in the survey appear to be distinctive to museums, in actuality they may well be. This survey just began to address how educators use the informal learning environment of a museum and its objects in teaching. More information may provide new insights into the nature of the adult education experience in

museums. Given the intrinsic nature of teaching with objects in museums, it should be at the heart of a future study of museums.

To aid research efforts, national organizations such as AAM and ASTC should work with other professional organizations such as the Museum Education Roundtable and the American Association of Museums Education Committee to maintain mailing lists and summaries of current research taking place in museums. These lists, coupled with an up-to-date resource library are the very tools that field researchers need to get started. The Museum Reference Center at the Smithsonian Institution is an excellent resource for those interested in researching topics pertaining to museum education. Its work and collection efforts should be supported by professional associations.

#### Funding Innovative Adult Museum Programs

So often in museums, the direction of education programs is maneuvered to match funding opportunities. Most of these grants provide support for altering or enhancing children's programs. Professional museum organizations should be encouraged to seek support for developing the adult museum program function, in such a way that it builds new adult audiences and enables future adult programs to be self-supporting. Seed money is very important if museum education programs are to experiment and expand into new program arenas.

## CHAPTER 6

EPILOGUE--ADULT PROGRAMS  
IN MUSEUMS: GETTING STARTED

Given the amount and type of adult programming taking place in museums today, this chapter will explore some issues and opportunities for museum educators to initiate and expand their programs for adults. It is divided into two sections. The first section provides a prescriptive guide for museum educators to help them start planning and implementing adult programs. The second section describes some of the innovative programs currently offered for adults in museums.

Most museum educators are highly educated, and yet they have little formal training in the field of adult education. However, they do know what works best in their museum setting, and many are dedicated to reading articles related to adult education. To best serve the needs of many museum educators, a short easy-to-use adult curriculum manual may prove to be a valuable tool. For museum educators that are just starting to plan adult programs, it offers a small prescriptive "powerbook" of program ideas. It is designed to introduce and describe adult museum program strategies for large and small groups. The following pages will

lay out the basics of such a guide. The text is written for museum educators.

### The Adult Museum Program Power Book

Successful adult programs build friends, fuel membership, and pay for themselves. To get there, start by creating and advertising interesting programs that inspire learning, encourage adults to identify the museum as a place for learning experiences, and offer unique opportunities unto themselves. To start creating some museum programs for adults, take a look through this guide for program ideas and formats. It is designed to review some basic teaching strategies that you can use in adult museum programs. Once you get started, there is plenty of opportunity to re-think, fine tune, or alter the types of programs you offer.

### Adult Education in Museums

"Adult education" and "informal education" often seem to be oxymorons. By nature, museums are the by-product of informal, spontaneous adult learning. However, there is little "informal" activity when it comes to planning exhibits or programs. Audiences are surveyed, routed, directed, and channeled toward major museum messages as soon as they arrive at the front door. Those "meta messages" say, formally or informally, things like "pay," "step to the left," "the Gorilla exhibit is

important," "you can see everything," "we value art," and "visit our store."

Adult museum programs speak the same "meta message." What will yours say?

### How Do You Create an Excellent Adult Museum Program?

To create an excellent museum program for adults, here's a list of tools to get started:

- \* Know you audience's needs and preferences for learning.
- \* Show an awareness of learning styles.
- \* Provide for "drop-ins" that have no reservations.
- \* Offer object-centered experiences.
- \* Create an interesting variety of formats and topics.
- \* Make sure they are fun.
- \* Make sure people learn something new.
- \* Set up a stimulating environment which can motivate adults to learn.
- \* Create a physically comfortable setting.
- \* Give adults time to socialize and reflect.

For the past 20 years, researchers in the field of adult education have been studying the optimal learning conditions for adults. Their findings are:

- \* Adults need and want to learn.
- \* Adults learn best when they can integrate their prior experiences.
- \* Adults want to participate in planning new learning experiences.
- \* Adults tend to be drawn to social learning experiences.
- \* Adults enjoy active learning experiences that encourage their participation.
- \* Adults often draw on childhood interests when choosing a new learning endeavor.

- \* Adults remember new ideas when invited to use higher-order thinking skills.

While adult learning needs are not unlike those of children, they are different. Adults are self-directed learners that can choose when to begin and end informal learning experiences. They are the ones that sign up, enroll, and pay for these learning opportunities. They consistently consume and demand quality learning experiences.

Strong adult programs come together when a museum's mission, vision, and educational strengths all merge with the needs of the adult learner. Take a few minutes to reflect on your strengths as an adult program planner and on your institution's strengths, educational goals, and resources. What do you have in common? Some museums successfully offer a wide variety of adult programs; others have developed a specialty that is unique to themselves. Where does your institution fit in? What can you offer as a museum educator of adults that is high quality, unique to your institution, and uses the best of your resources?

### Teaching Large Groups of Adults

Lectures, gallery talks, symposiums, gallery demonstrations, and dramatic performances are commonly used in museums with large groups of adults (50 or more people). These programs all have strengths

and weaknesses with respect to adult learning. A review of these presentation strategies follows.

### Lectures

A lecture is a "well-prepared oral presentation on a topic by a qualified person" (Bergevin et al. cited in Seaman & Fellenz, 1989, p. 54). Lectures are the most common adult program offered by museums primarily because they are easy to plan and cost effective.

Lectures have demonstrated the following strengths:

- \* They are relatively easy to organize.
- \* A substantial amount of information can be shared in a short period of time.
- \* A skillful lecturer stimulate adults to organize other self-directed learning activities.
- \* Lectures are of special benefit to adults that learn best by listening. (Seaman & Fellenz, 1989, p. 55)

Weaknesses of the lecture are:

- \* Only one person's ideas and views are presented.
- \* The speaker may not be an effective lecturer.
- \* The lecturer may use unfamiliar vocabulary.
- \* In general, learning begins to diminish 15 minutes into the talk.
- \* Long-term retention of information presented in the lecture format is not likely.

When planning lecture topics, it pays to know your audiences. This type of information can be gained formally through surveys or informally through individual conversations with members. A good example of a museum that targets lectures to a particular audience is the

Ft. Lauderdale Museum of Science and Industry. The education staff there has initiated a popular Health Lecture Series specifically geared for their large segment of retired seniors who are concerned about health issues. This series delves into these issues and related medical treatments. Other museums offer theme-based lectures that are tied to current feature exhibits. The Boston Museum of Science offers a "First Friday" lecture series that adults can count on to deliver interesting programs by prestigious lecturers.

