The Museum: An Effective Learning Environment For Students With Learning Disabilities

Melissa J. Walker

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The Museum: An Effective Learning Environment for Students with Learning Disabilities

By
Melissa J. Walker

Advisor: Dr. Susan Leshnoff

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Preface

I have chosen to focus on learning disabilities because I believe it is one of the most prevalent and perhaps misunderstood cognitive disorders. My interest in the topic is also highly personal for I have experienced firsthand the unique challenges, frustrations, and triumphs of a sibling who has severe learning disabilities.

Museums have always been places of wonder, intrigue, and interest for my younger brother. On numerous occasions, I have observed the tremendous impact the museum environment has had on his perceptions, thinking, and life. It is naturally in this realm in which I eagerly focus and share my research.

I would like to thank Dr. Susan Leshnoff, my dedicated thesis advisor, for her involvement, positive encouragement, and invaluable assistance on this project. I would also like to acknowledge and thank Barbara Cate, Dr. Petra Chu, Dr. Jurgen Heinrichs, Dr. Charlotte Nichols, Claudia Ocello, and Katie Jones for contributing to my growth as a scholar/professional and for their tremendous guidance and friendship.

To my family and especially to my brother, Matt, thank you for providing the inspiration for this project. My family's constant love and support has meant so much in all my endeavors. Like my brother, I too have persevered.
The Museum: An Effective Learning Environment for Students with Learning Disabilities

Introduction

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.¹

In 1992, The American Association of Museums (AAM) launched an important museum report, *Excellence and Equity: Education and the Public Dimension of Museums*. The extensive report, placing education at the core of museum philosophy, activity, and mission, asserts that museums must be inclusive places that welcome, reflect, and enrich diverse audiences. The report states, "Consistent with their missions, individual museums of different sizes and types must ensure that they are accessible to a broad audience and that they do not intentionally or even subtly and unintentionally exclude anyone."²

Although in the last decade education has become a driving force in museum philosophy and activity, much work still needs to be done in terms of inclusiveness. One such group that is often overlooked in educational programming is special needs. Current research suggests that this is the case. As Dianne Pilgrim, Director of the Cooper-Hewitt Museum in New York City states:

Barriers of all kinds—intellectual, social, cultural, and physical—prevent museums from fulfilling their potential as educational and cultural centers...This concern is not just about physical access, but it is about creating exhibitions and educational programs that are inclusive for people with visual and hearing impairments as well as

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learning disabilities.\(^3\)

The museum environment holds great educational potential for a wide range of visitors, including the learning disabled. This master’s thesis project investigates the impact that the museum setting can have as an appropriate and beneficial learning environment for students with moderate to severe learning disabilities. Using the museum environment as an exciting and stimulating learning space, museum educators can have an enormous and positive influence on these special students. Incorporating a variety of teaching methods and selecting appropriate modifications and interventions, museum educators can not only guide student learning in the museum, but also foster a sense of pride and accomplishment among students who may struggle academically and socially in the traditional classroom.

This thesis addresses, explores, and highlights the benefits of using the museum environment for students with learning disabilities. Scholarly literature, education journals, professional organizations, and personal interviews form the basis of this investigation. Chapter one addresses contemporary museum education, highlighting such current learning theories as discovery learning theory, constructivism, and the theory of multiple intelligences. Chapter two discusses the history and development of physical and mental accessibility in museums and public schools, incorporating pertinent federal legislation and its impact on issues of inclusiveness.

Chapter three introduces the learning disabilities disorder, incorporating a brief history, current definitions, and presenting implications of learning disabilities. Chapter four addresses the growing prevalence of learning disabilities, outlines current special

education initiatives, and explores the impact the disorder may have on the museum setting.

Chapter five emphasizes the enormous benefit of using museums and alternative learning sites for students with learning disabilities. Chapter six offers a variety of suggestions and recommendations ranging from the general to the specific for museum educators and program planners. Chapter seven highlights current exemplary programs in a wide variety of American museums that are greatly impacting students with learning disabilities.
-Chapter One-

Museum Education: Contemporary Philosophy & Practice

Museum education is an exciting and growing field of importance. As Eileen Hooper-Greenhill describes: "The emphasis today, from all sides is on the active use of [museum] collections, and on making available as many different forms of learning and enjoyment as possible with the resources available." In the last decade, public programming in the museum has dramatically changed/shifted from a didactic, expository methodology to a discovery, inquiry based approach. Today’s museum educator is focused on engaging and stimulating visitors.

Schoolchildren are no longer simply guided quietly through a gallery—they are involved in active questioning aimed at making visible the connections between the art objects they are viewing and the range of their own life experiences, both personal and cultural.

Current museum philosophy and practice reflects an active, minds-on and hands-on educational pedagogy. Handling objects, gallery games, and creative art making activities are now standard features of museum programming. Influenced by discovery learning theory, constructivist learning theory, and Howard Gardner’s theory of multiple intelligences, museum educators are enticing students to explore and experience firsthand museum objects and ideas.

The belief that the museum is an active and stimulating learning environment is closely linked with discovery and constructivist learning theory. Proposing that students are active, rather than passive learners, the theory of discovery learning has been

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especially influential on the ways in which museum educators currently design, interpret, and present exhibits and programs. According to the theory, providing students with a variety of hands-on activities that offer "the opportunity to manipulate, explore, and experiment" will foster deep understanding as well as a mastery of skills and concepts. Object based inquiry, open-ended questioning, gallery hunts, and studio-based projects, are museum methods and techniques often used today that clearly reflect this philosophy.

Expanding upon the ideas of discovery learning, constructivism proposes that students actively construct knowledge based on personal interest, motivation, and prior experience.

Constructivists, with their concern with the schema and ideas that are already in learners' minds, will be more likely to ask whether the environment is one with which the learner can make any connections. Is there a familiar reference, object, idea, or activity that will allow the learner to engage with the issue?

Constructivist learning theory is student-centered. As Anita Woolfolk explains, consistent with discovery learning, constructivism emphasizes the importance of a complex and challenging learning environment, characterized by authentic tasks, collaborative projects, social interaction, and inquiry, open-ended discussion.

