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**EXPLORING THE PERSONAL RESPONSIBILITY ORIENTATION MODEL:
SELF-DIRECTED LEARNING WITHIN MUSEUM EDUCATION**

A Dissertation in

Adult Education

by

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ABSTRACT

Grounded in humanistic philosophy, the intention of this basic-interpretive, qualitative inquiry was to explore self-directed learning (SDL) within the museum environment. Sixteen autonomous learners, aged twenty-five or older, were selected from random visitors among four participating museum sites within the Baltimore, Maryland – Harrisburg, Pennsylvania region. Investigation was conducted into the Personal Responsibility Orientation (PRO) Model as a conceptual framework for understanding SDL within museums and discoveries were revealed into SDL from the perspective of the museum learner. Topics of discussion include: the highly educated and experienced independent learner; the museum gallery or exhibition in the role of non-human facilitator; SDL inside of the museum; the social context of learning; and possible deficiencies and strengths of the PRO Model. The findings have implications for adult education, nonformal education, free choice learning and museum education (also referred to as museum science, museum studies or museology).

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LIST OF COMMON ABBREVIATIONS

AAM	American Association of Museums
BMA	Baltimore Museum of Art
DL	Distance Learning
HRD	Human Resource Development
IPRL	Inventory of Personal Responsibility in Learning
IT	Information Technology
LC	Learner's Characteristics Dimension (PRO)
MSCC	Museum Social Context Continuum
NFE	Nonformal Education
NMNH	North Museum of Natural History and Science
OCLI	Oddi Continuing Learning Inventory
PRO	Personal Responsibility Orientation Model
PRO-SDLS	Personal Responsibility Orientation to Self-Direction in Learning Scale
SDL	Self-Directed Learning
SDLRS	Self-Directed Learning Readiness Scale
SMP	State Museum of Pennsylvania
SSDL	Staged Self-Directed Learning Model
TL	Teaching-Learning Dimension (PRO)
WAM	Walters Art Museum

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CHAPTER 1

INTRODUCTION

Foreword

I remember that frost covered morning my father and I ventured into Washington, D.C. to visit the various museums. Over the years we had discussed numerous topics relevant to art and history and we were now setting out to find the answers to our questions and new topics for discussion. This was not a childhood experience, rather it was two adults, who had often talked about embarking upon such a learning adventure and were finally doing it. Our itinerary was self-directed and self-planned, however still flexible for unanticipated possibilities. The day was full of interaction. We discussed the exhibits among ourselves, with various guides, and with other visitors. It was a fantastic experience of learning, discovery, and camaraderie that I will always remember.

Little did I realize then, that this one day adventure would capsule much of the essence behind the areas of self-directed learning (SDL) and museum education. These two topics form a logical partnership. SDL has real implications for adult museum education. Preserved within the walls of museums exist many of the greatest accomplishments of human thought, science, and culture. Traditionally revered as special places of knowledge, museums can offer unique learning opportunities for the self-directed adult learner who undertakes the responsibility of seeking these institutions as a resource for their learning.

However, if one turns to the index of most museum education texts, SDL is seldom found. Although often implied, little documentation exists on adult education within the museum education literature (Dufresne-Tassé, 1995) and even less exists on SDL and its relationship and implication for museums. The significance of the problem is magnified when

one takes into consideration that self-directed adults are among museums' largest audience of visitors (Wright, 1989). On the other hand, rarely is museum education discussed in any great depth within the adult education literature.

None-the-less, it is the adult education literature, through its conceptual and empirical examination of SDL, which provides the bulk of the necessary background knowledge upon which this study is predicated and hopefully contributes. Therefore, it is essential to examine SDL within the adult education literature followed by a specific examination of SDL within museum education

Self-Directed Learning

Since the publication of *The Inquiring Mind* (Houle, 1961), SDL has been the focus of nearly a half century of scholarly research (Brockett et al., 2000). Through the study of SDL genuine understanding has been made into how adults learn outside of traditional or formal settings. Houle was the first adult educator to explore the motivation and activity of independent learners. His findings that adult learners share similar methods of thinking and acting toward the process of which they are involved lent credibility to the notion of SDL while at the same time offered a qualitative approach toward examining problems in adult education. All education is in some degree self-directed (Houle, 1992). Evidence suggests that learners plan at least 70% of their projects for the sake of obtaining new skill and knowledge (Tough, 1979). Although adults are fully capable of learning on their own, frequently they have been conditioned into knowing only how to be taught by others (Knowles, 1975; 1984). Thus the significant part that adults play, and need to play, in developing their own learning began to propel adult educators to re-examine their role as material and content teachers toward instead teaching or coaching the adult learner how to discover and pursue the skills necessary for self-instruction. In response, a new

strategy or process for teaching adults was introduced; that of andragogy (Knowles, 1975). The andragogical method is predicated upon six basic assumptions: the need for adults to know; the learner's self-concept; the role of the learner's experience; the readiness of adults to learn; the adult orientation to learning; and motivation (Knowles, 1984). In addition, these assumptions present a case to separate the adult from the child learner.

The initial foundation for SDL was presented through a linear and straightforward approach. However, little attention was devoted to the possible affect of environment on self-direction (For example: Houle, 1961; Knowles, 1975). Instead, the basic assumption was that each adult engaged by personal choice in the SDL experience (Tough, 1968). This assumption was brought into question when it was discovered that environmental circumstances can and do play a major role in affecting the learning structure for adults through a concept coined "organizing circumstance" (Spear & Mocker, 1984, p. 4). In this way SDL may be facilitated through the manipulation or restructuring of the learning environment. Acknowledgement that environmental factors contribute to the self-directed experience has helped to promote a more interactive approach where the nature concerning learning as well as the setting of the learning is now considered in addition to that of merely the learner (Merriam, 2001). Much of SDL has also been found to occur in a group setting or environment as opposed to an individual only experience (Brookfield, 1985a).

Large attention has also been devoted toward exploring the notion that SDL can be viewed as a personal characteristic. The two most popular instruments which were designed to measure the degree of self-directedness exhibited through personality characteristics are the Self-Directed Learning Readiness Scale (SDLRS) (Guglielmino, 1977) and the Oddi Continuing Learning Inventory (OCLI) (Oddi, 1986). Both of these instruments offer useful insights into

specific characteristics, i.e. personal responsibility, and their affects on SDL. Upon closer examination, the study prompted by the SDLRS and OCLI into specific personality characteristics suggests that self-directed orientation toward learning can actually be classified as a learning style (Bonham, 1989). However the use of these instruments does not collect the type of descriptive qualitative data that is also necessary for furthering our understanding of SDL (Brockett & Hiemstra, 1991). The impact of the SDLRS and the OCLI on adult education is indeed significant; as both instruments continue to be a source of academic debate and inquiry accounting for roughly a quarter of all research into SDL (Brockett, et al., 2000),

The aforementioned contributions led to a watershed of research into SDL culminating during the early 1990s in which several key concepts were introduced. Fundamental to all understanding of SDL is the idea that SDL occurs on a continuum (Brockett & Hiemstra, 1991; Candy, 1991). In any circumstance the degree of self-direction can fluctuate dependent upon the individual's skill ability, perception, and accessibility of resources. The advantages of increasing one's self-directedness range from development of superior critical thinking skills and understanding toward greater outcomes in learning as well as the ability to overcome adverse environmental conditions (Candy, 1989). Adult learners demonstrate behaviors which are nonlinear and increase in proficiency as specific skills are sharpened (Cavaliere, 1992). Initially SDL was observed from the external perspective of learning activity and consequent results. However it was soon discovered that research was necessary into the cognitive learning process. Psychological control was deemed as an essential and significant paradigm for any activity to be considered as self-directed (Long, 1998).

SDL has consistently been viewed as a positive end with individuals and facilitators seeking greater degrees of self-direction as their ultimate goals. Little argument arises as to the

need for teachers to redefine their contributions in SDL situations. For instance, teachers need to accept and practice being resources for learning as facilitators as opposed to traditional instructors who merely dispense knowledge (Brookfield, 1986). However, consensus is not mutual as to the appropriateness of facilitating SDL. Collins (1991) has called into question facilitation, identifying such an act as a possible shield by which to control and manipulate the learner. Proponents of facilitating SDL believe that facilitation promotes self-directedness and supports learning as collaboration between learner and facilitator (Brockett & Hiemstra, 1991; Garrison, 1989; Grow, 1991; Knowles, 1975, 1984; Tough, 1979). Methods have been developed to promote facilitation of SDL such as Grow's Staged Self-Directed Learning Model. This model was developed with the intent of providing a strategy for teachers and instructors to acknowledge, accept, and ultimately encourage SDL among their students. In doing so, the model recognizes various phases of self-direction, similar to Candy's (1991) concept that SDL exists on a continuum.

Finally, one significant component which is present in all aspects of self-direction is personal responsibility, or the notion "that one assumes the primary decision-making role for one's life" (Brockett & Hiemstra, 1991, p. 138). Through their responsibility the learner initiates and conducts autonomous learning. This responsibility occurs on a continuum and is inevitably affected through the social context in which all learning takes place.

Study into SDL within adult education reached its zenith in 1991, then unfortunately greatly waned during the later 1990s (Brockett, et al., 2000; Eneau, 2008). As a result, despite the tremendous amount of literature regarding autonomous learning, numerous conceptual models and perspectives have not been adequately explored through necessary empirical studies. Interestingly, research has continued and flourished into specific subject areas concerning SDL,

and is now firmly embedded in the literature and practice of human resource development, healthcare, and distance learning/ information technology. These cases provide ample evidences regarding the success of SDL and provide further justification for renewed interest in those areas in which SDL has either waned or has been thus far inadequately pursued, such as in museum education.

Self-Directed Learning in Museum Education

Despite the abundance of adult education literature regarding SDL, it is virtually nonexistent in the museum literature. The reason for this problem is twofold. First, an on-going struggle continues to exist among museum professionals over whether museums should concentrate on identifying themselves as collecting institutions versus education institutions (Dufresne- Tassé, 1995; Fahy, 1995; Hein, 1998; Mayr, 1998; Roberts, 1997; Sachatello-Sawyer et al, 2002). Second, when education is stressed, it is viewed through the development of object interpretation through the creation, fabrication, and presentation of the museum exhibition (Burcaw, 1983; Hein; Hooper-Greenhill, 1991; Kräutler, 1995; Maroević, 1995; Smith, 1989; Vergo, 1989). The museum concentrates on the objects and materials on display, “it is not organized with a primary concern for the viewer’s interest, or the meanings the viewer might make from the material” (Hein, p. 21). Furthermore, learning strategies and aids for self-directed visitors rarely exist (Carr, 1985; 1991). Museums “tend to believe that the people who go to exhibitions ‘get something out of them’, even if we are hard put to define what that ‘something’ is” (Vergo, 1989, p. 46).

Museums often lack distinct curriculum (Hein, 1998; Hooper-Greenhill, 1991). There is no requirement of attendance and the need to respect individual learners is stressed (Hein). The

act of learning within the museum becomes the visitors' responsibility (Adam, 1937). These, of course, are some of the characteristics which classify museums as places for SDL.

Museums are places of choice. Self-directed adults exercise their personal preference to visit a museum. This decision to attend along with similar types of selections on behalf of the adult learner has also been referred to in the museum literature as 'free-choice learning;' "learning individuals do because they want to rather than because they have to" (Falk & Dierking, 2000, p. 213). Once within the museum visitors can choose among various learning options which normally include the guided or self-guided tour. In this view, museums are basically settings of free choice-learning, offering the visitor not only choice but also control over their learning (Chang, 2006).

Free choice represents a determined effort created by museum educators for which to understand adult visitors specifically within a museum setting. Although seemingly similar, free choice is not SDL. Free choice was created as a framework by Falk & Dierking (1992) which to view museum learning and to replace the concepts of informal and nonformal learning (Bamberger & Tal, 2007). There are no characteristics of free choice learners nor does free choice occur on a continuum. Choice is not developed in the same depth as self-actualization over time. In free choice learning is viewed from incidents of the learner, either connected or isolated (i.e. the choice to attend) and not through the lens of learning (i.e. the development of autonomy and self-direction over the course of a lifetime). Often activities of free choice such as watching television more closely resemble incidental or informal learning. Free choice learning is also emphasized as occurring predominantly outside of schools and the workplace (Callison, 2003). This emphasis only tends to serve as a further divide between adult education and

museums, which may also be institutions of formal education or in partnership with traditional scholastic programs.

Museums are places of self-direction. They serve as human, as well as non-human, learning resources for those who exercise their personal responsibility to seek out the abundant and varied treasures which lie inside. Museums can range from international and broad in scope to small and local in focus. A comprehensive conceptual framework is necessary for understanding all aspects of SDL within the museum setting. Brockett and Hiemstra (1991) offer such a framework based upon the premise of personal responsibility in autonomous learning. The principles and concepts guiding the personal responsibility of the learner are implicitly grounded in humanistic philosophy. One can only fully appreciate and understand personal responsibility by approaching the framework from a humanistic philosophical lens (Hiemstra & Brockett, 1994).