When planning a lecture, the following should be considered:

- \* Is the topic interesting and relevant to the museum's mission?
- \* Is the topic interesting and relevant to an adult audience?
- \* Is the speaker known to be dynamic?
- \* Is the speaker knowledgeable about the topic?

With these considerations determined, you as the program planner need to assess the logistics of the lecture?

- \* Does the speaker intend to use any audiovisuals and can those be accommodated?
- \* Can every adult in the audience clearly see and hear the lecturer?
- \* Who will introduce the speaker?
- \* When will the speaker arrive and who will familiarize him or her with the lecture hall?

Gallery talks can also be designed to bring together an expert and general adult audiences. At the Oakland Museum of Art, staff offer a popular program that brings together adults and artists to review works in progress. The Allen Memorial Art Museum staff sponsors gallery

"teas" for senior citizens. Following a short gallery talk, adults have a chance to gather and socialize. Gallery talks can also be impromptu. Led by a museum educator, they can be ideal in situations where an adult group is too large to tour through an exhibit. The strengths and limitations for these types of programs are similar to those for a lecture.

### Symposiums

A symposium is "a series of short presentations by two to five persons qualified to speak on related topics or on various phases of the same topic" (Seaman & Fellenz, 1989, p. 58). These presentations are usually brief and specific. Each speaker is usually an expert on the topic to be discussed. As a result, the nature of a symposium provides good opportunities to:

- \* Introduce a variety of presentations and share a wide range of opinions as a result.
- \* Keep participants alert by changing speakers regularly.
- \* Provide more comprehensive coverage of a topic.

The weaknesses of a symposium include:

- \* The formal nature of the program.
- \* There is often little discussion or interaction among the speakers.

The key to a successful symposium is locating several knowledgeable and interesting speakers that can in a brief period of time introduce the salient points of the topic from their perspective. The wider range of perspectives offered by speakers, the better the program is

usually received. The moderator of the event also needs to be able to move the program on schedule and to avoid any repetition. Logistics that need to be addressed include all those listed for a lecture and the following:

- \* Does the moderator have some introductory information on all speakers and notes on the predetermined time constraints for the speakers?
- \* Can the speakers be seated on a stage in the order that they will be speaking?
- \* Can the audience ask questions from a microphone so that everyone can hear?
- \* How will the moderator wrap up the event and thank the speakers and the audience?

### Gallery Demonstrations

Gallery demonstrations are carefully planned presentations to show the effects of an act to the public. They can offer fun interactions between staff and adults in an exhibit. Some also offer hands-on experiences. Kahler, Morgan, Holmes, & Bundy (1985) list several advantages to demonstrations:

- \* They are attention-getters and sustain adult interest.
- \* They can present subject matter in an easily-understood manner.
- \* They can concretely prove a point.
- \* Demonstrations can illustrate an theory by example.

They can also be disastrous if poorly planned or they are illustrating an esoteric idea. The demonstration may also have nothing to do with the

point the educator is trying to make. To make sure a demonstration is effective, keep the following in mind:

- \* Practice before you share your demonstration with the adult public.
- \* Work in full view of everyone.
- \* Look at the adult audience when speaking.
- \* Work at a pace that enables adults to follow the details.
- \* Allow the audience to ask questions when your demonstration is complete.

### Dramatic Presentations

Dramatic presentations are also particularly effective with large groups of adults. When done right, the drama in its environment can bring emotion to programs. Recent studies have demonstrated that emotion plays a significant role in the learning process. Programs that evoke emotion, triggering what neuroscientists call stress hormone activation, are remembered longer and more clearly than other events. Dramatic presentations offered by museums are a good arena for evoking emotion. At the Baltimore City Life Museums, adult participants say they develop a better understanding of the past after viewing a drama. These presentations can take place anywhere--in an exhibit, in a lobby, or even on the lawn.

Strengths of dramatic presentations are:

- \* They can appeal to a wide adult audience.
- \* Dramatic presentations can put the audience in a different time and place.
- \* They can help adults look at everyday ideas in a new light.

- \* They can deal with difficult subject matter in a non-threatening manner.
- \* Dramatic presentations can be memorable and contribute to longer recall of ideas.

Weaknesses of dramatic presentations include:

- \* They require a great deal of planning time and effort.
- \* Staff require the right stage presence.
- \* They are disastrous if done poorly.

The logistics are also formidable. Basics about dramatic presentations to note include:

- \* Is the set eye-catching?
- \* Can every member of the audience see and hear the actors?
- \* Do the actors keep the story moving along?
- \* Is the performance just right to keep the audience feeling the right emotions at the right time?

Annually, educators at the Science Museum of Minnesota offer a training workshop for museum educators who are interested in planning and designing dramatic presentations for their museums. Some museums have successfully teamed up with theater companies to produce dramatic presentations that share museum resources. In Lima, Ohio, the American House staff worked with the Cornerstone Theater to create a piece based on the oral histories collected by the museum.

### Teaching Small Groups of Adults

Tours, field trips, seminars, gallery demonstrations, hands-on workshops, field trips, informal discussions, and short courses are all effective methods for educating adults in museums. Small group experiences provide opportunities for discussion and sharing among participants. With a small group of adults, museum educators can make educational experiences more interactive and participative, thus actively engaging the learner. To keep these experiences at their best, ask yourself the following questions with each adult program you plan:

- \* Are participants given time to observe and study objects?
- \* Are objects associated with larger ideas, symbols, historical events, and personal traits that relate to life experiences?
- \* Can participants share ideas and ask questions?
- \* Can participants share in decisions about the program's focus?
- \* Is the instructor inspiring participants to continue learning?
- \* Is the instructor involving participants in the learning process by letting them do things?
- \* Is the instructor providing content that is meaningful to adults?

For program ideas, brainstorm with other staff and museum members, review other museum's newsletters, approach curators for topics, or capitalize on exhibit themes. Community groups may be interested in planning an adult program with you as well.

## Tours

Tours are one of most unique programs of a museum and are used frequently to help adults better understand the objects and ideas presented in exhibits. Most tours are led by museum volunteers. Tour strengths include:

- \* Opportunities to connect many objects and ideas in a short period of time.
- \* The ability for adults to ask questions and share ideas.
- \* The exploration of ideas and relationships with a tour guide's facilitation.