Discovery and constructivist learning theory hold important implications for museum educators. If the museum is to be an effective learning environment, then exhibits and programs should incorporate stimulating minds-on and hands-on activities, and should try(aim) to connect with students' lives, interests, and experiences. As these learning theories assert, although it is the student who is in control of his/her learning, it

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is ultimately the educator who is responsible for creating and fostering learning by providing rich meaningful experiences in a rich and challenging environment.

In the museum as well as in the classroom, the educator remains an integral and important figure in the learning process. As Andrea Weltzl-Fairchild states: “the museum educator [is] very important in the interchange between art object and viewer. Not only as purveyor of facts and figures, the educator, by being aware of the different varieties of expression and out of response, can suggest other positions to take in relation to the art work...by open-ended and varied questions, different issues can be examined in relation to the work.”

Howard Gardner’s theory of multiple intelligences has also had a tremendous influence on contemporary museum theory and practice. Understanding not only how to provide valuable learning experiences, but also how to truly connect and understand how students learn has become an equally important concern for museum educators. Belief in multiple learning styles is greatly affecting how museum educators welcome, perceive, interact, and program for diverse audiences.

Gardner, a Harvard cognitive researcher, has proposed “that there are [at least] seven different categories of human abilities [in which] an individual may have strengths or weaknesses.” These areas currently include: linguistic (verbal), logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal (understanding of others), and intrapersonal (understanding of self). Though most individuals will have strengths in a number of these intelligences, some individuals may however exhibit

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extraordinary talents in only one or two particular intelligences. Learning, according to Gardner, is a highly unique and individualized process.

Emphasizing students' unique abilities, Gardner’s multiple intelligence theory is a positive model for classroom and museum educators. In terms of educational theory and planning, students “many distinctive intelligences should be the basis for deciding school programs and structure.” The theory of multiple intelligences clearly encourages the use of a variety of creative teaching methods to effectively reach students. Students are not a singular group but unique individuals with different needs and different learning styles.

Gardner advocates and supports the use of alternative learning sites such as museums. Believing that the creative arts are a crucial part of human development, Gardner emphasizes the need for more artistic activity in the education of children. In his book, Art Education and Human Development Gardner proposes that young children naturally develop the ability to perceive, to feel, and to respond to art: “researchers working in the last two decades have found that even young children can display sensitivity to aesthetic aspects of works of art...aspects of expression, composition, metaphor, texture, and balance can be apprehended even by relatively untutored youngsters.”

A study done in 1995 using the museum environment reaffirms Gardner’s theory of the impact of art on human development. The study found that not only were younger

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children (ages 8-10) able to respond to representational and abstract art, but they were more liable to express personal feelings and interests than older children (age 12).  

The belief in object based, multisensory, and creative learning experiences is reflected in the growth of museum magnet schools, which use the museum environment in conjunction with the traditional classroom. As one museum magnet teacher describes,

Teaching with objects enables us to teach to the entire range of learning styles. Students learn by listening and sharing ideas. They become personally engaged with the material and are led to think through ideas, critique information, collect data, test theories, and apply their common sense. ...Adopting this method of instruction, museums can address a variety of learning styles, not simply the logical, linguistic, and mathematical, the focal points of traditional learning in schools.  

Used appropriately, the museum environment offers stimulating minds-on and hands-on experiences and has the potential to incorporate a wide range of student learning styles and learning strengths. Current museum philosophy and practice is student-centered. Museum educators today are knowledgeable about the diverse ways students learn, experience, and understand the world. Museum education involves knowing students, incorporating their learning strengths into programming, and making them feel comfortable, confident, and good about themselves and their ideas.

Museum education today is focused on making museum objects and ideas accessible. The growth of student-centered programming reflects a philosophy of inclusiveness, which is an acceptance of difference and uniqueness. It is hardly a

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coincidence or surprise that attention towards special needs populations has developed simultaneously in the museum.
-Chapter Two-

Becoming Inclusive: History & Development Of
Physical & Mental Accessibility In The Museum & Beyond

"Full accessibility will require museums to look beyond the ramp... even beyond lowered label heights. They must address learning styles, multisensory approaches, and reflections of the history and resources of those who are audience..."

People with disabilities have not always been welcomed or considered in public spaces and public programs. Although a considerable amount of attention is given to special needs populations today, the history of special needs accessibility and inclusion can be characterized by a plethora of federal legislation, constant revision, and slow philosophical and institutional change.

In terms of accessibility, historical attention towards people with disabilities originates with The Vocational Rehabilitation Act of 1973. The first to protect the rights of people with special needs, the law states: "No otherwise qualified handicapped individual in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."\(^\text{20}\)

Although a good start, critical attention towards mental accessibility would not truly begin until two years later with the passage of the Education for All Handicapped Children Act of 1975 (Public Law 94-142). The law spawned revolutionary changes by mandating a "free, appropriate public education for every child between the ages of 3 and

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21...regardless of how, or how seriously, he may be handicapped."21 The law marks the historical foundations of critical attention towards the inclusion of children and adults with disabilities in public education.

Though beneficial, the Education for All Handicapped Children Act paved the way for more effective and better education legislation in the 1990’s. Amending Public Law 94-142, the 1990 Individuals with Disabilities Education Act (IDEA), was crucial in expanding educational services for disabled students and replacing the term “handicapped” with “disabled.” The growth and development of all this legislation had important consequences for people with special needs in the public domain. For the first time in history, critical attention and consideration was given to people with disabilities. No longer invisible and inferior, people with disabilities were given equal and rightful opportunity to a free and appropriate public education.

The year 1990 also marks the passage of the Americans with Disabilities Act (ADA), which extended civil rights protection and prohibits discrimination “against persons with disabilities in employment, transportation, public access, local government, and telecommunications.”22 Prohibiting discrimination against disabled persons, ADA had a tremendous impact on museums, mandating that state and local government departments/agencies and “places of public accommodation” (institutions including museums, libraries, historic houses, galleries, zoos, etc) offer “full and equal enjoyment of goods, services, and facilities” to disabled persons.23

22 Ibid, p. 146.
In the past decade, ADA has indeed guided much activity in museums. “Many have taken steps to eliminate those barriers, both architectural and programmatic, that have prevented individuals with disabilities...from taking advantage of the types of learning opportunities museums afford.”