Philosophical Framework

The conceptual framework for this study is predominantly grounded in humanistic philosophy. This includes basic assumptions and beliefs which may be assigned a completely different value if examined through a dissimilar philosophy (Hiemstra & Brockett, 1994). A brief introduction of the elementary tenets of humanism ensues.

Humanism is dedicated to the autonomy and independence of the individual with specific emphasis upon the supposition that people are by virtue beneficent (Brockett, 1994; Elias & Merriam, 1980; Kirschenbaum, 1979; Lamont, 1957; Merriam & Brockett, 1997; Perry, 1956). The origin of value and any action that begets substantive change emanates from within the self (Maslow, 1962). Learners need to be provided a climate conducive for change and a situation of empathic understanding (Rogers, 1969). When properly facilitated learners develop freedom and

trust in which to express their feelings with each learner moving “toward greater acceptance of his total being – emotional, intellectual, and physical – as it is, including its potential” (Rogers, 1970, p. 7). Rogers and Maslow refer to this concept as self-actualization. Human beings by ethical imperative accept life projects and grow as individuals toward developing their actual potential (McKenzie, 1991).

The role of environmental and social factors is recognized in self-actualization. The individual will always be a social creature yearning “for affectionate relations with people in general, mainly, for a place in his group, and he will strive with great intensity to achieve this goal” (Maslow, 1954, p. 89). With this notion is attached a responsibility for awareness to not only one’s self but also to others. Individuals develop this responsibility through self-liberation and positive participation within the greater community (McKenzie, 1991). In this manner, SDL is informed by humanism through a view of the individual as a systematized and integrated whole (Maslow, 1954; 1962; 1971) and focuses perspective upon the human experience coupled with the personal responsibility of each individual to achieve their own personal potential (Caffarella, 1993).

Conceptual Framework

The conceptual framework of this study is the self-directed learning (SDL) Personal Responsibility Orientation (PRO) Model. A major dilemma in SDL research has been the inability to formulate a consistent and mutually accepted theoretical base or framework (Candy, 1991). Knowles (1975) was the first to attempt it; devising andragogy on SDL ideals and concepts. However, andragogy is an incompletely devised theory (Jarvis, 1984; Merriam, 2001; Rachal, 2002) and was consequently never fully accepted by the academic community. Today

andragogy is viewed as a set of circumstances or approaches by which to view learning. One fault to such early attempts was that the frameworks were largely linear in nature.

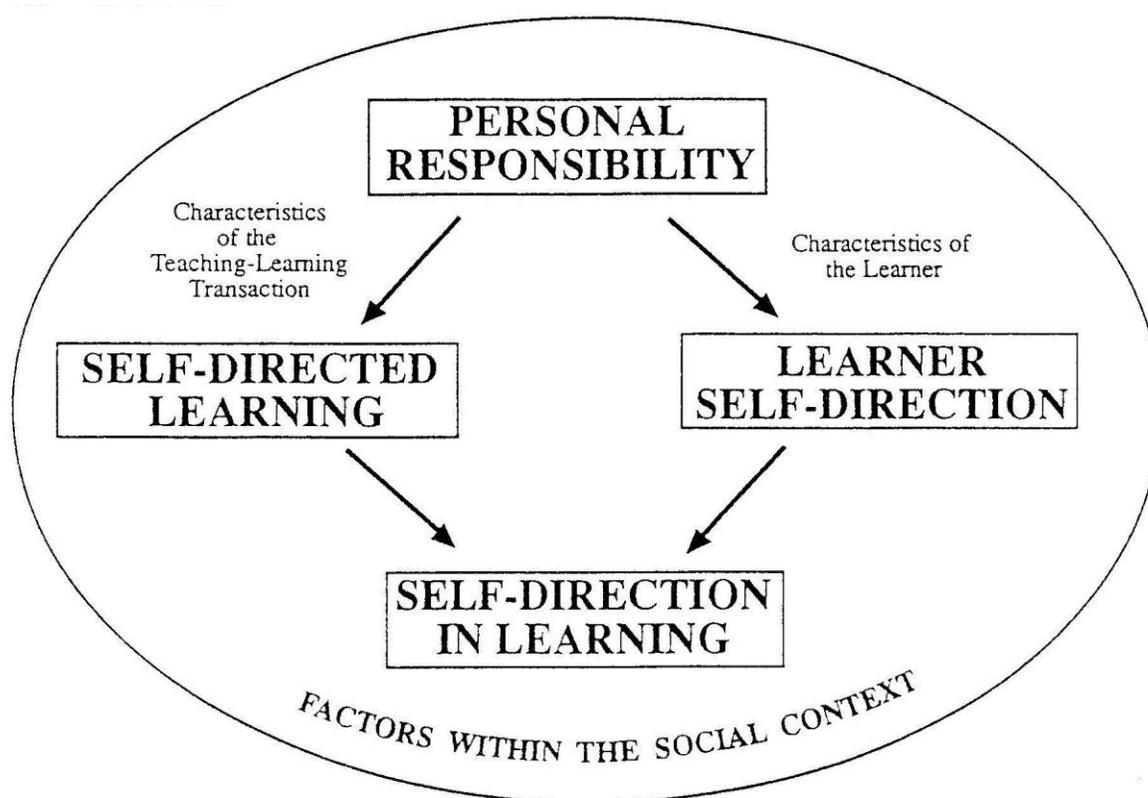
As research into SDL continued into the late 1970s and 1980s, subsequent perspectives became more interactive and student centered as adult educators attempted to provide a greater understanding into the actual learning process which was occurring. These ‘interactive’ perspectives tended to focus not only on the learner but also “the context of the learning and the nature of the learning itself” (Merriam, 2001, p. 9). By the 1990s numerous ‘models’ had been developed, such as the Educational Transaction Model (Garrison & Baynton, 1987), Staged Self-Directed Learning Model (Grow, 1991) and Two-Shell Model of Motivated Self-Directed Learning (Straka & Schaefer, 1997). Unfortunately none of these received any mutual acceptance and, in most cases, such ‘models’ were not followed by any empirical research. Thus, with the exception of Guglielmino’s (1977) SDLRS and Oddi’s (1986) OCLI which continue to be topics of research, the SDL literature is filled with various dormant conceptual possibilities.

One model, which has the essential components for providing a sound conceptual framework to SDL, is the Personal Responsibility Orientation (or simply PRO) Model developed by Ralph Brockett and Roger Hiemstra in 1991 (see Figure 1.1 on next page). As stated previously, this is the model used as a conceptual framework within this study.

The PRO Model allows for a view of SDL as occurring on a continuum, that knowledge, skills and experiences learned are transferable to other situations and that learning may or may not occur in isolation (Hiemstra, 1994). According to the model, learners utilize personal responsibility through characteristics of the teaching-learning transaction along with their own personal learning characteristics to achieve self-direction in learning within the social context.

The model builds upon previous concepts within SDL research including the notion of responsibility as a personal characteristic (Guglielmino, 1977) and the necessity of understanding environmental circumstances in the learning process (Spear & Mocker, 1984). Above all, the model clearly draws on humanistic concepts and assumptions relevant to self-actualization and personal responsibility.

Figure 1.1: The Personal Responsibility Orientation Model (Brockett & Hiemstra, 1991, p 25).



Crediting Knowles for triggering “self-examination” of his teaching and leading to his choice of pursuing SDL as a topic of research (Hiemstra, 2006, p. 5), the PRO Model is firmly grounded in the same humanistic philosophy of Maslow, Rogers, and Knowles (Brockett & Hiemstra, 1991). Despite concerted efforts to explain the importance of humanism in the PRO Model, it is perhaps this philosophical underpinning that has led to certain reluctance by those not similarly inspired by humanism in accepting the model (Hiemstra & Brockett, 1994).

However, humanism provides the necessary understanding concerning autonomy and freedom as well as the endless human potential in achieving these goals especially in developing personal responsibility (Hiemstra & Brockett).

Personal responsibility forms the basic fiber woven throughout the PRO Model. As self-directed learners, adults accept and practice personal responsibility throughout their learning experience (Hiemstra, 1980; 1985). This means that the decision of learning begins and resides with the learner and that all other resources, outside of the learner's self, although important, are inevitably secondary (Hiemstra, 1982). It also concludes that any consequences concerning the decisions of the learner are ultimately the responsibility of the learner (Hiemstra, 1994).

Brockett and Hiemstra (1991) recognize external factors to the learning situation. Learning can occur in traditional and nontraditional settings in which the factors for learning are established through the learning resource or institution through transaction. The PRO Model illustrates this as a teaching-learning transaction, which is not to be limited to our traditional view of a teacher and student however instead may be a human, nonhuman or institutional facilitator. Key to this transaction is the role of 'facilitator' as opposed to teacher.

Social and environmental contexts also influence learning within the PRO Model. Learning needs to take place in an environment in which the learner is granted freedom in the learning process and in which learning occurs (Hiemstra, 1980). Although a certain level of this freedom is the responsibility of the learner, the PRO Model does not suggest that the learner always has control over this environment. The learner does, however, have control in their reaction or response to their situational environment (Hiemstra, 1994).

The PRO Model then is based on the learner's 'personal responsibility' to activate the learning process. The learner may choose various characteristics of the teaching-learning

transaction (which as a process often involves factors that are external to the learner) in conjunction with their own characteristics as a learner to derive at ‘self-direction in learning.’ These activities are placed inside of a circle which represents the ‘factors within the social context’ in which learning occurs (Brockett & Hiemstra, 1991). In the PRO Model, “optimal conditions for learning result when there is a balance, or congruence, between the learner’s level of self-direction and the extent to which opportunity for self-directed learning (SDL) is possible in a given situation” (p. 30). Furthermore, “personal responsibility is not an either or notion. Instead, individuals possess different degrees of willingness to accept responsibility for their thoughts and actions” (Owen, 2002, p. 12).

In order to further understand the PRO Model; Brockett and Hiemstra define self-direction in learning as “a combination of forces both within and outside the individual that stress the learner accepting ever-increasing responsibilities for decisions associated with the learning process” (Brockett & Hiemstra, 1991, p. 9). They state that the term self-directed learning merely refers to a method of instruction and is too limited to contain the concept of self-direction in learning. Instead, self-direction in learning is inclusive of two distinct yet related dimensions: a) a process by which the learner assumes the responsibility for planning, beginning, and evaluating the learning process; and b) the focus on the learner’s personality for accepting the responsibility for learning. In brief an interactive process is advocated by which the instructor serves as a facilitator and the learner takes on the personal responsibilities relevant to their own accomplishments.

The PRO Model has numerous implications for adult and museum education. First, by empirically exploring the PRO Model within a museum environment, further information will be contributed as to its possibilities as a conceptual framework in which to understand SDL.

Although two attempts have been made to validate the PRO Model (Stockdale, 2003; Fogerson, 2005), these involved the Personal Responsibility Orientation to Self-Direction in Learning Scale (PRO-SDLS) a quantitative instrument formulated by Stockdale for measuring personal responsibility. An additional study utilized the PRO Model as a conceptual framework (Newell, 1995); however did not attempt to explore the possibilities and deficiencies of the PRO Model itself. Furthermore, none of these studies looked at SDL within the museum. The PRO Model contains the necessary components by which to inquire into the museum environment that typically produces a setting in which the learner is generally regarded to be self-directed and in possession of higher levels of personal responsibility toward learning and in which the exhibition serves as the facilitator in the teaching-learning transaction.

Problem Statement

For the past fifty years research has commenced into self-directed learning (SDL). Through the study of SDL insight has been made into how adults learn outside of traditional classroom settings. Discoveries include the characteristics or traits of adult self-directed learners, and the effect of environment in adult learning. Self-directedness has come to be perceived as an interactive process which occurs on a continuum with some adults being more autonomous than others. Although still debated, instruments have been developed which can measure the degree to which adults can be considered as self-directed. Teachers no longer direct the learning activity and are instead transformed into facilitators who serve as human resources for the self-directed learner. Ultimately, proponents of SDL argue for improved individual autonomous learning as beneficial to both the individual as well as society.

In addition to individuals, institutions may also serve as resources for autonomous learners. Museums serve this role well, yet very little attention has been placed on SDL within

the museum literature. Museums have instead traditionally identified themselves as collecting institutions and when exploring educational possibilities have for the most part done so through the study of object interpretation, mainly in the form of the exhibit. Although free choice learning has been offered as a lens in which to understand adult learning within the museum literature it falls short as a conceptual framework for understanding SDL due to its limitations on where such learning can occur.