Weaknesses are also evident in tours such as:

- \* An understanding that adults cannot spend as much time as they would like with a specific exhibit.
- \* The tour objectives may not match the adults' interest.
- \* A tour guide may be poorly-prepared.
- \* Adults will move at different rates.
- \* Lecturing may be used in place of a dialogue approach.

The best tours are those that are "preplanned with selection of objectives, content, and methods of presentation based on the characteristics of the visitors to be toured" (Grinder & McCoy, 1985, p. 52). This involves some prior knowledge about the adult audience and their learning objectives for the visit. Once begun, tours need to be "age-appropriate, accurate in content, and enjoyable" (Falk & Dierking, 1992, p. 151). Logistics to be considered include:

- \* What do the adults want to know about this exhibit?
- \* What prior experience do they have with the topic?
- \* Will the adult group need to sit down periodically?

- \* Will everybody be able to clearly see and hear the presenter?
- \* Where will the tour start and end?
- \* What are the main ideas that need to be emphasized?
- \* What other groups will be in that gallery during the tour?
- \* Do accommodations need to be made for handicap access?

Tours can be enhanced with the use of teaching materials, interactive exhibits, and brief demonstrations. However, a knowledgeable presenter and authentic objects are still the best keys to a good tour.

In the book, A Good Guide, Grinder and McCoy describe three basic techniques for tours: lecture-discussion, inquiry-discussion, and guided discovery. Of these approaches, the inquiry-discussion technique offers distinctive advantages for the adult museum group. Inquiry-discussion tours provide opportunities for adults to share experiences and ideas. They can also participate in determining the tour objectives and direction of the tour.

### Field Trips

Field trips offer opportunities for small groups of adults to connect the museum's mission with the larger cultural or natural world. Whether it is a trip to a tidal pool or a fossil site, participants enjoy seeing objects up close and in a natural setting. Instructors are often at their best in this environment because they feel most comfortable in the field. Some examples of active field programs are found at the several different

museums. For example, the Cincinnati Museum of Natural History offers regular opportunities for adults to work alongside paleontologists on research sites. The Stephen Birch Aquarium-Museum provides regular excursions led by researchers to different sites to collect or document specimens for ongoing projects. The National Archives and Records Administration offers day-long to week-long courses for adults to show them how to trace their family's history using archive records.

Strengths of these field trip programs for adults include:

- \* A chance to explore the natural and cultural world around them.
- \* Opportunities for adults to socialize and share experiences in a small group.
- \* Active-learning.
- \* Unique opportunities that are provided by museum experts.

Field trips come in a wide variety of formats from bus tours to hikes. At the Virginia Museum of Fine Arts, day-long bus tours led by a noted historian take adults through neighborhoods and homes that illustrate various aspects of the Arts and Crafts Movement. On a day-long hike, San Diego Natural History Museum staff teach adults how to identify and collect wild mushrooms in a woodland area. Field trip logistics vary for each program. The basics are:

- \* Plan trips far enough in advance to work out details and make sure participants understand what to expect.
- \* Choose a knowledgeable and articulate leader and make sure they can meet the needs of an adult audience.

- \* Appoint a staff coordinator to handle food, logistics, and any special participant needs.
- \* Visit the places that you'll take a group prior to your departure.
- \* Make sure you have all-inclusive liability insurance.

To get started offering field trips for adults, survey your adult audience to see what types of trips they may be interested in.

Springboard off their interests to create field trips that meet their needs and the mission of the museum. Use museum staff for programs whenever possible and do not be worried if not all of your trips do not meet a minimum number to break even. Experiments in program planning allow for growth and more awareness of your audiences interests.

Longer experiences are found in field or travel programs offered by several museums. For example, the Oregon Museum of Science and Industry offers adult natural history weekends at its Hancock Field Station. Staff at the Field Station encourage adults to design their own plan for weekend activities. Options include fishing, biking, hiking, fossil collecting, and rock polishing. The Utah Museum of Natural History successfully teams up with other non-profit organizations and museums to fill adult travel programs to sites of interest to their members. In 1994, they toured the Chesapeake Bay and rafted the Colorado river. Museum travel opportunities have been especially popular when they offer travel opportunities that are off the beaten path, distinctive,

creative, and combine museum expertise and resources in a way that is unmatched. Take a careful look at your staff and your museum's mission, and then use contacts in the travel industry to create travel opportunities that no one else can duplicate.

### Classes

Many popular museum-based classes teach adults new skills that they can continue to use and share with others. For example, the Tampa History Center offers a popular series of courses on conservation techniques. Adult participants have an opportunity to learn more about how to preserve photographs, family heirlooms, and textiles. Using their skills as conservators, they are offering a program that is unique to themselves in the Greater Tampa Area. Their participant evaluations are supportive and questionnaires indicate the interest rate for additional workshops is high as well. In Roanoke, Virginia, during the Museum's Wildflower Pilgrimage Weekend, small groups of adults are led by volunteers to spectacular wildflower sites in the area. Appreciation for areas outside but related to the museum's mission and for peer teaching are reported to be strengths of this program. The Minneapolis Institute of Arts offers night and weekend survey classes for adults that immerse them in the study of an artist or review a style of paintings. The High Desert Museum annually offers a popular western history series of

classes that introduce adults to the people and places that shaped the history of the High Desert region.

Classes can provide adults with a closer look at objects, teach skills, provide recreation and social activity, and give adults a chance to mentally escape from their daily concerns. Strong adult museum classes:

- \* Alternate teaching techniques.
- \* Recognize that participants have a great deal of life experience and use it by allowing adults to share.
- \* Create an atmosphere where questions can freely addressed.
- \* Provide challenges appropriate to the needs of the class.
- \* Let participants determine what they would like to focus on.
- \* Give adults a chance to actively participate in their learning.

When planning museum classes for adults, think about the following:

- \* Are the classes designed to be used by learners for different purposes?
- \* Does a class allow for interaction with others?
- \* Does this class provide unique experiences?
- \* Does this class help adults build positive relationships with ideas and processes so they can continue learning?
- \* Does the instructor model the behavior of a self-directing person?

The primary goal of museum classes should be to facilitate more self-directed learning. Thus, they help adult learners focus, reassess their learning goals, and move from one plateau to another. They also help adults shape and reformulate questions for continued self-directed learning.

What Does Hands-On Mean? Rarely is a term so overused as that of "hands-on." It can refer to anything from touching to creating something using one's hands. Adults, like children, often learn best when doing or handling something themselves. The emphasis on hands-on or kinesthetic learning activities has come from pedagogical learning research, but it also has important ramifications for adult learning. Adults are often more hesitant than children to touch things in a museum. They need more encouragement. Once they do touch, however, their delight is as genuine as a child's. In a hands-on class, allow time for individualized attention to help facilitate an adult's learning experience.