Clearly as Edward H. Able, Director of the AAM, suggests, ADA’s passage has prompted many American museums to think seriously about issues of accessibility and to make any appropriate changes.

However influential, the Americans with Disabilities Act of 1990 has been interpreted mostly as an issue of physical access. Although much activity of museums in the early 1990’s centered on physical access and in effect an “opening” or transformation of their sites and spaces, ADA’s definition of disabled goes beyond physical impairments to include mental/ psychological disorders including mental retardation, emotional/ mental illness, and learning disabilities. The term “special needs” is a broad and encompassing term used to categorize an extremely wide and diverse population of individuals who have a variety of physical and cognitive disabilities.

In addition, the law makes clear that offering an experience or program unequal, separate, or different from those provided to other visitors is accountable discrimination. The law suggests that if not able to provide a certain tour or experience to a disabled person, then a museum should provide an alternative, such as a virtual tour, video or full written commentary.

Although neatly categorized, packaged and presented in federal legislation, physical and mental accessibility is an extremely complex issue. True accessibility

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requires deep understanding and careful examination of special needs audiences in addition to sensitive planning.

As the Smithsonian *Guidelines for Accessible Exhibition Design* (1996) and *Guidelines for Accessible Publication Design* (2001) articulate, the movement in many American museums is currently towards "universal design." It is a philosophy that believes in being accessible to diverse audiences in presentation, display, and programming.

Despite vast improvements in many museums, overall accessibility remains an important and often neglected issue. Despite significant changes, "accessibility is still too often seen as an "add-on" requirement—a "special" responsibility in addition to the museum staff's regular work."  

Access...means much more than getting in through the doors and moving relatively freely inside. Educational access is of equal importance and often receives far less attention, although it is widely understood that making information more relevant and more easily obtainable is essential if new groups of visitors are to be reached. 

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Chapter Three


"Learning disabilities are an invisible disability—difficult to diagnose and easy to misinterpret."28

Learning disabilities are an incredibly complicated disorder. Like "special needs," the term "learning disabilities" is a catch-all phrase, used to simplify and categorize a broad, complex, and highly individualized set of cognitive disabilities. This chapter will attempt to present the inherent nature and potential implications of the disability as clearly and accurately as possible.

The term learning disabilities was first introduced and coined in 1963 by a group of concerned parents and educators meeting in Chicago, Illinois.29 At this historic meeting, the Association for Children and Adults with Learning Disabilities, the first of its kind, was formed. Dedicated to "defining and finding solutions for the broad spectrum of learning problems,"30 the organization quickly gained national recognition and support. Now named the Learning Disabilities Association of America, LDA continues its mission to support people with learning disabilities and educate the public.

Since the LDA's formation, public awareness and acknowledgement of learning disabilities has grown into a large field of study and interest. Today, numerous texts, journals, pamphlets, and web-sites, offering a wide variety of information on the subject.

can be found. Although valuable, definitions are plentiful and greatly vary. However, the latest version of the law, Public Law 101-476, 1997 Amendments to IDEA, is most often used in federal and state definitions and used as well in the assessment and classification of students with learning dysfunction. The federal definition of learning disabilities includes the following main concepts:

- the individual has a disorder in one or more of the basic psychological processes (a problem which is not primarily due to other causes such as visual or hearing impairments, motor handicaps, mental retardation, emotional disturbance etc.)
- the individual has difficulty in learning
- a severe discrepancy exists between the student’s apparent potential for learning and his/her low level of achievement.  

The last part of the federal definition is especially crucial when understanding the complex nature of learning disabilities. Students with learning disabilities will have general or above average intelligence but will exhibit a severe discrepancy between “achievement (what a student has actually learned) and intellectual ability (what the student is potentially capable of learning).”

LDA and the National Center for Learning Disabilities (NCLD) both define the disorder in terms of IDEA as well: a learning disability is a “disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations.” LDA furthers this definition by stating “A learning disability (LD) is a life-long disorder which affects the manner in which

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32 Ibid, p. 76.
individuals with normal or above average intelligence select, retain, and express information. Incoming or outgoing information may become scrambled as it travels between the senses and the brain.\textsuperscript{34}

According to Dr. Melvin Levine, a leading expert on the subject, learning disabilities are a neurodevelopmental disorder, or as Levine prefers, a "neurodevelopmental dysfunction." In layman’s terms, learning disabilities are "weaknesses in specific brain abilities."\textsuperscript{35} These natural short circuits in brain wiring will have important consequences and can mildly, moderately, or severely affect cognitive skills and abilities. As Lerner further explains, "This brain variance affects a person’s ability to speak, listen, read, write, spell, reason, organize information, or do mathematics."\textsuperscript{36}

As Levine states, to seek/find ultimate explanation and cause for cognitive dysfunction is futile. Numerous factors such as genetics, prenatal health stresses, sociodemographic influences, family life effects, critical life events, issues of behavior and personality, and educational impacts may predispose children to dysfunction.\textsuperscript{37} As Levine suggests, a more positive and worthwhile pursuit involves understanding the effects of the disability rather than focusing on the origins of it.

Students with learning disabilities are unique individuals and will be affected in a variety of ways. However, some common observable characteristics may include:

- hyperactivity
- hypoactivity (slow to accomplish task or difficult to motivate)

\textsuperscript{34} LDA. \textit{When Learning is a Problem}. (Pittsburgh, PA: Learning Disabilities Association, 2000).
• inattention (highly distractible)
• overattention/ perseveration (difficulty in stopping an activity or task)
• lack of coordination (clumsiness)
• spatial-temporal dysfunction (trouble with time concepts)
• perceptual disorders (senses are garbled)
• memory disorders

It is crucial to understand however, that a hyperactive, inattentive, or underachieving student does not automatically signify a learning disability. Learning disabilities are "not a single condition but rather a class of related and partially overlapping conditions." Professional assessment and careful testing is critical and necessary before a child is labeled and given the appropriate assistance and intervention.

Many students with learning disabilities may also exhibit difficulties in organizational skill, time management, and social skills. As Levine points out, learning dysfunction has serious effects on social ability. "Interaction with peers draws heavily on attention controls, organization, memory, communication, and higher-order cognition. The substantial developmental variation that occurs in acquiring academic skills also applies to building and sustaining human relationships." Unable to judge and adapt to the social scene, many students with learning disabilities will struggle to fit in and be accepted by peers.