Purpose of the Study

Therefore the purpose of this study is twofold: first to explore the possibilities of utilizing the PRO Model as a model for understanding how SDL occurs within a museum environment and second to gain insight into SDL within a museum setting from the perspective of the learner.

Research Questions

The following questions serve as an appropriate foundation for the study.

1. What kind of role does the museum as an educational institution play in support of self-direction in adult learning?
2. Which barriers exist to self-direction inside the museum?
3. How do learners utilize their personal responsibility to activate learning within the museum?
4. How can the PRO Model serve as a tool for understanding and promoting SDL?
5. What are possible deficiencies or strengths of the PRO Model?

Methodology Overview

The research paradigm utilized for this study is qualitative. The basic essence of qualitative research is to attempt an understanding of people from the perspective of each

individual's unique worldview and social interaction (Merriam, 1998). Within this paradigm, the researcher becomes the primary tool for data collection and analysis.

The use of a qualitative paradigm was appropriate for this study because the nature of the self-directed adult museum learner is a complex phenomenon. Data was required that was descriptive in context and rich in meaning. Qualitative research is premised upon humanistic philosophy and utilizes research strategy that is inductive by nature (Merriam, 1998).

Humanistic concepts practiced through qualitative research are also implied within the PRO Model. People are viewed as autonomous and of free-will positing the PRO Model and SDL firmly within the qualitative paradigm.

The research design used for this study is basic-interpretive. Sometimes this design is also referred to as a generic or basic qualitative study. Findings will be derived from patterns which recur throughout the data (Merriam, 1998). The simple and direct concept behind the basic-interpretive design is to seek and to discover knowledge (Bogdan & Biklen, 1998; Patton, 2002). The design contains the three basic elements of inquiry inherent to all qualitative research: experiencing, enquiring, and examining (Wolcott, 1992).

The study engaged a purposeful sample of museum sites with a basic set of criterion for adult participants. Museums were accredited through the American Association of Museums (AAM) and had environments which allowed for self-direction through a self-guided exhibition that was adult or family appropriate. Adult participants provided informed consent and were aged twenty-five years or older. Participants were not associated with a class or credited activity connected with an institution of higher learning. The identity of human participants was masked while permission was granted of cooperating museums in releasing their institutional identity for

the study. The procedures and policies of the Pennsylvania State University Institutional Review Board were followed.

As the premise of qualitative research is to form and ask questions (Willis, 2007) observations and semi structured interviews proved the ideal methods of basic interpretive research to collect data during the study. When combined within the same study, these two methods provide complex and descriptive interactions from participants (Marshall & Rossman, 2006). Initial observations employing a single page observation inventory for effective field collection (Creswell, 2003) gathered natural data which was used in connection with the following semi-structured interviews. Through the interview participants revealed the meanings they associated with their experience (Hein, 1998; Seidman, 1998). Both methods are well received by museum professionals and are generally recognized as an unobtrusive means by which to gather data within the galleries (Hein).

The constant comparative method served to analyze the data collected from the observation and interviews. Through this method patterns of analysis were discovered through continual comparison of collected data (Glaser, 2002). Recognizing that data analysis does not occur through a linear process, basic analysis occurred in simultaneous conjunction with the collection of data. Upon final analysis the findings were written in an informative, helpful, and understanding manner (Eisenhart & Howe, 1992).

Significance

This study is significant for two basic reasons. First, it adds to our knowledge of SDL and museum education. This is most relevant given the valuable resource that museums can play for self-directed learners as well as the implications for improving museum programming to accommodate such a large portion of adult visitors. Second, it is of particular importance given

the lack of empirical studies in exploring the various conceptual models of SDL as well as the overall need for continued empirical research into adult learning within museums.

Self-direction as a form of learning has been described as a way of life for many adults (Brockett & Hiemstra, 1991). The concepts and foundations which comprise the autonomous learner and the self-directed process of learning have long been recognized within adult education. However, interest in SDL in adult education has waned since its peak research year of 1991 (Brockett et al, 2000). As stated previously, a possible reason for this decline has been the abundance of conceptual perspectives and models of SDL as compared to the actual empirical exploration of such ideas. In other words, proponents of SDL have often allowed conceptual frameworks to go empirically uninvestigated and have failed to produce a widely accepted model by which to approach SDL. None-the-less it is difficult to understand why such an important theory in regard to adult learning has not received continued attention within the field. Surely there is a lot more to learn in regard to SDL. Hopefully this work will contribute toward re-energizing the interest in SDL on two fronts; in both adult education and museum science.

By adding to the work of Stockdale (2003) and Fogerson (2005) this study intends to contribute to the knowledge of the PRO Model as a viable and practical framework for understanding SDL. The study is unique in that the research was based upon a qualitative as opposed to quantitative paradigm, focused more greatly upon the social context of the model, and was open to a larger sample (as opposed to higher education). Furthermore, it was the intention of the study to discover the possibilities of utilizing the PRO Model within a specific environment of adult education by which the audience (which is in this case the museum visitor) is widely regarded to be in possession of higher levels of autonomous traits normally attributed

to self-directed learners. Ideally, this study will increase conversation and questions into how museums may better accommodate self-directed learners.

The study is of academic benefit toward narrowing the gap between adult education and museum science. Whereas the adult education literature has acknowledged museums as places of SDL (for example see Carr, 1985) and the museum literature has recognized that museums are commonly considered to be places of SDL (for example see Hein, 1998); all too often these two fields have operated in virtual or complete independence from one another. SDL, a research topic of mutual interest to both disciplines, can and should serve as a symbolic bridge between adult education and museum science. It was the goal of the study to explore practical possibilities, which will elicit further research into the fields of SDL and museum education.

On a personal level, the study has been significant in offering answers to many questions and curiosities concerning self-direction in adult learning. I have come to regard SDL as an extremely significant subject of inquiry and have gained much appreciation for my fellow adult learners throughout my personal, and increasingly autonomous, journey into learning. As a museum professional and learning facilitator I have seen the benefits and possibilities regarding SDL. Yet, at the same time, I have often been perplexed by how we merely expect adults to learn within the museum environment while rarely recognizing or accommodating their specific needs. Furthermore, by responding to the calls made within the museum literature for more empirical research, hopefully this study will spark further interest for others in doing the same.

Definition of Terms

The following terminologies are used throughout the study. The definitions that are provided are those which are most likely to lend understanding to the specific nature of the study. In regard to museum terminology; for the sake of consistency all English spellings have

been converted to a more contemporary American style (for example, artifact as opposed to artefact).

Self-directed learning (SDL) is “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (Knowles, 1975, p.18) and “a combination of forces both within and outside the individual that stress the learner accepting ever-increasing responsibilities for decisions associated with the learning process” (Brockett & Hiemstra, 1991, p.9).

Competing concept is a term used to identify concepts which share certain similarities to SDL (Hiemstra, 1994). For the sake of this study the competing concepts of autonomy, autonomous learning, self-planned learning, and independent learning are used as synonyms to imply the same meaning as SDL.

Adult learner (also adult museum visitor) is defined as anyone beyond the high school or secondary experience or aged eighteen years and older.

Museums are defined as educational institutions having collections relating to the fields of art, history, or science with adult museum education being defined as the practice of educating adults within the museum setting.

Museum collection refers to the institution’s entire holding of art, artifacts, architecture, and documents. Individual collections or subject areas not encompassing the entire collection are identified and defined appropriately in the text. Object and artifact are the terms used to define specific material pieces of a museum collection and are used interchangeably to mean the same throughout the text.

Exhibit or exhibition refers to a themed presentation of artifacts, objects, and text within the museum. Exhibits come in various sizes and often contain multiple components.

Gallery normally defined as a room or space used for presentation within a museum; galleries can hold one or multiple exhibitions or several galleries can be linked together within one exhibition. Particularly in larger museums, the term gallery is often used interchangeably with exhibit or exhibition for the same meaning as is reflected in this study.

Provenance is the association or documentation of an object that provides for its authenticity and origin.

Museology is defined as the overall theory and application of museum science.

Assumptions and Limitations of the Study

Recognizing that the very nature of academic inquiry possesses assumptions and limitations; for the purposes of this study I wish to plainly state first, my assumptions regarding the study, followed by possible limitations.

Assumptions

Adult learners are by nature self-directed. As SDL is considered to be a natural occurrence, it is acceptable to view adults as self-directed and to view this study as significant. Although 'other directed' learners are recognized and respected, it is understood that the ultimate goal of these learners are to also become self-directed.

Adult learners possess various degrees of autonomy and self-direction. Self-direction is a lifelong process. Throughout this process learners will be located at different levels of the self-direction or autonomous learning continuum. This continuum is regarded to be very personal in nature to each individual learner and is to be respected.

Learning follows humanistic ideals. Humans by basic nature are good. Adults wish to learn and to become autonomous and wish to respect and aid in the autonomy and learning of other adults. It is assumed that all participants in this study; both institutional and individual have entered into it with the intention of promoting our understanding of learning and without selfish or deviant purpose.

Museums are places conducive to SDL. As educational institutions museums are assumed to be places that welcome and encourage autonomous learning through an inviting and non-threatening environment. The contents of the museums are assumed to contain culturally inclusive and significant collections which have been collected and maintained for the unselfish promotion of the public good.

Limitations

Qualitative research is often referred to as being ungeneralizable due to the small and specific nature of the sample. This limitation is compounded due to the varying nature of each particular museum and small purposeful size of the research participants.

The sample for the study was collected during a season and day which was convenient for the study. No effort can be considered as feasible for the study which examines a prolonged typical visitation sample over the duration of one or more years. Additionally the sample may be regarded as limiting due to ethnic or gender considerations.

The environmental aspects of the PRO Model may be underdeveloped and therefore pose a weakness to the study. The emphasis within the PRO Model lies on the learner's responsibility while recognizing environmental conditions and constraints. The selected samples may not yield the ideal conditions for learning that the PRO Model states will occur when balance is achieved

between the learner's self-direction and the opportunity for SDL within the specific environmental situation.

Chapter Summary

This chapter has provided an outline for the basis of the conducted study. Self-directed learning (SDL) within adult education and museums was briefly examined and the philosophical framework of humanism and the conceptual framework of the Personal Responsibility Orientation (PRO) Model were introduced. Topics addressed included the statement of problem, purpose of study, research questions, overview of methodology, significance, definition of terms, as well as assumptions and limitations. Chapter 2 provides a comprehensive literature review for humanism, the PRO Model, SDL, nonformal education, and museum education. Chapter 3 explains a thorough description of methodology for the study. Chapter 4 provides the findings of the study. Chapter 5 presents a discussion of the findings and the resulting implications for practice provided for adult education, nonformal education, and museology.

CHAPTER 2

LITERATURE REVIEW

Introduction

As introduced in chapter one, the purpose of this study is twofold: First, to explore the possibilities of utilizing the Personal Responsibility Orientation (PRO) Model as a tool for understanding how self-directed learning (SDL) occurs within a museum environment and second, to gain insight into SDL within a museum setting from the perspective of the learner. This chapter presents a survey of the conceptual and empirical literature which informs the study topic. A review of the literature will commence with inquiry and exploration into the philosophical framework of humanism and the conceptual framework of the PRO Model. This will be followed by a thorough review of SDL, nonformal education (NFE), and museum education.

The literary and academic works selected for this chapter pertain to the fields of adult education, SDL, NFE, museum education or any combination of the above. Material searches included seeking references cited in various texts, manual searches through the various paper collections of professional and relevant journals within the stacks of the Pennsylvania State University (PSU), Harrisburg Library, and the utilization of numerous electronic databases via PSU. Databases included the PSU online catalog (Cat), EBSCOhost Electronic Journals Service (EJS), Education Abstracts Full Text (Wilson), Education Databases, ERIC (Education Resources Information Center), Project Muse (online scholarly journal articles), Pro Quest, Dissertation Abstracts International, and the Professional Development Collection. Two sets of search terms were used. SDL terms included self-directed, self-direction, independent, autonomous and individual independently or in conjunction with learning, education, program,

and experience. Museum and NFE terms included adult education, nonformal, informal, free choice, program, and museum as individual and combined keywords and phrases. Various electronic searches were also conducted on the internet. Finally, a review of the literary materials that serve as the curriculum for the Department of Museum Studies at the University of Leicester proved beneficial.

Philosophical Framework: Humanism

Despite sharing numerous similarities, the fields of adult education and museum education commonly continues to function in virtual independence of one another. The increased integration of theory and knowledge is essential for seeking a comprehensive understanding of the self-directing adult learner within the museum setting. Therefore, it is necessary to seek a common philosophical bond that unites the conceptual framework of the study with the environment by which the study is taking place. Furthermore, given the heavy influence that the philosophy of humanism bears on the PRO Model, an understanding of the basic principles of the philosophy will be essential in understanding and exposing any philosophical limitations imposed upon the model as revealed in this study.