### Discussions

Discussions bring people together to talk about a subject and share knowledge. As many adults learn best by verbalizing, discussions can be very appealing (Seaman & Fellenz, 1989, p. 120). Discussion groups allow the adult participant to have some degree of control over the learning experience and become active learners. Advantages to discussion groups are that:

- \* Active learning keeps adults interested and motivated.
- \* Discussion groups help develop speaking and listening habits.
- \* The personal interaction between adults helps to bring out viewpoints in a non-threatening situation.

- \* By getting to know each other, adults in discussion groups develop respect for other ideas.
- \* The vast reservoir of experience of the various adults can be a treasury of resources.

Examples of discussion groups that exist at museums are few and far between. In Kansas City, a museum has formed Adult Interest Groups that relate to specific museum disciplines, such as paleontology. Discussion groups at the Adler Planetarium discuss abstract ideas relating to quantum mechanics. In organizing a discussion group, consider the following:

- \* What meaningful topic should the group address?
- \* Can someone effectively lead a discussion on this topic?
- \* Can the leader adapt to changing group needs?
- \* How much flexibility will the group have in determining the amount of time they spend on a topic?
- \* What reading or video materials will be circulated to spur group discussion?
- \* How will major ideas be addressed?

In a discussion, a few adults can dominate a group. Strong leadership is needed to help establish ground rules to prevent this from happening.

Discussion groups can easily become too large to be effective. The leader must also be flexible and open to changes as the group sees fit. Decisions relating to amount of time, discussion direction, and reading material should be made as a group. A "good discussion leader shares learning control over the learning activity with participants" (Seaman & Fellenz, 1989, p. 125).

### Special Programs for Special Audiences

Many adult groups will have very specific learning needs, and you will have to tailor education programs to them. Good examples of these groups are docents and teachers. Strong docent programs and teacher workshops have become institutions in many museums. These programs are specifically designed to meet the needs of other educators. As a result, they usually focus on teaching new interpretation skills and content.

To get started creating programs for these specific adult groups, think about the end product--why are they training with you? Docents train to help visitors in general better understand and appreciate exhibits. Teachers usually train to improve their content knowledge and teaching skills so they can improve student learning. Why do they do it?

Docent Training. Docent training is usually made up of a mixture of programs on content and tour techniques. Lectures are typically presented by curators to expose adult volunteers to the exhibit content and themes. Education staff may also take a lead role in this as well as introduce the exhibits through tours and related exercises to introduce teaching materials, responsibilities of a tour guide, touring techniques, and problem-solving.

To prepare for docent training, consider using a variety of presentation techniques to effectively communicate exhibit features, themes, and tour techniques. A combination of lectures, discussions, demonstrations, simulation, and role-playing exercises can benefit the different types of adult learners in your class. Strong docent training programs:

- \* Provide a balance between content and technique.
- \* Allow docent trainees to build on current knowledge and experience.
- \* Help docent trainees identify and develop their teaching style.
- \* Provide support and invite feedback throughout and following the training process.
- \* Model effective teaching techniques for adults.

Weak programs simply do not survive. Volunteers may not continue in programs that do not develop their skills and abilities or use their talents.

Docent training programs vary in size and scope by each institution. To get started, have the docent trainees assist in assembling the resource materials to be used with each gallery and create a lending library. Invite trainees to assist with preparing programs for other trainees on various subjects. Help facilitate these programs by providing appropriate materials and reviewing the plans for training sessions. Enlist the support of curators and local university faculty to round out your training programs.

Teacher Training. Almost all museums offer some type of teacher training program. This attests to the strong ties that exist between museums and schools and the beneficial outcomes of using museum resources in classrooms. Teacher training usually consists of one or two part workshops that expose teachers to new content and teaching ideas that can be easily translated in the classroom. The best teacher workshops:

- \* Are designed to meet teachers' needs.
- \* Demonstrate teaching skills.
- \* Link teachers together with specialists.
- \* Offer a museum support curriculum program that complements the schools.

To start, consider working with a local school district to provide in-service training. Given museum resources and teacher needs, it may make sense to focus your training efforts initially on teachers in specific grades. The New York Museum of Science, for example, targets only 7th grade teachers to participate in their microbiology institutes. In this way, the workshops are specifically geared to strengthen teacher comprehension of a new core curriculum mandated by the school system.

Items to consider when starting a teacher training program:

- \* When can teachers attend workshops?
- \* What resources can you share with teachers?
- \* What skills do teachers need?
- \* How do your resources fit teacher's curricular needs?
- \* Will teachers be able to receive in-service credit?
- \* Will teachers be able to determine the direction the workshop will take?

- \* What balance will you provide between content and teaching ideas?

Before starting, carefully assess your teaching resources. They may be very different for an audience of teachers than general adult visitors. For example, using their staff, the Staten Island Children's Museum trains elementary school teachers on how to use drama to teach science in the elementary classroom. At the South Dakota Discovery Science Center and Aquarium staff train teachers to use scientific equipment to begin inquiry-based education programs in their schools.

If you have a limited staff and resources, consider combining some docent and teacher training programs. The McNay Art Museum, for example, has offered a mini-course, "Low-fat Art History," that consisted of a series of eight evening programs surveying art through history. The program was offered to both teachers and docents-in-training, and participants could receive 12 hours of graduate credit for completing the course.

### Rethinking Adult Museum Programs

Merriam and Caffarella (1991) argue that "what one needs or wants to learn, what opportunities are available, the manner in which one learns are all shaped to a large extent by the environment" (p. 11). This idea has important parallels to museums today. In recent years, there

has been a resurgence of interest in museums, and their appeal can be linked to several factors including American's increased level of educational attainment, increased free time, a renaissance in the arts, and awareness spurred by the information age (Naisbitt, 1990, p. 58).

Museums have also helped themselves by increasing visitor services and marketing by emphasizing their relaxing social environments and by creating blockbuster exhibits using resources from around the world. Shows like Monet, King Tut, and Treasure Houses of Britain not only bring in revenue, but they also "get people into the museum habit" (p. 58). With these lures, museums are setting themselves up to be destination points for adults.

#### What Do Adults Want When They Come to a Museum Program?

While no studies have been done to assess what adults want when they come to a museum program, studies have been done to assess what adult visitors want when they come to a museum. These findings can be extrapolated for museum programs.