40 LDA. When Learning is a Problem, (Pittsburgh, PA: Learning Disabilities Association, 2000).
Due to extreme academic and social difficulty, students with learning disabilities may exhibit low confidence and low self-esteem. These students may be “extra sensitive to their problems” and become easily frustrated, angry, and defeated. As educational psychologist Anita Woolfolk states, “Learning disabled students may also come to believe that they cannot control or improve their own learning. This is a powerful belief. The students never exert the effort to discover that they can make a difference in their own learning, so they remain passive and helpless.”

Learning disabilities are an incredibly complex and enigmatic disorder. Although the field engaged with the study, research, and understanding of learning disabilities is growing in importance, definitions are all too often ambiguous. Understanding the true nature of learning disabilities goes far beyond concise definitions however. As demonstrated, not only do students with learning disabilities have difficulty performing well in school, but have placed upon them a tremendous amount of social and pressure to fit in, feel good about themselves, and ultimately persevere.

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Chapter Four

A Growing Population Of Learners: Prevelance Of Learning Disabilities & Implications For The Museum

Current research suggests that between 1% to 30% of the school population may be learning disabled. Out of the 5% of students who are officially classified with learning disabilities, 49% are served in the regular classroom, 39% receive some daily additional assistance in resource rooms, 17% are served in separate classrooms, and the remaining 1% are serviced in separate schools, residential facilities or hospital settings.44

Each year, the number of students classified with learning disabilities steadily increases. As numbers grow, so does the number of learning disabled students served in the general classroom. Fueled by federal legislation (ie. Education for All Handicapped Children Act and IDEA), the regular education initiative movement, seeking to merge regular and special education together, has had a tremendous effect on contemporary education philosophy and policy.45 In the last decade, mainstreaming has become a very popular practice in public schools. Participating in one or more regular classes, students with disabilities leave their self-contained classrooms to experience and learn in mainstream “normal” classrooms.

Today, however, the trend has begun to shift from the practice of mainstreaming to full inclusion. Full inclusion, defined as “the integration of all students, including those with severe disabilities, into regular classes,”46 has serious implications. Although in theory a noble pursuit, inclusion policies have generated much debate.

The practice of placing mildly or moderately handicapped children into classes comprised of normal student populations has been a controversial issue... the idea behind mainstreaming centers on giving the special child an opportunity to broaden social and learning experiences, while de-emphasizing [their] physical or mental deficits.\textsuperscript{47}

However, as others make clear, inclusion classrooms are not always the best placement option for every child. For some students with disabilities, large, mainstreamed classes can be overwhelming and socially isolating. As one educator remarks, "Just because a disabled student is physically present in a class does not mean that student feels a sense of belonging."\textsuperscript{48}

Contemporary education philosophy and policy not only affects the public school system but the museum environment as well. The current policies of mainstreaming and full inclusion have serious implications for museum educators. As more and more students with learning disabilities are integrated into large mainstreamed classes, it becomes highly likely that these students with mild to severe learning difficulties will get lost in the shuffle of large visiting school groups.


Chapter Five

The Museum: An Effective Learning Environment For Students With Learning Disabilities

Murtaza went to his ‘lady lying down’ and spent some time viewing her from all angles before starting to draw. He seemed lost in a world of his own, gazing at the sculpture and struggling to record his impressions in his notebook...Emma was impressed with a caryatid which she drew with great concentration and success... Jaswinder had great difficulty with drawing, but seemed to enjoy wandering around the sculptures, examining them closely. He showed his delight in the museum experience by kissing the gallery warden before leaving!49

The above passage is extracted from an inspirational book, Museums and Children with Learning Difficulties: The Big Foot. Written by two female British scholars, Chitra Aloysius and Anne Pearson, the book highlights an education project done in the British Museum in 1991. Inspired by the special needs research of the authors, the project sought to examine the value of museum education for students with learning disabilities. Six British schools and thirty-six students with learning disabilities ranging from moderate to severe participated in the programming.50

Three years in the planning, the museum program proved highly successful. The project not only demonstrates that the museum environment has great learning potential and value for students with learning disabilities but also reflects the powerful impact that museum objects can have on these students’ lives. As Aloysius makes clear, many students had powerful and remarkable reactions and responses to the objects on display. Responding enthusiastically to paintings, a few students with severe learning and behavior problems became highly articulate, surprisingly focused, and extremely

confident. The remarks of Jamie, a student characterized with extremely poor levels of concentration and writing problems, are remarkable, “When I look at paintings it makes me think of other artists and feel like them. I don’t just draw. I think how to draw and want to do better, and this makes me happy.”

Work in museums with children with learning difficulties bears out the prevailing view that learning difficulty is not a clearly definable and static condition, but rather a continuum. A child who has serious difficulty with words and logical understanding may be capable of a powerful and creative aesthetic response to museum objects and have a marked ability to draw, paint or engage in another activity, such as dance or mime.

For the thirty-six participants, the British Museum proved to be an exciting, stimulating, and effective learning environment. As The Big Foot highlights, the museum program, carefully planned and led by dedicated educators and incorporating gallery/object exploration, handling materials, and drawing activities, truly had a tremendous and positive effect on student perception and confidence.

Many special needs educators emphasize the positive impact that alternative learning sites have on students with learning disabilities. Theresa Santiago, one dedicated special education teacher in New Jersey, truly believes in the power of mind-on and hands-on learning environments. She shares her rationale of using the outdoors (a New Jersey marshland) as an alternative classroom: “I knew most of [the class] were visual and tactile learners, and I reasoned that they needed active experiences….these kids would flourish if they went out of the classroom and experienced the world.”

Sure enough, Santiago’s students showed remarkable signs of improvement in their interest,

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52 Ibid, p. 12.
learning, and motivation in such academic areas as math, science, and reading. The most significant result of the alternative learning experience however, was the great impact the experience had on the students’ confidence and self-esteem.