The philosophy of humanism is concerned with the individual, particularly his or her ability to be free, autonomous, and to make independent decisions, based upon the assumption that human beings are by virtue 'good' (Brockett, 1994; Elias & Merriam, 1980; Kirschenbaum, 1979; Lamont, 1957; Merriam & Brockett, 1997; Perry, 1956). The source of values and any consequential change to promote these values are generated from within, from the self (Maslow, 1962). In other words, key to these values of humanism is a sense of responsibility on behalf of the individual to improve society and to act in a way beneficial for others, not only the self.

Humanists believe that adult education, indeed all education, can serve as a means toward achieving these humanistic values.

The teacher, learner, and content in humanism

The emphasis on education from the perspective of the humanist is fully learner-centered. The teacher assumes a different role than the traditional classical instructor who is all knowing and considered to be the dispenser of knowledge. Commonly teachers in the humanist tradition are referred to as facilitators with the primary charge of aiding the learner during their path of inquiry (Beder, 1991; Elias & Merriam, 1980; McKenzie, 1991; Owen, 2002; Rogers, 1970). “In order to be a facilitator one must trust students to assume responsibility for their learning” (Elias & Merriam, p. 125). Of utmost importance to the humanist facilitator is the development of learner responsibility (Owen) with the result “that the learners become more liberated as individuals, better capacitated to participate in the life of their communities and institutions, and empowered to create an authentically human future” (McKenzie, p. 129).

Facilitators must maintain a sense of impartiality in serving learner needs. This is not to suggest that facilitators are to be disconnected and unconcerned in their relationship with the learner, rather they are to be careful as to not interfere in a manner “whether overt or subtle, to adjust the adult learners’ values, beliefs, feelings, and life practices” (McKenzie, 1991, p. 118). Learners need to beware of facilitators who attempt to manipulate or exploit learners, center attention to themselves or who view themselves as superior to the learner (Rogers, 1970).

“Humanistic education is student-centered not only with regard to the responsibility for learning but in terms of the self-development of each learner” (Elias & Merriam, 1980, p. 123). Maslow and Rogers believed that the goal of each learner is self-actualization. “Self-actualization means experiencing fully vividly, selflessly, with full concentration and total

absorption...at this moment of experiencing, the person is wholly and fully human” (Maslow, 1971, p. 45). The process of self-actualization is ongoing: Individuals are faced with a choice to progress or recede and with each decision to progress move closer toward self-actualization (Maslow, 1971). Therefore each learner will be in a different location on the road toward self-actualization. Vital to the humanistic learner is intrinsic motivation (Elias & Merriam). Facilitators cannot “train an individual to be a person” (Rogers, 1970, p. 150). Facilitators serve only as human resources toward the learner achieving self-actualization. The content in humanistic education is whatever is relevant to developing the full person and self-actualization of each learner. Each person pursues their own learning idealistically rendering useless the traditional college practice of course credits and degrees (Maslow).

Strengths and weaknesses of humanism

The major strengths of humanism are its emphasis on the individual as a whole and the promotion of goodwill toward humanity. Although able to receive assistance from others, only individuals are capable of ‘making’ themselves, not a parent or teacher (Maslow, 1971). Self-actualized individuals, secure and aware in their own humanity, are capable of great accomplishments. Within adult education the major strength of humanistic learning is the emphasis placed upon the individual learner.

Two major criticisms of humanism within the literature are that the philosophy is self-centered and that results are not measurable by observable performance (Brockett, 1994). Too much emphasis is placed upon the individual not only in achievement but in dealing with problems which may be institutional or societal in origin (Tennant, 2006). It is unrealistic to expect harmonious learning in which the individual’s expectations or goals are not compromised (Tennant). Facilitators cannot function in total neutrality to the learner’s course of learning. An

argument against humanism is that no evidence exists in humanistic learning of an individual actually making a true inner choice or achieving self-actualization (Skinner, 1959). Maslow has been criticized as downplaying the affect of environmental conditions in regard to self-actualization (Tennant).

Whereas it is important to recognize these criticisms, humanistic beliefs contribute toward an accepted value of the adult as learner and responsible contributor to society. Adult educators practice humanistic ideals through inclusion of adults in the instructional process and the value that is placed on previous experiences in learning (Hiemstra & Brockett, 1994). Humanism provides a fabric of optimism for which to encourage positive contributions within education while maintaining focus on the individual as a unique, valued, and integral part of the entire learning process.

Humanism as it informs SDL

Attempting to argue support for one philosophy over another in SDL through empirical research proves a daunting task given the general assumptions underlying philosophy and the specific examination of each empirical study. No specific empirical research has been found as to argue an all encompassing humanistic approach to SDL. Normally each study or conceptualization, while perhaps overtly oriented to one philosophy, also contains philosophical pieces or ideas from various philosophies. Furthermore, concepts of philosophy can be argued on each specific case basis. One can imagine Skinner debating findings that may point to humanistic outcomes through his argument that “faced with a situation in which no effective behavior is available, we behave in ways which make effective behavior possible” (Skinner, 1968, p. 120).

Still, the philosophical orientation most often attached to SDL remains that of humanism (Caffarella, 1993; Owen, 2002). Repeated reference to the intrinsic ability of the self or research on the emphasis on self-directedness as perceived as a positive to the individual can be found in empirical literature. Over one quarter of all empirical research in SDL has been dedicated to self-directedness as a personality characteristic through examination of the Self-Directed Learning Readiness Scale (SDLRS) and Oddi Continuing Learning Inventory (OCLI) (Brockett, et al, 2000). Both of these instruments view the self-directed individual as possessing personality characteristics capable of propelling them toward Maslow's self-actualization. More specific cases can be argued for humanistic needs to identify the on-going question of 'who I am' (Kroth & Boverie, 2000); the necessity to cope with emotional needs (Rager, 2003b; 2004); or humanistic ideals toward autonomy in learning (Danis & Tremblay, 1987).

Adult educators closely associated with humanism in SDL are Cyril Houle, Allen Tough, Malcolm Knowles, Ralph Brockett, and Roger Hiemstra. SDL, as informed by humanism, views the individual as a systematized and integrated whole (Maslow, 1954; 1962; 1971) and centers its perceptions on human experiences and the responsibility of each adult to achieve their own personal potential (Caffarella, 1993). This can occur individually; however, learning will often be pursued through groups (Pearson, 1999). The main role of the facilitator in SDL as informed by the humanistic perspective is that of assisting and accommodating the learner in achieving their own needs. The teacher-learner relationship often seen in humanistic SDL resembles that of a client-patient relationship in humanistic clinical psychology (Tennant, 2006). Proponents of SDL usually adopt the humanist belief that "learners are impelled toward self-actualization" (Owen, 2002, p. 11). Through the concept of self-evaluation as envisioned by Rogers, the learner continues to assess their own learning on an increasing basis turning self-initiated

learning into responsible learning (Rogers, 1969). Through self-actualization the individual will continue to grow, be liable for their own action, transcend “the values of their own culture” and be responsible for the promotion of social change (Maslow, 1971, p. 184). Therefore those firmly based in a humanist philosophy posit that it is the goal of SDL to enhance and develop the learner’s self-directedness (Merriam, 2001).

The humanist concept of autonomy and the notion of personal responsibility cannot be emphasized enough in regard to its significance in SDL. Humanistic beliefs of autonomy and freedom in learning have appealed to western ideals of democracy (Elias & Merriam, 1980). “Action begets learning, and learning begets change” (Cavaliere & Sgroi, 1992, p. 7). However, it is this notion of autonomy that often leads to criticism of the humanistic perspective in SDL. Critics claim that focus on the individual serves to mask larger societal problems (Pearson, 1999; Plumb, 2008). The thought that learning may be shaped and driven by social institutions as opposed to the individual learner conflicts with the ideals behind humanism (Merriam, 2001). Self-directedness when disguised in humanistic language appeals to certain elements of society that result in a bias toward white middleclass males (Candy, 1991). In defense of these criticisms proponents of humanism maintain that learners have an individual as well as a social responsibility (Brockett & Hiemstra, 1991). The key is for the learner to develop true self-independence and to resist empty conformity.

With the advent of practical arguments for other theoretical orientations to SDL adult educators need to critically evaluate accepted assumptions while maintaining valuable humanistic ideals. This can be accomplished in three ways: First, reconnect the concept of self to its proper social context; secondly, maintain the ideals of independence and individualism

while recognizing power realities; finally, when placing theory into practice be cognizant of any possible dilemmas that may challenge that theory (Pearson, 1999).

Conceptual Framework: The Personal Responsibility Orientation Model

The Personal Responsibility Orientation (PRO) Model, which was devised by Ralph Brockett and Roger Hiemstra in 1991, is the culmination of an examination of the research and ideas into SDL in an attempt to devise an adequate theory. The intention of the model is to provide a framework for understanding self-directed and autonomous learning in any setting. “The PRO Model is premised on the idea that individuals taking personal responsibility for their learning is central to understanding self-direction” (Brockett & Hiemstra, 1991, p. 1). This argument, that the one concept found to be existent within and essential to all SDL is personal responsibility, is fundamental to understanding the PRO Model.

The objective of this section is to provide a thorough discussion of the PRO Model. This will commence with a brief overview of the model followed by consideration of personal responsibility. Inquiry will continue with the two key components of the PRO Model (the process orientation and the personal orientation), social context, and will culminate with an investigation into the criticisms of the model as well as a review of the empirical studies relevant to the PRO Model. Finally, implications of the PRO Model will be explored in regard to museum education. For purposes of clarity, the abbreviations utilized by Stockdale (2003) concerning process (teaching-learning) and personal (learner characteristic) orientation of the PRO Model are also incorporated into this study.

Brockett and Hiemstra's Model

As previously stated in chapter one the PRO Model is based on the learner's ‘personal responsibility’ to activate the learning process. The learner may choose various characteristics of

the teaching-learning transaction (process orientation), which often involves factors that are external to the learner, of 'self-directed learning' in conjunction with their own characteristics as a learner (personal orientation) of 'learner self-direction' to derive at 'self-direction in learning.' These activities are placed inside of a circle which represents the 'factors within the social context' in which the learning occurs (Brockett & Hiemstra, 1991). In the PRO Model, "optimal conditions for learning result when there is a balance, or congruence, between the learner's level of self-direction and the extent to which opportunity for self-directed learning (SDL) is possible in a given situation" (p. 30). Furthermore, "personal responsibility is not an either or notion. Instead, individuals possess different degrees of willingness to accept responsibility for their thoughts and actions" (Owen, 2002, p. 12). The model applies to any SDL situation; formal as well as nonformal. For a graphic depiction of the model refer to Figure 1.1 on page 11.

The PRO Model was largely inspired by the virtues of humanism. A key value of humanism is a sense of responsibility on behalf of the individual to improve society and to act in a way beneficial for others, not only the self (Brockett, 1994; Elias & Merriam, 1980; Kirschenbaum, 1979; Lamont, 1957; Merriam & Brockett, 1997; Perry, 1956). This responsibility can be sparked through self-examination. Indeed, Hiemstra credits Knowles for triggering "self-examination" of his teaching and leading to his choice of pursuing SDL as a topic of research (Hiemstra, 2005, p. 5). Both authors credit the particular humanistic influence of Maslow and Rogers in regard to the development of the PRO Model (Brockett & Hiemstra, 1991).

First, we embrace the view that human nature is basically good and that individuals possess virtually unlimited potential for growth. Second, we believe that only by

accepting responsibility for one's own learning is it possible to take a proactive approach to the learning process (Brockett & Hiemstra, 1991, pp. 26-27).

Of most importance to the PRO Model, the acceptance and practice of a humanistic oriented view toward learning can contribute toward increasing responsibility of the learner (Hiemstra & Brockett, 1994).

Personal responsibility

As self-directed learners, adults acknowledge and put into action personal responsibility throughout their learning experience (Hiemstra, 1980; 1985). In essence the decision of learning begins and resides with the learner. SDL begins with the individual, amidst awareness from within one's self with the learner maintaining the responsibility and control for all learning decisions (Hiemstra, 1982). All other resources, external of the learner's self, even though significant or relevant, are inevitably secondary (Hiemstra). Despite originating from within one's self, personal responsibility does not exclude working with others as in groups of self-directed learners or with human resources. In fact, often this type of human interaction sparks and leads to further interests and initiatives into learning.