In a study of leisure activities that adults choose to pursue, Marilyn Hood (1983) found five common motivators: (1) the opportunity to learn, (2) social interaction, (3) the challenge of new experiences, (4) participating actively, and (5) feeling comfortable in one's surroundings. With respect to museum goers, she noted that there are

"three distinctly different audience segments . . . based on their leisure values, interests and expectations: frequent participants, occasional participants, and nonparticipants" (Hood, 1983, p. 52). Each group opts for different experiences in their free time.

In a second study, Denver Art Museum staff found that novice art museum goers or those who rate "themselves as having moderate to high interest and low to moderate knowledge of art" make up the largest percentage of art museum visitors. In a study of this group, Melora McDermott-Lewis found that they want to come to the museum to have a good time and a pleasant social experience. They also want to learn by seeing something that they have not seen before and learning about things that will be helpful to them in the future. Adults also want to participate and have a personally relevant experience. Finally, they want to "get their money's worth" (McDermott-Lewis, 1988). With this in mind, what does this mean for adult museum program goers?

Most adults are self-directed learners. Self-directed learning describes a process in which individuals "take the initiative with or without the help of others in diagnosing their learning needs, formulating learning goals, . . . and evaluating learning outcomes" (Knowles, 1975, p. 18). Self-directed learning experiences often have humble beginnings. In effect, adults often "take advantage of any opportunity that random events may offer them" (Candy, 1991; p. 170). It is also important to

note that self-directed learning experiences do not occur continuously, but rather ebb and flow as time and resources for them allow. Given these parameters, think about the format of your adult programs. How do they encourage self-directed learners and meet museum goers expectations?

### Teaching Strategies and Methods

Teaching strategies enable museum educators to organize a group of adults in such a way so as to maximize the learning experience. Different teaching strategies have proven to be more effective with different groups of adults or individuals. Clubs, discussion groups, or classes may create a better learning arena for smaller groups; lectures or symposiums may work more effectively for larger groups. Different methods may be used within a given situation. Small group sharing and active hands-on learning experiences can easily be created in a small group setting. While lectures are predictable teaching strategies used with large groups, the methods a lecturer uses may vary from situation to situation.

The teacher has a varying amount of control over the program using these various strategies. For example, in a lecture, the speaker has total control over the program. Teaching strategies where the teacher has a great deal of control include symposiums and demonstrations. The

teacher has less control when using such strategies as a dialogue, debate, or interview (Seaman & Fellenz, 1989, p. 54). While the adult literature suggests adults would prefer those strategies that are more learner-centered, each type of teaching strategy has its own strengths and limitations. Lectures meet the needs of those adults who prefer to listen rather than discuss and are relatively easy to plan. Demonstrations, on the other hand, are not as easy to develop, but can convince those who might otherwise doubt a thing could be done" (p. 68).

With smaller groups of adults, other types of teaching strategies may be employed. In addition to those listed above, it is possible to create what Seaman and Fellenz call "action" and "interaction" strategies, which can be described as teaching activities that require active learner participation. Action strategies include simulation games, role playing, and case study analysis. Interaction strategies include discussions, participatory training, committees, and "buzz" groups. All of these teaching strategies utilize the teacher as a facilitator and require most members of the group to take part in the learning experience in order for it to be successful.

Many museums have created innovative programs by taking traditional presentation strategies and adding their own twist to them. Descriptions of some of these are presented below. Noteworthy museum

lectures, tours, classes, and teacher training programs are featured in this section on program innovations.

Variations on a Theme:

Rethinking the Museum Lecture

One of the most common teaching strategies used by museums with large groups of adults is the lecture. Lectures by well-known, articulate public speakers can pack a museum auditorium and provide high audience satisfaction. However, lectures can be also be over-used and abused. To freshen the lecture format and improve the experience for adult learners, consider making some changes based on ideas expressed in adult education literature. With this in mind, the following are some innovative ideas that have been successfully employed by museums that do just that.

At the Smithsonian Institution's National Gallery of Art, Friday night lecturers introduce a provocative idea in 30 minutes followed by a reception that allows participants to discuss ideas. The combination of food, a relaxed atmosphere, and the opportunity to reflect, share ideas, and meet new people has proven to be a good one. The National Zoological Park in Washington, D.C., offer a similar successful program. Their "TGIF" lectures accompanied by refreshments are offered in different animal houses each time so that adults can observe the animals and ask questions while an animal keeper is talking.

### Rethinking the Museum Tour

The museum tour can be one of the most popular museum programs, or it can also be the most deadly for adults. Tours are often too structured to meet the needs of an adult audience. To respond to adults in galleries, consider an approach offered in Los Angeles. The Los Angeles Museum of Contemporary Art's Explainer Program is designed to provide visitors with an opportunity to discuss current exhibitions. The explainer's job is to strike up conversations with visitors and answer questions. They also carry materials such as catalogues and photographs of the artists to share with visitors. Other similar formats such as "Ask Me" tours have also had success with adults. In these, docents typically offer the opportunity for adults to touch objects and challenge them to take a closer look by asking questions such as "can you match this photograph with . . ." (Fisher, 1991, p. 24).

All too often, tours are only available to pre-formed adult groups that request a guide with advance notice. Individual adult museum goers rarely have a chance to participate in a museum tour. Consider offering gallery tours for those adults that just drop by for a visit or want to spend some in-depth time in a specific gallery. At the Boise Art Museum, drop-in tours of feature exhibits are led by docents on the first and third Thursday of every month.

Tours also tend to be one-shot experiences for adults. They visit once, and they see only one gallery or are exposed to one theme. To help adults learn more about all a museum has to offer, consider offering multiple opportunities for adults to visit galleries and see the collections. One excellent approach is found in Minneapolis where the Minneapolis Institute of Arts regularly offers Serial Tours that take visitors for an in-depth look at a part of the collection over a series of visits. They also may be theme based and cover several parts of the collection, but they link together successive visits.

Activity-oriented learners make up a large segment of the adult population. They want to combine learning with social experiences. A tour that capitalizes on this idea is found at the San Diego Zoo. There staff offer an evening tour of the wild animal park called "night moves" for adults only. Designed for fun, this evening tour ends with coffee and desert. At the Winterthur Museum on select Monday afternoons, adults can have coffee with the curators followed by a 30 minute tour of an exhibit. This program is offered weekly in the winter.