They showed confidence in trying to do things they never had attempted before. They were more comfortable in social situations with their main-streamed peers and interacted with them more...I’ve seen such a rise in their self-esteem and I know it’s a combination of things-pride in their learning, the oral presentations, peer and group work, different sensory and modality learning, new stimulation to their imagination...It gives me a thrill to see them ignore that “label”, assert themselves, and find pride in their accomplishments.  

Charles Cox, another special needs educator, also believes in and extols the benefits of using creative programming in stimulating environments. An extensive and carefully planned program in a historic ice cream parlor in Providence, Rhode Island, proved to be especially rewarding. “The ice cream-making demonstrations coupled with the building tours and the historical information presented by experienced guides provide a rich and memorable experience to students who otherwise would be limited to classroom instruction.” As Cox explains,

If what students see and experience on that trip can contribute to an already existing body of learned and experienced knowledge, however limited it may be, then it can be a valuable addition to the classroom experience. It can, that is, become another tool used to overcome learning disabilities and acquire learning skills.

Stimulating learning environments such as museums, marshlands, and even ice-cream parlors, can have an extremely positive and lasting effect on students with learning disabilities. Students with learning disabilities “may have a deep reservoir of creativity and intellectual power and unusual strengths in originality, insight, knowledge, humor

54 “Going Beyond the Expected,” The Active Learner, (Fall 1999), p. 29.
and emotions... Often, [they] seem to require a great deal of activity. They may find regular classroom environments uninviting or have difficulty attending to classroom instruction.  

A stimulating and exciting environment that encourages a minds-on and hands-on approach, incorporates multiple learning styles, and reflects students' lives, will be truly be effective.

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56 Ibid, p. 94.
-Chapter Six-

Suggestions And Adaptations For Planning, Developing, And Teaching Students With Learning Disabilities In The Museum

Incorporating museum programming for students with learning disabilities is not about "dummyming" down, simplifying existing programming, or providing a separate or different experience. It is about knowing students, incorporating their learning strengths into programming, and making them feel comfortable, confident, and good about themselves.

Current research however, suggests that some modifications and adaptations may ultimately benefit students with learning disabilities. Educators can meet the unique needs of these students by "helping bypass their deficits as they access their areas of strengths; modifying assignments and curricula for these students so their true abilities may be demonstrated; [and] creating an environment that nurtures personal creativity and intellectual characteristics."

PRE-VISIT PLANNING & PREPARATION

Careful planning and preparation for groups of students with learning disabilities is extremely valuable. Ideally, preparation should begin prior to the actual museum visit. Museum educators should, if possible, establish contact with the special educator, the primary classroom teacher, and/or the Learning Disabilities Teacher-Consultant, a school professional that interprets and assists the implementation of educational programs. As useful sources of information, these professionals may share intimate details about the needs and abilities of each student and also help to choose the most appropriate methods
and materials to be used in the lesson.\footnote{Janet Lerner, \textit{Learning Disabilities}, (Boston MA: Houghton Mifflin, 2000), p. 19.} According to Aloysius and Pearson, \textit{"Museums need advice and criticism from special needs teachers to help them improve provision generally... Teachers of children with learning difficulties are expert at adapting all manner of resources for use with their pupils."}\footnote{\textit{Art in Special Education}, (NJ: Art Educators of New Jersey, 1990), Section 4, p. 4-5.}

On the flip side, museum educators should be valuable sources of information for classroom teachers. Teacher packets that contain general museum information, maps, hand-outs, and suggestions for relevant pre-visit classroom activities, can be especially helpful. Classroom teachers using good visual resources to introduce museum objects and ideas will not only prepare students and helpers for the visit, but will establish familiar points of reference and help to build confidence.\footnote{Anne Pearson and Chitra Aloysius, \textit{Museums and children with learning difficulties: The Big Foot}, (London: British Museum Press, 1994) p. 79.}

**GENERAL MUSEUM STRATEGIES**

Upon arrival, visiting students should find their museum teacher welcoming, well prepared, helpful, and ready to begin. Introductions should be short and concise, and include a review of only two of the most important museum rules.\footnote{Ibid, p. 77.} Appropriate way-finding materials and handouts (simple floor plans, color coded maps, photos of the exhibit, relevant text etc.) should be quickly passed out and programs should begin promptly.

Keep groups small! Students with learning disabilities may need individualized attention. As David Henley states, \textit{"ratios of twelve-to-one are ideal for either intact or special needs children placed within the mainstream setting."} Although ratios of thirty-

to-one are very common today, “ratios this high allow for only mass education with diminished opportunities for meaningful interactions with both staff and peers. This is especially crucial should one or more special needs children be placed in this size grouping.”

In general, museum programs should be kept short and present only the most interesting and important information. As Janice Majewski also suggests, programming should be done in quiet, uncrowded areas of the museum. She explains:

"Generally, a learning disabled person is someone who has difficulty processing information. His misperceptions often cause him to be disorganized, literal minded, inconsistent or inflexible in his responses to situations and/or unable to function well in a highly stimulating environment."

Too many exterior distractions, such as roving school groups, wandering visitors, and busy staff members, could cause potential problems. Eliminating any unnecessary distractions will help keep students focused and alert.

**PROGRAMMING/TEACHING STRATEGIES**

"There’s no magic formula for teaching developmentally disabled children. A lot of it is just being responsive to the audience, getting a sense of what the interest level is, what the ability is, and then just focusing on the ability. It’s good to know what the disability of a person is, but then you really need to focus on the ability."

Students with learning disabilities are unique individuals with a variety of learning strengths and needs. Although there is no single way to develop a cohesive education program, current research suggests that “children with disabilities learn best

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with an interactive, hands-on approach. Visual, auditory, and tactile props and aids, such as illustrated texts, videos, music, raised maps, and globes, in addition to a variety of museum handling objects can serve as highly effective learning tools in the gallery.

In terms of gallery instruction, a recent study by H. Lee Swanson at the University of California found that a combination of direct instruction and strategy instruction was the most effective form of teaching for students with learning disabilities:

[The components] most linked to effect student achievement: control task difficulty...the use of small interactive groups...and the use of structured questioning and directed responses, involving, for example, interactive questions and answers or the teacher directing students to ask questions and summarize.

Led by the educator, museum inquiry and questioning should be open-ended, flexible, and aim to connect and relate to students' lives.