Learners need to accept and take responsibility for their learning. Stated slightly differently they must present an active willingness for the control of their learning as well as adhering to accountability for any resulting actions (Hiemstra, 1994). Within SDL it is this willingness on the part of the learner that determines the degree of their self-direction (Brockett & Hiemstra, 1991). The PRO Model acknowledges and allows for a view of SDL as occurring on a continuum, that knowledge, learning skills and life experiences learned are transferable to additional situations and that learning may or may not occur in isolation (Hiemstra, 1994). In

summary, Brockett and Hiemstra conclude three primary points concerning personal responsibility:

1. First, while we emphasize our commitment to the view that human potential is unlimited, we believe that each individual assumes some degree of personal responsibility
2. Second, the emphasis on personal responsibility as the corner stone of self-direction in learning implies that the primary focus of the learning process is on the individual, as opposed to the larger society. Yet, accepting responsibility for one's actions as a learner does not ignore the social context in which the learning takes place.
3. Finally, it is important to point out that in taking responsibility for one's thoughts and actions, one also assumes responsibility for the consequences of those actions. (1991, 27-28)

Brockett and Hiemstra are not the only adult educators to view personal responsibility as a significant component for understanding SDL. Guglielmino (1977) investigates the role of responsibility as a characteristic essential to self-directed learners and Garrison (1997) explores responsibility through The Self-Directed Reaming Model. Unique to the PRO Model is the use of personal responsibility to link to separate yet related dimensions of the SDL process: self-directed learning and learner self-direction. "The PRO Model is built around the premise that personal responsibility for learning is both desirable and effective" (Brockett & Hiemstra, 1991, p. 101).

Process orientation and personal orientation

The PRO Model consists of two major components, that of process orientation and personal orientation. These components provide for a separation or distinction of external from

internal factors within the learning process. Both components are linked through personal responsibility: external factors which facilitate that the individual accept responsibility and internal factors by which the individual actuates responsibility for learning action (Hiemstra, 1994). Although the two components are distinctly separate they are also strongly connected.

Self-directed learning (TL): the process orientation

The teaching-learning (TL) component of the PRO Model consists of the process orientation of self-direction. Brockett and Hiemstra refer to this dimension of the PRO Model as ‘self-directed learning,’ however for the sake of clarity in regard to other perspectives of SDL it may also be referred to as the TL dimension. The process within this component focuses “on the activities of planning, implementing, and evaluating learning” (Brockett & Hiemstra, 1991, p. 28). Within the TL component the learner utilizes their personal responsibility in seeking resources for the specific learning endeavor. Most commonly this involves the instructional process by which a teacher serves as a facilitator within the humanistic tradition (Hiemstra & Brockett, 1994). Brockett and Hiemstra note that much of the early research into SDL centered on this dimension, in particular the andragogical methods of Knowles (1975; 1984) and the self-planning research of Tough (1979). The teaching-learning transaction is not limited to the traditional view of instructor and student; it may also include human, nonhuman or institutional facilitators. Actually this is highly probable given the demonstrated practice of self-directed learners to engage diverse types of resources (Hiemstra, 1982). It is important to understand that within the TL component factors are actually occurring external to the individual learner.

Learner self-direction (LC): the personal orientation

The learner characteristic (LC) component of the PRO Model consists of the personal orientation of self-direction. Brockett and Hiemstra refer to this dimension of the PRO Model as

‘learner self-direction,’ however it may also be referred to as the LC dimension. This component focuses on the “characteristics of an individual that predispose one toward taking primary responsibility for personal learning endeavors” (Brockett & Hiemstra, 1991, p. 29). Largely, these characteristics stem from humanistic philosophy. However, Brockett and Hiemstra also recognize behaviorist (in regard to influence of environment) and transformative (connecting personal and social learning dimensions) influences upon the PRO Model. While strategies can be employed which may enhance self-directedness, inevitably self-direction is an internal process (LC) with responsibility for action residing with the individual.

Two final concepts concerning the TL and LC components are vital to understanding the PRO Model:

1. Both the internal and external aspects of self-direction can be viewed on a continuum.

Thus, a given learning situation will fit somewhere within a range relative to opportunity for self-directed learning (TL) and, similarly, an individual’s level of self-directedness (LC) will fall somewhere within a range of possible levels.

2. Optimal conditions for learning result when there is a balance, or congruence, between the learner’s level of self-direction (LC) and the extent to which opportunity for self-directed learning (TL) is possible in a given situation. (Brockett & Hiemstra, 1991, p. 30)

Opposed to optimal conditions, complications will arise when conflict or lack of harmony exists between the learner’s internal level of self-direction (LC) and the external opportunity for self-directed learning (TL).

Social context

The PRO Model recognizes that learning occurs within a greater social context. This includes the learner along with the TL and LC components, although personal responsibility continues to reside within the individual. Within the PRO Model “the individual learner is, in fact, central to the idea of self-direction. However, such learning activities cannot be divorced from the social context in which they occur” (Brockett and Hiemstra, 1991, p. 32). This context is intended to include political elements as well as social (Hiemstra & Brockett, 1994) and expands beyond the physical environment to affect emotional aspects of the learner (Hiemstra, 1980). The environment which comprises this social context must permit individuals to exercise the freedom for which to learn (Hiemstra). If the social context is restrictive it can severely limit this freedom and curtail learning, however, ultimately individuals still possess degrees of personal responsibility and are at the very least able to control how they will respond to any given situation (Hiemstra, 1994). This argument is based upon humanistic assumptions and recognizes ‘organizing circumstance’ differently than Spear and Mocker (1984) refusing to cede ‘control’ through the reaction of the individual as opposed to the environment.

Criticisms of the PRO Model

Criticisms of the PRO Model primarily involve concern regarding the social context of the model. Newell (1995) presents an argument for expanding the social context to include “political, economic, cultural, and historical dimensions that are brought to bear in a given learning context” (p. 226). Flannery (1993) is more specific:

Persons are part of a society. The authors effectively ignore the large influences of the society: The socialization process to roles and to one’s place in the social strata, the influences of group interaction on one’s behavior, the relationships between persons’

culture and persons' learning and communication styles, and issues such as cultural diversity and the counter-hegemony of individual and group resistance to the imposition of contrary values." (p. 110)

Instead Brockett and Hiemstra simply recognize social context. In looking at the PRO Model nearly two decades later, Ralph Brockett acknowledged in a conversation that this element could be expanded and actually represented as a third component of the model along with TL and LC. In answering reaction to the PRO Model Hiemstra and Brockett (1994) offer a more in-depth description of the humanistic assumptions behind the model.

Additional concerns with the PRO Model center on ambiguities relating to personal responsibility. Despite presenting personal responsibility as a precursor to SDL that in separating the external process (TL) from the individual that personal responsibility is also separated from the LC component (Kohns, 2006). Newell (1995) suggests that personal responsibility is too restrictive in relation to the learner's cognitive and metacognitive dimensions and should be expanded into personal dimensions.

Despite these criticisms the PRO Model is still a viable and relevant conceptual framework for which to understand SDL. Although perhaps not fully developed the social context of the model is presented and acknowledged throughout the fabric of the PRO Model. In all fairness, studies conducted thus far in regard to the PRO Model have concentrated on the LC component and have not fully explored the possibilities in regard to social context. Ambiguities which may arise in regard to personal responsibility may be clarified through examination of similar concepts such as the motivational dimensions of learning as explored in Garrison's (1997) Self-Directed Reaming Model (discussed further in *SDL Perspectives and Models*).

Review of empirical studies relevant to the PRO Model

Few studies have been conducted in regard to the PRO Model. However, an instrument has been developed and validated to measure personal responsibility in SDL based upon the PRO Model. With the Personal Responsibility Orientation to Self-Direction in Learning Scale (PRO-SDLS) Stockdale (2003) created an instrument “to measure self-directedness in learning within the framework of the process and learner characteristics components” of the PRO Model within a higher education setting (p. 3). The findings indicate a connection between the success of the students and the degree of self-direction indicated by the PRO-SDLS with a reliability estimate of .86. A correlation study was conducted on the PRO-SDLS within another higher education setting, this time an online course which produced similar results (Fogerson, 2005).

Unfortunately, the PRO-SDLS does not address any of the criticism concerning the social context dimension of the PRO Model as identified by Flannery (1993) and Newell (1995). The PRO-SDLS understandably builds upon Guglielmino’s (1977) Self-Directed Learning Readiness Scale (SDLRS) which continues to be a topic of debate within adult education. Creating a further instrument based upon its principles likewise incorporates adjoining criticism, for example Field’s (1989) charge of flawed methodology on the part of Guglielmino, carrying continued research away from the PRO Model and toward the SDLRS. Finally, the issue arises as to whether the ultimate purpose of the PRO-SDLS is to provide evidence in support of the PRO Model or to create a new instrument for the measurement of self-directedness of adult learners in higher education. If the purpose is the latter, than inevitably how will this instrument contribute toward improving our understanding of this sub-population?

It is significant to note that another instrument, the Inventory of Personal Responsibility in Learning (IPRL), was recently designed for the intent of measuring “an adult’s perception of

personal responsibility in SDL” (Kohns, 2006, p. 2). Although providing an instrument which may prove beneficial as a research tool for SDL; the IPRL is based upon the Triangle Model of Responsibility (Schlenker, Britt, Pennington, Murphy, & Doherty, 1994) within the psychology literature. Therefore Kohns’ study does little to advance our understanding of the PRO Model, specifically its effectiveness as a means toward understanding SDL.

While acknowledging the appropriateness of quantitative investigations, in particular to the LC component of the PRO Model (Brockett & Hiemstra, 1991), given that the PRO Model is based so heavily upon humanistic assumptions, a qualitative study may yield greater insight into the role of personal responsibility and its implications to SDL as described by the model. Thus far no such study has been conducted. Newell (1995) does utilize the PRO Model as a framework by which to explore learning episodes of physicians in her qualitative case study. The study suggests that the PRO Model is conceptually sound allowing for a useful tool for directing an analysis of learning. A limitation of the study pertains to the participant sample of physicians who obviously possess higher degrees of learning.

The PRO Model and museum education

While no studies are known to exist in regard to the PRO Model and museum education, Brockett and Hiemstra (1991) acknowledge the potential of museums in conjunction with SDL as institutions in which autonomous learning can flourish and succeed. As multifaceted institutions, museums can offer numerous resources that allow for various interpretations by the learner (Sandell, 2007). Museums can fulfill the facilitator role in the TL component of the PRO Model with the exhibition serving as the role of nonhuman resource. As places of social activity and environment (Falk & Dierking, 2000; Leinhardt & Knutson, 2004), museums also offer an interesting setting for which to examine the TL and LC components of the PRO Model in

conjunction with the social context of learning. As centers of nonformal education, museums attract visitors with various learning skills and economic backgrounds thereby expanding upon the leaning of participant samples from higher education settings or schooled physicians.

Museums continue to make advances toward professionalism and academic understanding of learning. Museum educators are being encouraged to engage self-directed learners by providing interactive and meaningful exhibitions as opposed to static displays (Hiemstra, 1981). Interactive technological exhibitions present situations where visitors can become a part of the exhibition through their interaction. Self-directed adults learn best through involvement. The visitor who becomes engaged in seeing, physically handling or sensing, and questioning will learn more (Allen, 1981). Over 70% of adult visitors desire interactive programming (Sachatello-Sawyer et al., 2002) with one study revealing 82% of museum visitors engaging in interactive experiences (Tunncliffe & Laterveer-de-Beer, 2002).

While visual learning, also including to a lesser degree, speech and hearing, remains the traditional method of museum instruction for adult learners, museums are reaching out to adults through actuating other senses. On occasion artifacts can be touched, smelled, and even tasted! When allowed to touch artifacts a unique reaction is generated from both the body and the mind (Hooper-Greenhill, 1991). These types of experiences can be achieved by history museums through living history or 'white gloved experiences' with artifacts for adults to touch and feel. Drama as a medium in museums can also provide an interactive and cultural experience (Schindel & Oughtred, 2001). Museum objects can serve as interactive components within the drama (Schindel, 2002) as well as entice self-directed learners to become involved in the creation and performance of the production adding further possibilities to SDL.

All museum experiences require that time be allotted to train museum professionals and volunteers to properly facilitate the self-directed adult learning experience. This idea is two-sided. Adult visitors need to be granted the opportunity to learn more about museums and their implications for learning while museum staff and volunteers must understand the nature of SDL. In brief, museums offer a unique attraction to adult learners who are seeking a nonformal learning environment. The PRO Model can be utilized as a conceptual framework for which to better understand and to promote SDL within museum education.

Self-Directed Learning

SDL received attention among modern scholars in 1961 when *The Inquiring Mind* was published by Cyril Houle. In his work, Houle was the first to describe the motives for learning and resulting activities of a group of independent minded learners who wished to pursue their education outside of the traditional institutional method (Candy, 1991). Actually SDL was far from being new; Houle (1992) acknowledged that references to SDL dated into antiquity. Even Aristotle philosophized about the role of the true self (Cavaliere & Sgroi, 1992). What was new, however, was the scholarly approach to and study of SDL (Candy, 1989). Adult education, as a field of study, was in itself still in a stage of infancy. Having begun shortly after the First World War, in which scholars were beginning to identify unique characteristics of adult learners (Knowles, 1984), the field had produced only a small body of literature and was focused on sociological and behavioristic concepts of adult learning through quantitative methods of research (Candy, 1992; Merriam, 2001). Much of the findings for adult education, as Merriam notes, were still being derived from conclusions based on the research of child learners. With the dawn of the 1960s and the era of new romanticism that the decade would produce, the timing was perfect (Jarvis, 1984) for a new introduction of SDL.