### Rethinking Adult Museum Classes

As a museum is unlikely to be the only organization in town offering adult education classes, make sure you are unique to your institution, have a reputation for high quality instructors, deliver on

course descriptions, and consistently provide clean and comfortable classrooms. Attention to detail, instruction, and student needs are the hallmarks of most excellent museum education classes for adults.

Successful programs will bring adults back looking for more. To meet adults' ongoing educational needs, the New York Botanical Garden offers adult classes in a series. Those adults who complete the entire series of six to ten courses are awarded a certificate of completion. Not only does the certificate serve as a tangible recognition of accomplishment in an informal learning program, but it also visibly identifies the participant with the institution's education program.

Popular museum classes often teach skills that adults can continue to develop once the class is over. Examples of these types of classes are found at the California Academy of Sciences where adults can learn through classes how to distinguish qualities of gem stones and make willow baskets from natural materials. At the Adler Planetarium's classes, adults can learn how to grind a telescope mirror, then make a telescope mount and use it. At the Roswell Museum and Art Center's studio classes, adults can learn to throw and hand build clay pots. Development of adult skills is a sure fire method of helping to convince adults that they are getting their money's worth.

It is rarely appropriate to teach the same class to a 5 year old as to a 9th grader. Both groups have different developmental needs, interests,

and knowledge basis from which to explore and learn. The same is true for adults. At different stages in their lives, adults are ready for different types of programs. So how do museums meet their needs? To accommodate changing needs, consider offering classes that target different developmental needs of adults. Innovative programs that are currently taking place in this arena include the Powell Gardens' "Seasoned Adults Garden Education Series" (SAGES). Targeting those 55 and over, this program offers half-day, hands-on workshops that bring staff and participants together with activities such as walks through the gardens, creating craft projects using plants, and exploring house plant basics that are followed by lunch. While not offered exclusively to those over 55, those who reach the age minimum can participate at half-price.

Similarly, the Witte Museum and Chicago Institute of Art regularly create Elderhostel classes for adults. These week-long seminar programs provide opportunities for adults to spend some in-depth time in museums with personal attention to their needs. These courses accommodate 30-40 adult participants. Elderhostel's step-by-step planning process also makes it easy to plan and implement an adult program that meets their guidelines.

### Rethinking Teacher Training

Well trained teachers can teach others and model effective teaching methods. Teachers teaching teachers offers opportunities for peer coaching and role modeling within the school using museum resources. Several museums have made this leap by training teachers so well that they feel comfortable training others. Other museums train and hire teachers as gallery interpreters. The University of Nebraska at Lincoln trains "master teachers" that serve as museum resource personnel in area schools. At the National Aquarium in Baltimore, teachers who have completed the STARS training program can receive in-service credit for sharing their knowledge with other educators. After completing a summer institute at the Exploratorium, teachers can apply to participate in follow-up weekend workshops, curriculum-development efforts and district leadership programs that include training other teachers.

To help immerse teachers in the culture of a museum, several museums have created teacher-in-residence programs. At some museums, like the Lawrence Hall of Science, teachers can spend up to a year working in the museum, improving their science skills, and presenting programs while learning to teach with objects. At the Heard Museum, teachers use the time to develop programs for other teachers on feature exhibits.

For more information about some of the innovative programs taking place in museums for adults, consider attending other museums' programs. If there are no other museums in your town, research and attend the continuing adult education classes in your area. Survey community members for program ideas. Finally, experiment, take notes, and make changes as necessary. Some of the best programs are yet to be created.

### Teaching Styles and Learning

To be at your peak when teaching adults, it is not enough to understand their needs; you must also understand your own strengths and weaknesses as a teacher of adults. To arrive at this insight, you need to be aware of your teaching style. Your teaching style is your personal set of values, beliefs, and attitudes relating to teaching and learning (Heimlich, 1994, p. 40). These personal behaviors that you demonstrate time after time directly influence student responsiveness and learning (Fisher & Fisher, 1979, p. 245). This style is a reflection of your teaching philosophy. To assess your teaching style, take a teaching style inventory. The Principles of Adult Learning Scale (PALS) developed by Dr. Gary Conti of Montana State University is an easy-to-use assessment tool. This free instrument can be self-scored.

While your teaching style is generally predictable and stable, it can be improved to match the needs of adult learners. How do you do this? By initiating a journey of self-discovery regarding your own teaching. This process requires careful personal exploration, reflection, and reaction. If you feel like you are ready to start it, read Developing Teaching Style in Adult Education by Heimlich and Norland (1994) or enroll in an appropriate adult education course at your local university.

#### Learning Styles and Teaching Strategies

Learning styles are also an important factor to consider when selecting appropriate teaching strategies for a given situation. For teachers of adults, it requires an understanding of how they learn themselves, their teaching style, and how they can alter their teaching methods or strategies to meet the needs of different types of learners in an exhibit or classroom setting. It is known that "adults with certain learning styles prefer different teaching strategies" (Seaman & Fellenz, 1989, p. 52). For example, Cawley, Miller, and Milligan (1976) found that "the more analytic learner tends to be more sedentary, sees a teacher as a source of information, prefers complexity, is achievement oriented and competitive, and prefers social distance" (p. 104). By contrast, a kinesthetic learner prefers to have an active, hands-on role in the learning experience. If "learning is directed only toward one type of

learner, the others are not receiving the message" (Gunther, 1990, p. 290).

There are many different teaching strategies that can be incorporated in museum programs so that different learning styles can be accommodated. The following describes an approach based on Bernice McCarthy's (1986) 4MAT System that can be used for adult classes or other types of small group experiences. It can also be adapted for exhibits.

McCarthy (1986) identifies four primary groups of learners, each of which can be divided into smaller groups based on their preference for left brain or right brain modalities. The four types include:

Type One Learners that are primarily interested in personal meaning. Teachers need to give them a reason.

Type Two Learners that are primarily interested in the facts as they lead to conceptual understanding. Teachers need to give them facts.

Type Three Learners that are primarily interested in how things work. Teachers need to let them try it.

Type Four Learners that are primarily interested in self-discovery. Teachers need to let them teach it to themselves and others.

To create experiences that meet each of these learners needs, she has designed an elegant learning cycle that can be matched with adult preferences for learning. The cycle begins with Type One learners and moves through Type Four.