Programs involving time, space, or historical concepts, must be approached carefully. For students with learning disabilities, according to Cox, "it is necessary to provide more than a simple recitation of names. To say, for example, that Italy is a country in Europe is not enough...begin with [the present] location...[then] the relation to the rest of the country, the location of the United States, and the relative locations of the various continents... bring along a basketball-sized globe for the children to toss around, to get a sense of the earth's shape and the arrangement of the continents." This method of instruction not only extends the student's experience with geography but reinforces a sense of real time and physical space.

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Overall, the following techniques are highly recommended by a variety of arts, museum, and special needs educators.

- utilize all of the senses in approach to learning
- demonstrate more and talk less
- provide many opportunities for tactile and three-dimensional experiences
- include movement as part of the lesson.  

Good visual stimuli and greater use of creative writing, dance and drama are extremely effective techniques for students with learning disabilities in the museum environment.  

In general, museum educators should speak clearly and at a normal pace, relate abstract concepts to the student’s lives, slowly explain and repeat instructions, and always avoid embarrassing students by calling on only those who want to participate.

Humiliation protection is especially critical for dealing with students with learning disabilities. As Levine states: “The constant threat of embarrassment in front of peers...is apt to be especially profound among children with learning disorders...Adults need to reassure these students that they will make every effort to help them avoid public exposure of their learning and developmental weaknesses.”

Fostering positive and successful experiences in the museum is critical. Special attention must be given to students with learning disabilities to ensure that they experience success. The museum educator clearly plays a large role in making the

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71 Art in Special Education, (NJ: Art Educators of New Jersey, 1990), Section 2, p. 5.
74 Ibid, p. 566.
museum environment comfortable, accepting, and conducive to learning for students with learning disabilities.

Last but not least, museum educators should always plan for the unexpected.75 Due to a variety of circumstances, museum educators may not always be informed about the abilities and potential disabilities of their visiting students. Despite good intentions, in reality, students with learning disabilities may fall undiscovered through the cracks. However, knowledgeable and sensitive educators should be able to observe student difficulty in the gallery and/or studio and be able to quickly adapt. As Henley suggests: “Signs [of learning difficulties] alert the educator to modify his or her expectations and to offer increased tolerance and patience, as well as to modify the program to address the specific or general deficits.”76

INCORPORATING ART

“The artistic process is equally accessible to all individuals regardless of their emotional, intellectual, or physical capacities.”77 Studio activities in addition to or in conjunction with gallery activities can be especially rewarding for students with learning disabilities. Looking at, thinking about, and making art is an important process for all students, and perhaps in some cases, even more so for students with disabilities. As Rubin states:

Art...can and does give a child [with disabilities] an exciting, stimulating and pleasurable way to enjoy and explore the sensory world. It gives him a way to control, to order, to “map out” a confused sense of his body or of his environment, of time or space—to make sense out of things through organizing them, or to organize himself in the productive activity. It gives

him a way to discover and define himself through genuine choices and decisions, and creations which are uniquely his.78

Creating meaningful studio experiences for students with learning disabilities involves being flexible and open to providing a range of artistic mediums and projects. According to Rubin, students with learning disabilities are unique and rich individuals who will “think, feel, paint, and draw in ways that are radically different from one another.”79 Limiting materials and simplifying projects is unnecessary. Adaptations, if appropriate, should be directed to the needs of each individual student rather than to the group as a whole.80

However, it is recommended that arts educators establish individual work spaces, eliminate extraneous procedures, and chose art activities that will provide the most rewarding, positive, and least frustrating experience. As Rubin suggests, providing each student with a large bowl or tray to hold all necessary project materials is extremely helpful.81 This simple strategy also works extremely well for mainstreamed special needs students by allowing children to work “within their own self-contained units without violating the space or materials of their neighbors.”82

Providing special needs students with pre-cut, laid out materials in the studio is also extremely beneficial. This adaptation not only helps to reduce frustration, but compensates for the slower, more irregular pace rhythm of special needs students, often a challenge.83

79 Ibid, p. 238.
81 Ibid, p. 249.
83 Ibid, p. 32.
Henley also suggests focusing on art activities that will provide the most rewarding, positive, and least frustrating experience. Painting with tempera paint, characterized by its thick, drip-less consistency and bright opacity, for example, may be more suitable than drawing or sketching activities for some students.\textsuperscript{84}

\textsuperscript{84} Ibid, p. 92.
-Chapter Seven-

Exemplary Museum Programs For Students
With Learning Disabilities

LOCAL CASE STUDIES: GREATER NYC/NEW JERSEY AREA

Extraordinary museum programming for students with learning disabilities is currently taking place in the greater New York City area and beyond. The following case studies at The Metropolitan Museum of Art, The Museum of Modern Art, Queens Museum of Art, New Jersey Historical Society, and The Newark Museum are highlighted for their strong commitment and involvement with special needs students, including students with learning disabilities. Although, offering a wide and distinct range of approaches and techniques, each museum is inspiring, encouraging, and making special needs students feel welcome, included, and good about themselves.

Since 1913, The Metropolitan Museum of Art in New York City, has been involved in special needs programming. "Robert W. de Forest, Secretary of the Met in 1913, offered two lectures on American sculpture and musical instruments, complete with touchable objects and braille. There are also records of the museum's "story hour for physically handicapped children" in 1924-25, and "lip reading lectures" in 1926.”

Today, the tradition continues as a group of specialized docents offer quality educational programs for students with all forms of disabilities, including those with learning disabilities. As The Accessible Museum states: "These are not your standard

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guided tours, where guides offer information about art objects. The guides try to get the children to talk by asking them questions about what they see.\textsuperscript{86}

The interactive format of the Met's program has proven highly successful. Upon arrival, groups view an introductory slide show in a museum classroom before entering the museum. Depending on the students' needs, using just one slide of one museum object and dealing with different aspects of it has also proven to be especially effective in keeping students with severe learning difficulties attentive and focused.\textsuperscript{87}

Keeping groups small (no more than nine per docent), museum guides then lead students in an interactive gallery tour. Object based and comparative questioning, which seeks to relate to the student's own lives, is utilized by docents to engage and stimulate student participation. According to Aloysius and Pearson:

This method of interpretation actively engages the students, increases their visual skills and allows for the necessary flexibility in working with students at various academic levels. It is a teaching technique which creates a positive, participatory museum tour which is successful with all students, not only those with learning disabilities.\textsuperscript{88}

The Met's interactive and open-ended museum program for students with learning disabilities fosters a sense of positiveness and provides much opportunity for student success. Although a large and often intimidating place, the museum is truly affecting and connecting with students with learning disabilities in intimate and meaningful ways.