The literature regarding SDL is quite extensive and requires numerous sub-headings. A thorough review allows for a broader perspective of the PRO Model as representative of one of many, albeit similar as well as dissimilar, concepts derived from within the context of SDL. Discussion will commence with various definitions of SDL and an exploration into the various traits of self-directed learners. This will be followed by an in-depth review of the various perspectives and models which have been devised relevant to the academic study of SDL. Finally, three prominent fields, which have habitually been the topic of SDL empirical research, will be examined. Comparisons of the SDL literature will be made to the PRO Model, or to specifics regarding this study when appropriate.

Defining SDL

Numerous terminologies have been devised in order to explain SDL. Terms such as autonomous learning, independent learning, lifelong learning, self-direction in learning, self-initiated learning, self-plan learning, and self-teaching have become associated with SDL and are now common throughout the adult education literature. A survey of symposia revealed 247 different terms for SDL (Hiemstra, 1996)! Researchers have obviously used the term to cover a wide variety of activities (Bonham, 1989). The inconsistent and hap hazard use of such numerous terms has made defining SDL a difficult process (Brockett & Hiemstra, 1991; Grow, 1991; Owen 2002). With such striking commonality to one another these definitions can best be understood as ‘competing concepts;’ or explanations that share certain similarities to SDL (Hiemstra, 1994). Examination of the various ‘competing concepts’ reveal two basic types of authors behind the definitions: those who believe that self-direction is the road toward the learner attaining their “inner-most personhood” and those who use the term simply to define “independent academic or intellectual pursuits” (Candy, 1991, p. 6).

Despite the numerous definitions, it is useful to examine several descriptive explanations that have been devised by select prominent authors within the field in order to gain basic insight into SDL. Knowles acknowledges the wide scope of the terminology and provides for a definition in the broadest of terms:

Self-directed describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (Knowles, 1975, p.18).

Knowles' contemporary Allen Tough, using the term self-teaching, defined it as "the assumption of the learner for planning and directing the course of learning" (Brookfield, 1986, p.40). At the heart of these two definitions is the responsibility of the learner to assume control of the learning process. Key to Knowles' definition is that this may be achieved "with or without the help of others" (Knowles, p.18).

Peters provides a definition of SDL as:

A process in which the learner makes a decision to learn in order to achieve a goal, formulates a plan to reach the goal, and takes action toward the goal...Self-direction means that the learner has control over the process of goal setting, planning, and action (Peters, 1989, p. 43).

Interesting to the Peters definition is the notion of effective control or, in other words, the balance of control between the learner and external agent. Once the external agent controls the process it can no longer be viewed as self-directed.

This concept of balance of control is further alluded to in definitions of SDL regarding autonomy. For example, SDL can be defined as:

A self-initiated process of learning that stresses the ability of individuals to plan and manage their own learning, an attribute or characteristic of learners with personal autonomy as its hallmark, and a way of organizing instruction in formal settings that allows for greater learner control (Caffarella, 1993, pp. 25-26).

Hallmark to understanding SDL is that this notion of control is recognized as existing on a continuum (For example see Candy, 1991).

Critical definitions of SDL consider the context of the learner's external environment and call for action to facilitate social change. This action begins with the learner. For example, at the heart of SDL Brookfield places autonomy of which he defines as "the possession of an understanding and awareness of a range of alternative possibilities" (1986, p.58). Within this view of SDL the need exists for the individual to use his or her consciousness to act against the repressive interest of others (Brookfield, 1986, 1993, 2005b). Hammond and Collins (1991) integrate critical theory into the Knowles definition of SDL and rename it 'Critical SDL.' Differences from the original Knowles' (1975) terminology include "learners take the initiative, with the support and collaboration of others, for increasing self- and social awareness [and] critically analyzing and reflecting on their situations (Hammond & Collins,, p. 13).

It is appropriate to note that it is "impractical to attempt a definition that would be so broad as to include all instances in which the term has been used" (Bonham, 1989, p. 17). If we base our conclusions upon an author's definition alone we may end up painting an entirely different portrait of that author's understanding of SDL. For instance, Knowles was an advocate of the assumption that adults possess a natural inclination toward learning, yet this is not mentioned in his definition. Furthermore, despite the universally accepted notion that adults do not learn in a vacuum and at some point integrate other persons into their learning Straka and

Schaefer fail to acknowledge this in their 1997 definition yet clearly discuss it within their proposed Two-Shell Model of SDL (Straka & Schaefer, 1997).

For the purposes of this study it is helpful to establish a single definition of SDL. Using the term self-direction in learning; “learning is a combination of forces both within and outside the individual that stress the learner accepting ever-increasing responsibilities for decisions associated with the learning process” (Brockett & Hiemstra, 1991, p. 9). This definition of SDL acknowledges internal as well as external forces. What separates this definition from that of Knowles and Peters is that the learner is being stressed into accepting the responsibility of learner-control.

The traits of the self-directed learner

With such responsibility placed upon the learner, the adult who pursues SDL must possess or develop certain characteristics in order to succeed. Throughout the literature several educators have identified traits or commonalities that are shared among self-directed learners. Knowles particularly devoted much of his attention to defining the adult learner.

Human beings develop their basic need to become self-directed learners through the maturing process (Knowles, 1975). They accomplish this through making use of their past experiences as a learning resource and by seeking the resources of others while expanding this resource with every new learning experience. Adults are ready to learn, although that readiness will vary between individuals and they employ a learning orientation that is task and problem centered. Although affected by external sources adults are internally motivated toward learning. Learners possess a self-concept of being responsible for making their own decisions and pursuing their own life direction (Knowles, 1984). Conventional beliefs of self-directed learners include:

(1) that adults are inherently self-directed, (2) that the best way to learn autonomous behavior is to behave autonomously, and (3) that the ability to learn independently in one situation or context is generalizable to an ability to do so in a different setting (Candy, 1991, p. 339).

Autonomous behavior can be explained as the extent to which a person can devise plans and goals, utilize their freedom of choice, exercise rational reflection, maintain the will to follow through with endeavors, practice of self-discipline, and a self-view of being autonomous (Candy).

An argument can be made that not every adult exemplifies or has yet to achieve these above traits. Instead they may exhibit characteristics associated with directed learners. Brookfield (1985b, 1986) identifies and describes two types of learners based upon the earlier work of H. A. Witkin; that of field dependence and of field independence. Field dependent learners find comfort in regulated settings in which little change occurs. They are “extrinsically oriented, responsive to external reinforcement, aware of context, view things holistically, and are cognizant of the effects that their learning has on others” (1986, p. 41). Field independent learners find settings of autonomy, self-control, and open democracy appealing. They are “analytical, socially independent, inner-directed, individualistic, and possessed of a strong sense of self-identity” (p. 41). Field independent learners exhibit the qualities and tendencies most frequently associated with success in SDL.

As a result of interpreting the various definitions and examining the basic traits shared by self-directed learners we can begin to develop a basic essence of SDL. The learner is at the center of SDL. Learners are seen as inherently self-directed. The motivation, initiative, responsibilities, and evaluation for learning fall squarely on the learner’s shoulders. The learner

has at their disposal various resources: human and non-human. Human resources require a responsibility of learner-control. If at any point external agents begin to direct the learning process than the learning process can no longer be considered as self-directed. SDL can occur inside and outside formal education settings provided that the balance of learner-control is maintained. The autonomy of self-directed learners is essential to the SDL process. Although factors from both internal and external sources will affect the learner, the learner must maintain a strong personal autonomy or set of personal values, consciousness, and determination. Autonomy, as with learner-control, will exist along a continuum, with some learners being more autonomous than others. Certain scholars relegate SDL to being merely a learning process while others define it as the route in which to discover the very inner-self and persona of the adult learner.

SDL Perspectives and Models

Given the large amount of perspectives and models within the literature pertaining to SDL, categorizations have been developed in order to organize the varying ideas. Utilizing the self-directed model categorization work offered by both Caffarella (1993) and Merriam (2001), components have been adopted from their categories in order to organize the SDL literature for this study. The categories arranged for this chapter include linear, interactive, learning style, and critical interactive. These categorizations were developed to represent how SDL occurs from a holistic perspective including the learner and the environment for which learning occurs. An optional set of categories could easily be transposed over these to include historical (linear), mainstream (interactive and learning style), and alternative (critical interactive) views of SDL. Rather than limiting the discussion exclusively to models, several perspectives and contributions by leading adult educators into SDL are also included.

Linear

Linear contributions and perspectives are presented in a straightforward fashion focused on specific steps or strategies necessary to aid the learner. These steps often follow a progressive order. Linear perspectives were largely introduced during the 1960s and 1970s and are most associated with the early development of SDL. The three educators most closely associated with the linear categorization are Houle, Tough, and Knowles, who, in their own right, can be regarded as pioneers to SDL.

Houle. As previously mentioned, Cyril Houle was the first to explain the learning motives and results of a group of adult learners pursuing their education outside of the traditional institutional environment. His book *The Inquiring Mind* (1961) was a significant contribution to the small body of literature concerning adult education that existing during that time. Houle spent the next three decades dedicated toward inquiry into SDL and through his work inspired the research of Tough and Knowles.

In his survey of the existing literature, Houle (1961) identified several characteristics concerning adults involved in continuing education activities. Adults from higher income brackets participated in a greater number of educational activities than did those from lower income brackets. Adults affiliated with certain ethnic and religious backgrounds were more likely to take part in activities than were those of other backgrounds. Adults with higher formal education became more involved in continuing education than did those adults with less formal education.

Houle turned the direction of adult education “first by moving away from the prevailing notion that research always had to involve large numbers of respondents and preferable a lot of statistics; and second by placing the learners themselves and their personal values and aspirations

at the center of the research process” (Candy, 1992, p.25). The method that Houle utilized in his research for *The Inquiring Mind* consisted of two parts: a statement introducing the concept of continuing education, how the interview would proceed, and general information concerning the questions that would be used and nineteen major questions complete with a number of sub questions for the purpose of clarity or motivation in order to answer the major questions (Houle, 1961). Houle discovered that his participants

Had the same basic ways of thinking about the process in which they were engaged.

They all had goals which they wished to achieve, they all found the process of learning enjoyable or significant, and they all felt that learning was worth while for its own sake (p.15).

As a result of his research, Houle (1961) classified his participants into three different types of learners. The goal oriented learners used education to accomplish clear and finite objectives. These individuals accepted education as a means toward pursuing personal interests and solving specific problems. The activity oriented learners took part due to an interest in the meaning of the circumstances of learning. These adults were candid in stating that they may become involved in education for reasons other than the knowledge that it may provide. The learning oriented learners participated for finding knowledge for its own sake. They are often preoccupied with their pursuit of learning however they view education as a way in which to have fun. The concept of learning for fun or mere pleasure has long been associated and emphasized with children rather than adults (Danis and Tremblay, 1987).

Houle (1992) acknowledged that in one way or another that all education is self-directed and that it focuses on the role of individuals or in certain cases groups. He warned that American society was hostile toward life-long learning and that opposition to the individual

learner would present itself not in apathy, but in direct opposition from sources closest to the learner, mainly family, friends, and associates (Houle, 1961). As a result Houle felt that it was the responsibility of every person interested in adult education to work toward changing societal attitudes against continuing education.

A criticism of Houle is that his observation of learners developing a close association with a supportive mentor is contradicted by his findings which indicate that traditional teachers are rarely viewed as important stimulators for adults and their subsequent pursuit of learning (Candy, 1992). Further criticism is that his work is linear in fashion and lacks specific depth. For instance Houle acknowledges the problem of hostile societal attitudes toward continued education however does not recognize the complexity of the problem or offer practical solutions.

Houle's contributions and perspectives cannot be over emphasized; especially the impact of *The Inquiring Mind*. The book continues to serve as important reading within the field of adult education even today. His efforts provided "new impetus and direction to two major streams of scholarly work: that concern with participation in structured forms of adult education and that concerned with adult SDL" (Candy, 1992, p.31).

Tough. Allen Tough was one of Cyril Houle's graduate students at the University of Chicago in the early 1960s. Tough has openly credited Houle as providing the motivation behind his academic work. Since his initial research into SDL in January 1963, Tough has become one of the leading authorities for research in the field (Candy, 1991). Indeed "the notion of SDL as it is conceived, and deployed, in contemporary North American adult education can be traced most directly to the studies of Canadian adult educator, Allen Tough" (Collins, 1991, p.22).