For example, to teach an adult class on quilt dating techniques using this model and preferences for adult learning, the class might begin with an ice breaker that invited all participants to show off a quilt from home and share any information that they know about its age, design, and maker. This activity enables Type One Learners to share personal objects that mean something to them and any information that is shared can be reinforced by the teacher. The teacher then can introduce information on the origins of quilt styles and specific clues to look for when documenting the age and style of quilts. Type Two Learners have an opportunity to grasp the facts and can also relate these to life experiences. After identifying clues in quilt making and fabric, the teacher can give students some quilts to decipher as well as allow them to use some of the quilts that they brought with them. This activity allows Type Three Learners to get involved and to try their hand at dating quilts. The class may wrap up with a discussion of what students could tell about the quilts based on instructor clues and prior knowledge. This discussion period provides time for Type Four Learners to reflect and share with others, thus reinforcing their own learning experience.

### Getting It Together

Consideration of adult needs, institutional strengths, learning styles, teaching styles, teaching strategies, methods, objects, and resources

are all part of the framework for teaching adults in museums. Effective programs are built from this framework. As you refine your adult program, consider where you can add onto your framework to the benefit of adult learners. Significant investments in adults can in turn benefit your museum and its impact as a center for lifelong learning.

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APPENDIX  
SURVEY INSTRUMENT

# MUSEUM EDUCATION ROUNDTABLE

3000 CONNECTICUT AVENUE, NW  
 SUITE 237D • WASHINGTON, DC 20038

October 1995

Dear Colleague:

Attached is a survey designed to collect information about how museum practitioners develop, plan and conduct programs for adult audiences. The instrument, a component of a doctoral research project undertaken by Bonnie Sachatello-Sawyer, Director of Education at the Museum of the Rockies, presents a significant opportunity for the museum education community to assess current programming. Museum Education Roundtable and EdCom, the Standing Professional Committee of the American Association of Museums, would like to encourage your participation.

The survey addresses the more formal types of programs, workshops, classes, field trips and training activities that we create. It is divided into two sections. The first consists of a series of questions relating to program planning and design. The second section is a teaching style inventory, the basis of which is the Principles of Adult Learning Scale. The survey contains questions that may not always seem applicable to you as a teacher in a museum. By answering all of the questions, the responses of other groups of educators previously surveyed can be correlated with those of museum educators.

Your contribution is important to the field and will provide useful information to all of us as program planners. Thank you for taking the time to respond. The results of this survey will be available at future MER and EdCom meetings.

Sincerely,

*Karen Holt Luetjen*

Karen Holt Luetjen  
 Chair, Board of Directors  
 Museum Education Roundtable

*Mary Ellen Munley*

Mary Ellen Munley  
 Chair, Education Committee  
 American Association of Museums

**SURVEY OF  
MUSEUM EDUCATORS PRACTICES RELATING TO  
ADULT EDUCATION PROGRAMS  
IN MUSEUMS**

This survey is divided into two sections.

**Section I** seeks information on the types of adult education programs presently available in museums and how museum educators design and plan programs for adults.

**Section II** seeks information on museum educators' preferences for teaching adults.

**Definition of Terms**

**Adult:** "A person who has reached the maturity level where he or she has assumed responsibility for himself or herself and sometimes for others, and who is typically earning an income" (Hiemstra, 1976, p. 15).

**Adult Education Program:** Primarily denotes "short term learning experiences that are responsive to learner needs and are implemented outside of the traditional educational system" (Groteleudchen in Knox, 1980, p.82).

**SECTION I**

1. Does your Museum offer educational programs for adults?  Yes  No  
(If No, skip to question 14.)

2. What percentage of your total museum education programs are designed for adults, families, and children. Your total should add up to 100%.

\_\_\_% Adults  
\_\_\_% Families  
\_\_\_% Children  
**100% Total**

3. Please fill out the chart accordingly. Check the type of adult education programs you offer and list the number of programs and average attendance accordingly.

	# of adult programs offered annually	Typical attendance at each program	These programs are taught by:				
			museum staff	outside professionals	volunteers	docents	other
___ Non-credit Classes							
___ Lectures							
___ Symposia							
___ Field trips							
___ Guided tours							
___ Gallery demonstrations							
___ Discussion groups							
___ Volunteer Training Courses							
___ Teacher Workshops							
___ Courses for College credit							
___ Film Series							
___ Field Schools							
___ Dramatic presentations							
___ Other _____							

4. What type of adult program do you consider to be a particular strength of your museum and why?

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5. What best describes your method of designing and planning museum programs for adults? (Check as many as are applicable--if you do not design, plan, or teach programs for adults, skip to question 14.)

- I follow a set course established by tradition
- I review the programs that have been successful in the past and design upcoming ones based on this information
- I meet with a group of museum staff to design and plan the programs for adults
- I create a set of programs based on what I think will be interesting to others
- I involve past program participants when designing upcoming programs
- I involve potential program participants when planning new programs
- I review surveys from previous class participants and create programs based on their comments
- Other \_\_\_\_\_

6. Does your Museum cooperate in co-sponsoring programs for adults with any of the following? Please check all that apply and list an approximate number of programs annually.

	Approx. # offered annually
<input type="checkbox"/> Independent professional groups	
<input type="checkbox"/> Libraries	
<input type="checkbox"/> Government agencies	
<input type="checkbox"/> Other Museums	
<input type="checkbox"/> Religious groups	
<input type="checkbox"/> Hospitals	
<input type="checkbox"/> Universities	
<input type="checkbox"/> City or State Parks	
<input type="checkbox"/> Civic organizations	
<input type="checkbox"/> Other (please specify) _____	

7. Has your museum conducted a visitor survey in the past five years?

Yes  No

If Yes, how do you use this information in your program planning?

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8. What types of programs have you found to be successful with large groups of adults.

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9. What types of programs have you found to be most successful with small groups of adults?

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10. In your opinion, what are the top three elements that define an excellent museum program for adults?

1. 

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2. 

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3. 

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11. How do you evaluate your adult programs? If more than one method applies, please list a percentage of each accordingly. Your total should add up to 100%.

- % Individual interviews
- % Written surveys
- % Informal observations of programs
- % Systematic observations of programs
- % Unsolicited comments/suggestions
- % Review of attendance
- % Review of financial data
- % Peer review
- % Other \_\_\_\_\_
- % We do not evaluate our programs
- 100% Total**

12. What other museum do you know that is designing and implementing excellent adult programs and why do you consider them to be excellent?

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13. What resources have you found to be particularly valuable regarding adult experiences in museums?