The \textit{Museum of Modern Art} in New York City is also providing quality programming for special needs students. As Leah Schroeder, the Special Needs Assistant shares, MoMA's three-part program for students with learning disabilities centers on


\textsuperscript{87} Ibid, p. 71.

creating a risk free environment with open-ended questioning, hands-on learning, and museum educator led dialogue.\footnote{Leah Schroeder, Personal Interview, 12 February 2001.}

The multi part program incorporates an initial pre-set visit to the classroom, the actual museum visit, and lastly, a post-set visit back in the classroom. Although the “meat” of the program takes place in the museum, the pre-visit and post-visit activities, characterized by an hour long introductory slide show and concluding studio activity, have proven to be highly effective and important for students.

Upon arrival at the museum, similar to the Met’s program, students are led into an orientation room where the rules of the museum are discussed and the pre-visit slide show is shown again. Open-ended questions seek to reinforce and stir up the pre-visit experience, and students are asked if they have changed their minds or opinions regarding the projected work.

Focusing on such basic themes as “Portraits”, “Movement in Art”, “People, Places or Things”, or “Shapes and Colors”, students are lead through the museum by a trained museum educator. Depending on the needs of the students, some adaptations and techniques may be used in the gallery. One interesting technique includes the use of vocabulary flash cards. Containing descriptive words or phrases, the flash cards serve to promote careful observation and reinforce literary skills. Throughout the program, students may be encouraged “to match” a phrase or word to a corresponding art piece.

Role playing and kinesthetic activities are also often incorporated into MoMA’s programs for students with learning disabilities. As Ms. Schroeder states, incorporating
movement into programming, such as re-creating and setting into motion an art work, has proven to be very effective in captivating students.90

At the Queens Museum of Art, Queens, New York, extraordinary educational programming for students with learning disabilities is also taking place. Led by skilled museum professionals, ArtAccess, an innovative program offered year round, four days a week, features a guided, interactive gallery tour and a hands-on, exploratory art workshop. As Kit Shapiro, the current ArtAccess Coordinator emphasizes, the multisensory program is based upon an art therapy point of view that seeks to build participants’ self-esteem, encourages freedom of choice, and aims to provide a fun, rewarding, and successful experience.91 As Ms. Shapiro shares, in the museum environment, students of all abilities become “stars.”

Like the Met and MoMA’s programs, ArtAccess is specifically designed for special needs students. Led by two full time, professional staff, and lasting between two and three hours, ArtAccess aims to establish a strong and ongoing relationship between students with learning disabilities and the museum. Multi-visits to the museum are highly encouraged.

The author was fortunate enough to observe and participate in one such exciting ArtAccess program in the Spring of 2001, which featured portraiture. Upon arrival, a small group of seven students with severe learning disabilities were given a warm and enthusiastic welcome to the museum. After a brief introduction and a quick review of museum rules, the group was led into the museum to form a large circle on the floor in front of a huge installation of clay heads. Passing around an empty wooden frame, each

91 Kit Shapiro, Personal Interview, 20 March 2001.
student was encouraged to make a face for the group. Giggling with delight and excitement, the students shared and described the wide range of corresponding emotions as the museum educators encouraged and led the dialogue. After repeating this activity a few times, the group was introduced to a variety of picture cards with different portraits and expressions, often with corresponding descriptive vocabulary words. Students who grew restless or anxious while waiting for their turn, were given a variety of handling objects to hold on to.

Due to their restlessness and desire for hands-on activity, the group was given a brief tour of the gallery and then led into the studio for the remainder of the program to create their own clay heads. A large circular, covered table, pre-cut cardboard bases, and a variety of fun materials in sectioned off bins served to keep things neat, organized, and in control. Before receiving their clay balls, students were encouraged to touch their own faces while describing and thinking about the three-dimensional landscape of their features. Mimicking the museum educator, the students deeply enjoyed exploring their clay—pounding it, poking it, and smelling it. Some students chose to follow step-by-step in making a head; others naturally experimented and went ahead. New materials such as feathers, beads, and pipe cleaners were introduced one at a time so that the students were not overwhelmed and anxious.

Overall, the program, lasting just about two hours, was a tremendous success. In the museum environment, these kids truly excelled. The intense high level of concentration and focus of these students in both the galleries and studio was especially astounding. Placed into a comfortable, new, and creative atmosphere, and given one-on-one attention and encouragement, these students were truly shining stars.
The New Jersey Historical Society in Newark, New Jersey is also creating some extraordinary programming for students with learning disabilities. However, what is so extraordinary is actually perceived as really "ordinary" within the walls of the small, yet stimulating historical society. Julie Chernoff, Museum Educator for Adults & Special Needs Audiences, believes that their education programs, based on an interactive, hands-on, inquiry-based approach is highly effective for all audiences, special needs included.92

Since handling objects, art activities, and open-ended questions are central to all their programs, offering a separate program for students with learning disabilities is really unnecessary. In fact, Ms. Chernoff has observed that students with learning disabilities often and naturally excel in the museum environment. Encouraged by the museum educator, these normally quiet, withdrawn students quickly become active participants, often surprising their teachers and peers.

Some small yet significant adaptations used in the gallery for special needs students are eliminating distractions and external sounds (turning off gallery music, video screens, flashing lights), providing a variety of handling objects and more time to handle them, and moving to a quiet, remote place away from other visiting groups.

The success of the New Jersey Historical Society's programming for all students, including those with learning disabilities, reflects careful planning, flexibility, sensitivity, and an inclusive philosophy. About three to four times a year, all staff members participate in sensitivity training regarding special needs audiences. And in weekly staff meetings, relevant issues of accessibility and need are addressed as necessary. As Ms. Chernoff states, mental accessibility has to be a philosophy that is supported throughout the institution.