From Tough's original dissertation came a new interview protocol which has since been recognized as a standard for adult learning activity research. Utilizing a trained interviewer, subjects were asked questions as to the learning that they had accomplished during the previous year (Bonham, 1992). Observing that only slight attention was given to the personality characteristics of why an adult may desire to learn, Tough (1968) endeavored to extensively interview thirty-five adults in the Toronto region during the spring of 1967. He discovered that the reasons and motivation behind embarking on a learning project proved to be quite complex with a variety of reasons almost constantly present.

The most consistent pattern that Tough (1968) discovered was that the learner selected or was assigned a goal, the learner then decided upon a skill or strategy that would be necessary in order to achieve the goal, and then sought to acquire the proper knowledge that would be required to learn that skill or strategy. Another pattern, rather than deciding upon or being assigned a goal, the learner happens upon something that results in puzzlement or questioning. The other two actions of skill selection and knowledge acquisition remain the same.

Allen Tough showed empirically that adults do learn in deliberate and extensive ways- a new thought for his day. Furthermore, Tough showed the large degree to which such learning is planned by the learner and not by an educational institution or trained professional (Bonham, 1992, p.51).

In addition, Tough (1979) found that the learner plans by themselves at least 70% of all learning projects with "the single most common and most important reason for adult learning is the desire to use or apply...knowledge and skill" (1968, p.52). Although there is no area or subject of inquiry in which the adult self-directed learner cannot pursue these learners would be accepting of greater help or assistance in the learning process many "often experience difficulties

in obtaining some of the help they do receive. They cannot perform all the necessary preparatory steps unaided, yet they fail to obtain all of the help that they seek or want” (p.104). He argued that adult educators should not focus on becoming teachers of content, but rather that they should learn how to coach adults to teach themselves (Bonham, 1992; Collins, 1991). As a result, Tough’s work has been extremely beneficial in framing the role that adult educators need to play in order to better facilitate SDL (Collins).

Despite his findings, there are several criticisms of Tough. Similar to Houle, Tough does not acknowledge the depth or complexities of SDL. Another criticism is his use of autonomous goal setting. Danis and Tremblay (1987) argue that the self-taught adult is unable to perform this goal setting without first mastering certain skills. They also contend that the process does not necessarily fit with an adult’s process of learning since they “do not describe their own progress in terms of specific goals, nor do they proceed according to predetermined learning objectives” (1987, p.5). Instructors and facilitators who wish to promote SDL and insist on goal setting force their students or learners to convert subject matter into behavioral objectives and run the risk of infringing on the self-directedness of the learner (Danis & Tremblay; O’Donnell & Caffarella, 1998; Tennant, 2006)

Further empirical evidence in the examination of learning contracts supports these conclusions. Employed by both Tough and Knowles as an alternate form of education to teacher control. “a learning contract is a formal agreement written by a learner which details what will be learned, how the learning will be accomplished, the period of time involved, and the specific evaluation criteria to be used in judging the completion of the learning” (O’Donnell & Caffarella, 1998, p.276). Through the learning contract the learner ideally becomes in control of the learning situation as opposed to the teacher. Efforts have been made to use learning contracts

as a means of providing structure for particular coursework (Boyer, 2003; Cristiano, 1993). However in numerous studies the instructor was either required to use or required students to use learning contracts (Boyer; Harris, 1994; Soloman, 1992; Williams & Williams, 1999). Three of the studies found resistance among participants to the learning contract (Boyer; Harris; Soloman) while one study (Harris) found higher achievement in an experimental group that did not use the contracts. This causes us to revisit Tennant's question as to whether the learning contract really benefits the learner or has become the tool of teachers and trainers to control learning (Tennant, 2006).

Finally, Tough concluded that each adult engaged in a detailed planning exercise prior to undertaking a learning project or SDL experience. Although the adult learner was not always aware of this exercise, Tough argued that it occurred none-the-less. This conclusion was later challenged by Spear and Mocker (1984) in a study which initially set out to confirm Tough's argument. Spear and Mocker observed and identified that environmental or life circumstances carried an extreme importance in structuring the learning of adults as opposed to the detailed self-planning as initially proposed by Tough.

Knowles. Andragogy was developed as an attempt to provide a comprehensive theory for adult learning and education. It was attributed in the mid 1980s as being the most influential concept for training and educating adults and practitioners in the field of adult education (Brookfield, 1986). Andragogy shares many similarities to SDL and can be considered a 'competing concept.' The author of andragogy was Malcolm Knowles who borrowed the term from a Yugoslavian educator to mean "the art and science of helping adults learn" (Knowles, 1984, p. 52). His work was influenced by Eduard Lindemann who in 1926 urged that teachers were to serve as facilitators of knowledge (Candy, 1991). Following in the footsteps of Houle,

Knowles, a dedicated humanist, based much of his work on the ideals of Abraham Maslow and Carl Rogers. Knowles resisted scientific explanations of learning and offered andragogy which through its humanistic ideals “reaffirmed the human qualities of the person, such as personal freedom, choice and the validity of subjective experience” (Tennant, 2006, p. 11).

Sometimes referred to as the ‘father of adult education’ Knowles followed a course of attempting to professionalize adult education by contributing toward the creation of a knowledge base that was unique to adult learners (Merriam, 2001). Knowles shaped SDL into a usable technique that can be applied throughout adult education (Collins, 1991). Through the actualization of the self toward unselfish needs Knowles sincerely believed that the world could become a better place.

“It is a tragic fact that most of us only know how to be taught; we haven’t learned how to learn” (Knowles, 1975, p. 14). Knowles argued that the function and purpose of education should be to assist learners in acquiring the skills necessary for inquiry. He claimed that adults are ignored by pedagogy which in his view has come to serve the interests and needs of the child learner. “The pedagogical model assigns to the teacher full responsibility for making all decisions about what will be learned, how it will be learned, when it will be learned, and if it has been learned” (Knowles, 1984, p. 52). To Knowles, the traditional system of education was forcing adults into “patterns of conformity” (1984, p. 29) and what was required was a new method for learning with qualitative implications for the adult learner. Knowles painted the adult learner as an individual that was required to journey from a dependent state toward ever increasing learner independence (Long, 1992).

According to Knowles human beings develop their basic need to become self-directed learners through the maturing process.

Self-directed describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (Knowles, 1975, p. 18).

They accomplish this through making use of their past experiences as a learning resource and by seeking the resources of others while expanding this resource with every new learning experience. Adults are ready to learn, although that readiness will vary between individuals and they employ a learning orientation that is task and problem centered. Although affected by external sources adults are internally motivated toward learning. Knowles (1984) also credits adult learners with having a self-concept of being responsible for making their own decisions and pursuing their own life direction.

Knowles (1984) introduced what he termed his andragogical model based on six assumptions: the need for adults to know; the learner's self-concept; the role of the learner's experience; the readiness of adults to learn; the adult orientation to learning; and motivation. These six assumptions separated the adult learner from that of the child learner. For example, in regard to experience "to children, experience is something that happens to them; to adults, their experience is who they are" (Knowles, p. 58). They also created the need for a new type of mentor in the form of facilitator and not teacher. Knowles' facilitating learning can be described as one in which transactional encounters between learner desires and mentor priorities inevitably "interact and influence each other" (Brookfield 1986, p. 98). Knowles does not profess that changing the teacher role will be simple; he does however, note three basic problems and provides solutions to them. Included among the problems are "(1) structure versus non-structure, (2) content versus no content, and (3) how goals will be arrived at fairly" (Long, 1992, p. 43).

Knowles' use of the term pedagogy can cause confusion. He defines the term "as the art and science of teaching" (Knowles, 1975, p. 19) but seems to relegate the term to the teaching of children. Jarvis (1984) sheds some light on this topic by explaining that it was Knowles' intention to use the term pedagogy in referring to the traditional and classical form of curriculum while introducing andragogy to suggest a less rigid and new romantic curriculum.

Knowles was not the only proponent of creating a model of andragogy. Contributions have been made by Ingalls, Godbey, and the Nottingham Andragogy Group (Brookfield, 1986). Ingalls created a series of instructional methods to help apply andragogy into the work of social service staff trainers and Godbey introduced a new mix of andragogical methods. The Nottingham Andragogy Group adopted andragogy as a means for encouraging adults to explore critical thinking rather than mere compliance in accepting the thoughts of others (Brookfield).

Since its introduction there have been numerous criticisms of andragogy. A basic problem with andragogy is that it can be interpreted in numerous ways (Brookfield, 1986; Tennant, 2006). Brookfield presents three different perspectives by which andragogy may be interpreted. It may be seen as an empirical descriptor for styles of adult learning. Andragogy can be interpreted as a concept from which a set of behaviors useful for teaching adults can be formulated. Finally, andragogy can be interpreted as a sort of rallying concept that energizes adult educators. From these interpretations Brookfield views andragogy as "a set of assumptions concerning adult learning processes from which we can derive a number of injunctions concerning appropriate teaching methods" (Brookfield, p.120).

Another major criticism of andragogy is that is an incompletely devised theory (Jarvis, 1984; Merriam, 2001; Rachal, 2002). By his own admittance Knowles (1984) had attempted for three decades to formulate an adult learning theory based upon the adult learner's unique

characteristics. Despite his tremendous effort he was unable to completely develop andragogy as an adult learning theory. Elements of andragogy are still open for debate since Knowles never sufficiently grounded his concept with empirical research (Jarvis). In a review of the eighteen studies conducted on andragogy, mainly unpublished dissertations, it was concluded that the research revealed andragogy as only an “unstable theoretical foundation upon which to prescribe practice” (Rachal, p. 224). Today very few adult educators speak of andragogy in terms of being a theory or a model.

There are those who argue that the unique characteristics of adults as proposed in andragogy may also be shared by child learners as well (Brookfield, 1986; Merriam, 2001). For instance, Merriam observes that certain children possess high motivation and prefer independent learning and SDL while certain adults may lack motivation or prefer to be highly dependent on an instructor during the learning process. Knowles acknowledged this dilemma and revised his position to represent an andragogy versus pedagogy spectrum in which existed a continuum between SDL and teacher directed-learning (Merriam).

Finally, Knowles’ view of the autonomous and growth oriented individual has been heavily questioned. Knowles does not take into consideration factors from a person’s culture, environment, or history that may strongly influence their independent pursuits of learning (Merriam, 2001). Difficulty arises with Knowles’ portrait of learning as a positive and enjoyable experience and he fails to recognize the wanton lack of self-directedness in many oppressive societies (Brookfield, 1986). Knowles’ urging of maintaining a goodwill relationship between learner and facilitator has also been questioned noting that in certain cases this will cause either person to avoid or suppress conflict, which in turn is unhealthy toward learning (Tennant, 2006).

The criticisms of andragogy do not in any way diminish Knowles' contributions to SDL and adult education. As mentioned previously he was the first to seriously attempt to create a distinct and qualitative literature toward establishing the legitimacy of adult education as its own field. His basic assumptions concerning the adult learner and suggestions concerning appropriate instructional methods are still widely accepted and utilized in professional settings today. Perhaps more than anything his spirit and belief in the adult learner as a unique and exceptional individual with tremendous capabilities toward learning and accomplishment continue to keep andragogy in the forefront of adult instructional methods heading into the twenty-first century.

The various linear perspectives provided the groundwork for exploring and legitimizing SDL. The humanist tradition of developing the learner's capacity toward becoming self-directed is strongly reflected in the writing of Houle, Tough, and Knowles. Generally, however, their work failed to acknowledge the complexities of SDL. It may also be argued that they did not offer practical solutions in overcoming environmental obstacles toward SDL. Tough and Knowles approached teaching-learning transactions from slightly different perspectives (Long, 1992). Tough gave greater emphasis to the individual with the teacher-learner transaction occurring only occasionally. Knowles often focused on the learner that participated in group learning or in a classroom setting, he therefore understandably placed more emphasis on the role in which the teacher was to play concerning the teacher-learner relationship.

Interactive

As research into SDL continued into the late 1970s and 1980s, subsequent models and perspectives became more interactive as adult educators attempted to provide a greater understanding into the actual learning process which was occurring. These 'interactive' models

tend to focus not only on the learner but also “the context of the learning and the nature of the learning itself are taken into account” (Merriam, 2001, p.9). Most models and perspectives of SDL fall into this category. They include the work by Spear and Mocker, Grow, Candy, Long, Cavaliere, Garrison and Baynton, and Straka and Schaefer.

Spear and Mocker. Through a study of the learning efforts of 78 self-directed learners with less than a high school education; George Spear and Donald Mocker (1984) observed and identified that environmental or life circumstances carry an importance in structuring the learning of adults. Interestingly the study had began as an attempt to confirm Tough’s (1968) argument that adults consciously or unconsciously engaged in a detailed planning exercise prior to undertaking a learning project or SDL experience. Instead, and in opposition to existing SDL research, Spear & Mocker found that learners with minimal education did not encounter a large number of decisions when engaged in SDL due to limited available choices and that they did not conduct deliberate planning exercises as suggested by Tough (West, 1992). Indeed the very decision process was basically reduced to deciding which resources to utilize, where to learn, and when to learn. In brief, the structure for which learning occurs is determined by surrounding environmental circumstances; a concept that Spear and Mocker coined ‘organizing circumstance.’