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14. Which best describes your museum? (Choose one)

- Art museum
- Historical home
- History museum
- Natural history museum
- Science center
- General museum
- University museum
- Botanical garden
- Arboretum
- Zoo
- Aquaria
- Other \_\_\_\_\_

15. Is your museum

- A small institution (annual operating budget less than \$500,000)
- A medium-sized institution (annual operating budget between \$500,000 and \$3 million)
- A large institution (annual operating budget greater than \$3 million)

16. How many people work in your Education Department?

- Full-time     Part-time     Volunteers

17. I have worked in the museum industry for \_\_\_\_ years.

18. What statement(s) describe your training in adult education methodology. For all that apply, write "L" for low-impact, or "H" for high-impact.

- I have taken classes in adult education at a university
- I have attended a museum-sponsored workshop on adult education
- My experience working with adults has taught me what works and what doesn't
- I have read articles on adult education methodology in professional journals or books
- I have observed adult programs at other institutions
- Other ways I have learned about adult education \_\_\_\_\_

19. What is your highest level of education attainment?

- High school diploma
- Associates degree
- Bachelor's degree with a major in \_\_\_\_\_
- Masters degree in \_\_\_\_\_
- Doctoral degree in \_\_\_\_\_

## SECTION II

Below is a teaching style inventory developed by Dr. Gary Conti. It was designed for use in formal classroom settings. When you answer this instrument, think of your experiences teaching docents, teacher workshops, or adult classes in your museum. If you do not teach or plan programs for adults, first complete the final two questions before mailing the survey.

The following are several things that a museum educator might do in a museum. For each item, please respond to the way you most frequently practice the action described in the item. There are no right or wrong answers. Circle 5 if you Always do the event, circle number 4 if you Almost Always do the event, circle number 3 if you Often do the event, circle number 2 if you Seldom do the event, circle number 1 if you Almost Never do the event, and circle number 0 if you Never do the event.

	Always	Almost Always	Often	Seldom	Almost Never	Never
1. I allow adults to participate in developing the criteria for evaluating their performance in a museum program.	5	4	3	2	1	0
2. I use disciplinary action when it is needed.	5	4	3	2	1	0
3. I allow older adults more time if they need it in a museum education program.	5	4	3	2	1	0
4. I encourage adults to adopt middle class values.	5	4	3	2	1	0
5. I help adults diagnose the gaps between their goals and their present level of knowledge.	5	4	3	2	1	0
6. I see myself as a provider of knowledge rather than as a resource person.	5	4	3	2	1	0
7. I stick to the instructional objectives that I determine prior to the start of a program.	5	4	3	2	1	0
8. I participant in informal counseling with adults in museum programs.	5	4	3	2	1	0
9. I believe lectures are the best method for presenting subject material to adults.	5	4	3	2	1	0
10. I arrange museum classrooms so that adults are encouraged to interact.	5	4	3	2	1	0
11. I determine the educational objectives for each adult in a program.	5	4	3	2	1	0

	Always	Almost Always	Often	Seldom	Almost Never	Never
12. I plan programs which differ as widely as possible from my audiences' socio-economic backgrounds.	5	4	3	2	1	0
13. I get an adult to motivate himself/herself by confronting him/her in the presence of others during group discussions.	5	4	3	2	1	0
14. I plan learning episodes that take into account adults' prior experiences.	5	4	3	2	1	0
15. I allow adults to participate in making decisions about the programs that will be offered.	5	4	3	2	1	0
16. I use one basic teaching method because I have found that most adults have a similar style of learning.	5	4	3	2	1	0
17. I use different teaching techniques depending on the adults being taught.	5	4	3	2	1	0
18. I encourage dialogue in adult museum programs and classes.	5	4	3	2	1	0
19. I use evaluations to assess how much adults have learned in a museum program rather than to indicate new directions for learning.	5	4	3	2	1	0
20. I utilize the many competencies that most adults already possess to achieve educational objectives.	5	4	3	2	1	0
21. As my chief criteria for planning programs, I use what history has proven adults need to learn.	5	4	3	2	1	0
22. I accept errors as a natural part of the learning process.	5	4	3	2	1	0
23. I have individual conferences with adults to help identify their educational needs.	5	4	3	2	1	0

	Always	Almost Always	Often	Seldom	Almost Never	Never
24. I let each adult work at his/her own rate.	5	4	3	2	1	0
25. I help adults to develop short term as well as long-term learning objectives.	5	4	3	2	1	0
26. I maintain a well-disciplined learning environment to reduce interferences to learning.	5	4	3	2	1	0
27. I avoid discussion of controversial subjects that involve value judgments.	5	4	3	2	1	0
28. I allow adults to take periodic breaks during learning experiences.	5	4	3	2	1	0
29. I use methods that foster quiet, productive learning.	5	4	3	2	1	0
30. I use written evaluations as my chief method of evaluating adults' learning experiences.	5	4	3	2	1	0
31. I plan activities for adults that promote growth from dependence on others to greater independence.	5	4	3	2	1	0
32. I gear my instructional objectives to match the needs of adult learners.	5	4	3	2	1	0
33. I avoid issues that relate to an adult's concept of himself/herself.	5	4	3	2	1	0
34. I encourage adults to ask questions about the nature of their society.	5	4	3	2	1	0
35. I allow an adult's motives for participating in museum education programs to be a major determinant in the planning of learning objectives.	5	4	3	2	1	0
36. I have my adult program participants identify any problems that need to be solved.	5	4	3	2	1	0
37. I give all adults in an adult museum program the same assignment on a given topic.	5	4	3	2	1	0

	Always	Almost Always	Often	Seldom	Almost Never	Never
38. I use materials with adults that were originally designed for students in elementary and secondary schools.	5	4	3	2	1	0
39. I create adult programs based on the problems adults encounter in everyday life.	5	4	3	2	1	0
40. I measure an adult's performance in a museum program based on my expectations of that person.	5	4	3	2	1	0
41. I encourage competition in my adult museum education programs.	5	4	3	2	1	0
42. I use different teaching materials with different adults.	5	4	3	2	1	0
43. In museum programs, I help adults relate new learning to their prior experiences.	5	4	3	2	1	0
44. I create museum programs about problems of everyday living.	5	4	3	2	1	0

**Please take this opportunity to make any additional comments about the issues addressed in this survey that you wish to add.**

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**After this study is completed, we may want to contact some educators to ask more questions about their education programs. Would you be willing to participate? If so, please write your name, address, and phone number. Thank you! We would also appreciate it if you would enclose any information or literature about your current programs for adults.**

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*Thank you for taking the time to complete this survey!*

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