92 Julie Chernoff, Personal Interview, 26 February 2001.
A few blocks away, The Newark Museum, another outstanding New Jersey museum, is also involved with providing quality programs for students with learning disabilities. Of special note is the museum’s annual October Festival, a day long event set aside for and dedicated to Newark’s special needs schools. Sponsored by VSA arts, a national organization dedicated to promoting creativity among the disabled, the festival offers a stimulating and fun day of gallery talks, planetarium shows, science demonstrations, and art activities. Growing in reputation, this past year, over 300 students and teachers participated.  

NATIONAL CASE STUDIES

Extracted from The Big Foot and The Accessible Museum, the following museums, The Children’s Museum in Boston, The Museum of Fine Arts in Boston, The Natural History Museum of Los Angeles County, and Chicago’s Brookfield Zoo are highlighted for outstanding programs which target and/or include students with learning disabilities.

The Children’s Museum in Boston, Massachusetts, is deeply involved with quality special needs programming. During the academic school year, Wednesday mornings are specifically reserved for a variety of special needs school groups, including those students with learning disabilities. Offering two sessions a day, well trained museum interpreters lead small groups through the museum. These “interpreters adapt the tour according to their assessment of what will be the most enjoyable and beneficial to the children in their charge. Interpreters need to be able to make this judgement within a few minutes after the children arrive.”

Museum is the ongoing attention and consideration given to staff development and excellence. Not only are these special needs educators paid for their time and expertise, but this staff participates in regular weekly training sessions that provides the opportunity for discussions and guidance.

The Museum of Fine Arts in Boston, Massachusetts, has been active as well in programming for special needs groups. The museum not only offers thematic gallery tours for small groups of students with special needs but provides each student with canvas gallery-bags full of theme related handling objects. As Aloysius and Pearson describe, the bags might also include “cardboard ‘samplers’ with brush strokes in thick paint, paintbrushes, rocks which contain pigment elements, palates, color samples and pieces of fabric.”

Designed specifically for students with learning disabilities, the museum’s program “Artful Adventures” encourages exploration of cultural diversity through art activities. “By allowing participants to respond to paintings through such activities as sketching, storytelling, and movement, the museum staff hopes the participants will develop new or more focused skills of perceiving, exploring, reacting, and relating to what they see.” Fostering a hands-on learning environment, return and multi-visits to the museum by special needs groups are frequent.

Eager to connect with and impact special needs students, The Natural History Museum of Los Angeles County, California, takes their hands-on programming on the road. At least three times a month, a group of four to six specially trained docents travel to different county schools, to present such topics as dinosaurs, ocean life, and North

American mammals. Using a variety of visual and tactile aids, such as illustrations, large Velcro storyboards, and lots of museum handling objects, the program offers a stimulating and interactive museum/classroom experience. "Children get to touch as well as smell, handle and play with artifacts and specimens from the museum collection." 97

Last but not least, the Brookfield Zoo in Chicago, Illinois, features an after-school six-week program designed specifically for students with learning disabilities and/or behavior disorders. Meeting once a week at the zoo, small groups of 8-12 year olds in this highly innovative program learn about animals (horses, dogs, dairy animals) and the duties and responsibilities of the people who take care of them. At the conclusion of this program, each student is given the opportunity to present to the public a variety of animals in the Pet-and-Learn Circle. As Mark Trieglaff, the Special Populations Coordinator states: "The aim of this exercise and the program as a whole, is not only to educate the students, but to help them improve their social and listening skills and to boost their self-confidence, a commodity often in low supply." 98 The positive impact of the program is truly reflected by the graduates’ improved behavior, higher self-esteem, and their further involvement and interest with animals and the zoo.

-Conclusion-

Some Final Thoughts

The ability to “read” visual language clues, offers educationally handicapped students another modality of learning. For those “special” students with reading [and writing] difficulties, the development of an additional learning modality becomes a viable instructional method pertinent to their total educational program. This offers an alternative way to observe and collect, relate, analyze and interpret information.99

This simple observation addresses the very core of the matter: the museum can be an effective learning environment for the cognitive, physical, and social development of students with learning disabilities. As Aloysius and Pearson state, the benefits of asuccessful museum program are plentiful:

- greater student motivation
- development of specific learning skills of hand to eye co-ordination, concentration, observation through drawing
- powerful creative, aesthetic and emotional responses (rather than logical or analytical ones)
- multicultural educational possibilities
- greater self-confidence for students in their ability to recognize, respond, make choices and decisions
- enhanced social skills and confidence
- the encouragement of more museum visits on a regular basis.100

The National Information Center for Children and Youth with Disabilities 2000 Fact Sheet proposes that 5% to 10% of the population is affected by learning disabilities

99 Art in Special Education, (NJ: Art Educators of New Jersey, 1990), Section 7, p. 2.
and that over 2.7 million children with learning disabilities were served in the 1997-98 school year. Students with learning disabilities are a substantial, significant, and growing population of learners that should not be discounted. Albert Einstein, Nelson Rockefeller, Thomas Edison, Auguste Rodin, Woodrow Wilson, Winston Churchill, Pablo Picasso, Greg Louganis and Cher are a few individuals who not only overcame their learning disabilities but persevered to become some very great and influential figures in history.

Museum programming for students with learning disabilities needs to be continued. Although today, "the field of special education is too often regarded as an optional extra to educational planning," federal legislation such as The Americans with Disabilities Act and the Individuals with Disabilities Education Act mandates that museums become physically and mentally inclusive. Focusing on special needs audiences is a noble and worthwhile pursuit. The tremendous success of the British Museum project and other notable programs currently being implemented in a wide and diverse variety of American museums is extremely encouraging. However, the list of extraordinary museum programs for special needs groups has not been exhausted. The local and national case studies highlighted are museums that I was fortunate enough to discover and make personal contacts with. I encourage other researchers and educators to uncover more!

Mental and physical accessibility in the museum involves a close and ongoing collaborative partnership between special education professionals and museum educators.

With careful planning and collaboration, the museum environment can be further developed and used as exciting, stimulating, and highly effective learning environment. Sensitive, careful, and knowledgeable museum programming not only benefits students with learning disabilities, but ultimately all museum visitors.

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