In their resulting model SDL is initiated by some change that occurs in the individual’s environment. The model consists of an outer circle listing aptitude, creativity, tenacity, energy, and motivation with change at the very core. An inner circle contains emergent learning, limited opportunity, and structured opportunities. Emergent learning is described as circumstantial changes occurring during the learning process and thereby created new impetus for learning. Limited opportunity is used to refer to the few reasonable possibilities for learning which exist to

the learner who must scan and select from these limited opportunities. Structured opportunity is the circumstances that dictate which learning methods, resources, and conditions of learning will be available to the learner. Learning is organized by the circumstance.

The key contribution of Spear & Mocker's work to SDL is the argument that through the manipulation or rearrangement of the environment SDL may be facilitated. A primary concern with the Spear & Mocker model is the limited scope of their study which was confined to those adults with an education lower than grade twelve. Subsequent studies (Roberson & Merriam, 2005; Straka & Schaeffer, 1997; Wheeler, 2008) confirm that the environment has significant impact on how an individual will organize their SDL. However, simply rearranging the learning environment underestimates the complexity of learning. Learning may be unpredictable, subtle, or resist such behaviorist explanation (Elias & Merriam, 1980; Rogers, 1970; Tennant, 2006). Students may also learn passively through the observation of others' actions as opposed to actions merely of their own (Tennant).

Grow. Recognizing the need to promote self-direction within the traditional classroom setting and academic environment; Gerald Grow created the Staged Self-Directed Learning Model (SSDL). The purpose of the SSDL is to provide teachers within a traditional instructional situation a method that will aid their students toward becoming more self-directed in learning. Grow (1991) recognized that there are numerous teaching methods and that self-direction is situational in learners. The premise behind the SSDL is for teachers to recognize stages of self-directedness within their students and then to match those stages with appropriate instruction. Students are categorized in four phases toward self-directedness: dependent; interested; involved; and self-directed. Within these four phases teachers are to act as an authority or coach, motivator or guide, facilitator, and finally consultant.

The significance of Grow's contribution to SDL is that he provided teachers with a practical instrument, in the form of an instructional model, toward identifying and promoting SDL. Care must be exercised in use of the SSDL. Grow (1991) warns educators that mismatches between teaching technique and stage of student self-directedness can lead to serious difficulties. "The most severe problems occur when dependent learners are mismatched with non-directive teachers and when self-directed learners are mismatched with directive teachers" (p.137). Encouraging SDL in traditional settings can often meet with stiff resistance. The most obvious criticism of the SSDL arises as to how teachers, especially directive ones, will be motivated to even consider such a model.

Candy. Philip Candy contributes to the knowledge of SDL with a thorough approach toward understanding how adults utilize lifelong self-direction. He is the adult educator most commonly associated with SDL from the philosophical approach of constructivism. His other major contributions include a well-developed argument of SDL occurring on a continuum and that of adults learning and utilizing SDL differently in formal as opposed to nonformal settings.

Candy (1989; 1991) argued that constructivism was more compatible with SDL than positivism. Although he acknowledged environmental circumstances he argued against adults as "passive beings" (1991, p. 251) responding to stimuli. He encourages the adoption of a constructivist view as having five important implications for the study of SDL. The self-constructing learner is out of necessity autonomous. They must possess a desire toward self-improvement and be self-aware. Self-constructing and autonomy are to be viewed as a continuous or ongoing process. Autonomy cannot be granted to the learner. It is something that the learner must already possess. In order for someone to be self-constructing they must already contain a set of values or a belief system that allows them to organize their direction and actions

in learning. Via constructivism SDL can be understood through its emphasis upon the adult's responsibility for learning by their use of experiences and actions to construct knowledge.

Two distinctions of SDL are named by Candy (1991): Outcome and method. Outcome and method are further divided to include two domains each: Personal autonomy and self-management as outcomes; and autodidaxy and learner control as methods. These four domains collectively comprise the dimensions of SDL.

Candy's outcomes of SDL include personal autonomy and self-management. Personal autonomy refers to the degree in which a learner is independent of internal and external constraints. Characteristics of the autonomous learner include the ability to create plans and goals, practice freedom of decision, utilization of rational reflection, the ability to complete projects, proper demonstration of self-discipline, and a personal view of actually being autonomous. Autonomy is "situation dependent" (Candy, 1991 p. 125). The level of autonomy will be affected by two variables: The learner's immediate situation and the comprehension of the learner. Candy defines these variables as situational autonomy and epistemological autonomy. Self-management refers to the skills and competencies of the self-directed learner (for example: methodical and disciplined, openness to motivation, creativity, and self-sufficiency) and their willingness to pursue goals.

Candy's methods of SDL include autodidaxy and learner control. Autodidaxy occurs outside of formalized institutional settings. It may be described as the independent pursuit of learning and self-education. Autodidaxy has become extremely widespread and has limitless possibilities. Few 'autodidactics' embark on learning projects without social interaction and influence. Indeed, "at least some autodidactic projects arise from, and occur within the context of, membership in a group" (Candy, 1991, p. 197). Autodidaxy and learner-control exist in

various forms of degree. Learner-control is dependent upon both the instructor's level of self-directedness as well as the self-directedness level of the student. Learner-control in adult education appears as various terminologies "including self-direction, open learning, participatory learning, and student-centered instruction" (p. 211). Candy argues that several advantages result in increased learner-control of education including improved curiosity and critical thinking, better retention and understanding, and superior learning outcomes. However he also warns to be wary of instructors who practice pseudo autonomy, defined as fictitious increases of learner-control with an unclear or artificial commitment by the instructor. Differences between autodidaxy and learner-control include the existence of an instructor in learner-control and the absence of one in autodidaxy.

A criticism of Candy is that he has not formulated his work into a model or conceptual framework which can be applied to SDL. This would seem the logical next step given his extensive arguments for grounding SDL into constructivist philosophy. Much of his work, although important, examines SDL as a personal characteristic. This limits exploration of such Candy (1991) statements as the mere modeling of democracy will not lead to it and that little evidence exists to conclude that SDL reduces inequalities. Furthermore, his contention that adults are not forged by circumstances beyond their control and that they instead possess the ability to find alternative solutions to situations (1989) can be questioned from a critical as well as behavioral lens.

Long. SDL can be viewed as having several different conceptual dimensions. Huey Long suggests that these dimensions can be categorized into four major and one minor paradigms of SDL. These paradigms of SDL include: sociological; teaching; method by which education providers relate to learners; and psychological (Long, 1998). The sociological paradigm is when

the learner seeks independent learning outside of the constraints of interpersonal and institutional pressures. The teaching paradigm occurs through promotion of SDL through the pedagogical process, for example Knowles and andragogy. The method by which education providers relate to learners paradigm involves the institution and its approach toward learners and self-direction. The psychological paradigm encompasses “the mental activities of the learner” (Long, 1989, p. 2), for example the autonomous learning projects studied by Tough (1968). A fifth, minor paradigm conceptualizes SDL as the actual goal for which learners or facilitators wish to develop, that is SDL in and of itself becomes the objective.

Long (1989; 1998) concentrates on the psychological and cognitive aspects of learning and is clearly a proponent of the psychological paradigm. The contention that psychological control is the critical paradigm necessary for any learning endeavor to be termed as self-directed is an important contribution to SDL. In other words, the learner must sustain command of his or her learning for that learning to be considered as self-directed. This paradigm can occur in various degrees with learners ranging between high and low dimensions of psychological control.

Psychological aspects of learning can be complex and difficult to measure. While Long argues that the psychological variable is necessary for self-direction to occur, a counter argument can be made that elements of the other paradigms must also be present. Two cases can provide further support for this counter argument: The need for teaching adults how to learn through self-direction as opposed to being taught (Knowles, 1975) and that autonomous learning can only occur when the learner recognizes and overcomes certain political conditions of control (Brookfield, 1993).

Cavaliere. Lorraine Cavaliere (1992) offers a unique perspective toward understanding SDL through an analysis concerning the Wright brothers and how they employed the learning process to learn how to fly. She discovered that the Wright brothers' "behaviors were nonlinear, with the learners demonstrating increased proficiency as they moved through the project" (p. 58). Five pronounced stages were identified: Inquiring, modeling, experimenting and practicing, theorizing, and perfecting.

The significance of the Cavaliere perspective to SDL is twofold. First, her study quells any continued notion that SDL is merely a linear process. Secondly, she applied her analysis to an historic case study in which the participants were clearly considered to be self-directed. While the study has interesting possibilities one of its strengths is also a clear criticism; it focuses on two bright and extremely successful learners, who may be argued as being the exception, rather than the rule, to learning. It would be interesting to see this study applied to other learners who attempted to build flying machines and then compare the results of their learning processes against the Wright brothers.

Garrison and Baynton. The two models discussed in this section were based on the notion that SDL can be facilitated. This is significant to SDL as numerous educators are divided as to whether or not SDL can or should be facilitated. As mentioned previously in the conceptual framework section of this chapter Brockett and Hiemstra (1991) found no contradiction to facilitation of SDL. Tough (1979) and Knowles (1975; 1984) were proponents of facilitation. Indeed Tough expressed that "many persons would welcome more and better help with their self-planned learning" (p.104). Others caution of concerns with facilitation. Candy (1991) warns to be careful of causing confusion by blending forms of instruction with autodidaxy. Collins is more adamant declaring "facilitating self-directed learning and using

contracts come to mean, above all, serving institutional needs” (Collins, 1991, p.27). Jarvis (1998) is also cautious noting that SDL can begin with facilitation and that gradual control is given to the learner. However, he clearly mentions, that in many cases the “residue of power still lies with the teachers in this type of learning situation” (p.22).

The Educational Transaction Model of D. Randy Garrison and Myra Baynton (1987) is a model which acknowledges that “education is inherently a collaborative and active process between teacher and student” (Garrison, 1989, p. 55). The model combines three dimensions of control: freedom without external influence; proficiency or academic abilities to achieve goals; and support in the form of human and nonhuman resources. During this collaborative process two phases of communication occur between the student and teacher. The first is concerning with planning while the second centers on instructional methods. These components are also incorporated in the second and later model.

The Self-Directed Learning Model (Garrison, 1997) places a large emphasis on the actual learning process; the cognitive plus motivational dimensions of learning. Focus centers on three distinct yet interconnected, overlapping dimensions of self-management, self-monitoring and motivation. Self-management is basically concerned with issues related to external task control. These issues center upon the activation of learning goals and the finding and use of learning resources. Although a self-directed experience, learners may utilize facilitators to provide support and direction thereby creating a collaborative experience. The next two dimensions of the model, self-monitoring and motivation, represent the cognitive dimensions of SDL. In self-monitoring or cognitive responsibility, the learner assumes the accountability for constructing personal meaning. This includes insuring that new knowledge structures are properly and meaningfully integrated with existing ones. Learners are encouraged to incorporate external

feedback with their own internal evaluation. Motivation, another key component of SDL, is as equally important as the other two dimensions of the model. Also referred to as entering and task, motivation may occur in various forms. Proper motivation is necessary to start a project, maintain a project and to achieve cognitive goals. Garrison makes the analogy of motivation as being the emergency or reserve fuel supply of a learner's motivational state.

Strengths of the two models are that they present a framework for which to understand SDL within an environment which encourages facilitation of learning and the importance of learner motivation is stressed. This steady assuming of autonomy has been found to be effective in conjunction with the developmental needs of less educated adults (Terry, 2006).

Weaknesses of the models are that they assume learning will take place in a supportive and encouraging environment and that institutions will be willing facilitators of SDL. Garrison and Baynton do not seem to answer the challenge of Spear and Mocker's (1984) dilemma in which certain adults may have difficulty in overcoming their 'organized circumstance.'

Straka and Schaefer. The Two-Shell Model of Motivated Self-Directed Learning, introduced in 1997 by Gerald Straka and Cornelia Schaefer, is based upon research findings of SDL within the workplace. SDL is related to the experienced environmental conditions of the learner; in this case the workplace and the employee. In this model SDL is viewed as an interactive exchange between an employee's interests, motivations, strategies, control, and evaluation.

Straka and Schaefer (1997) formulated the model for the purpose of differentiating socio-historical environmental conditions, internal conditions, and four activity concepts (interest, learning strategies, control, and evaluation). Their research suggests that employees approach a learning topic with an interest in content and through application of resource management,

acquisition, and sequencing strategies; control their use of cognitive, metacognitive and motivation skills along with diagnosis and evaluation to bring about the desired result of learning. In brief, the findings relevant to the model suggest that SDL is influenced by the environment and that personnel who are capable of higher levels of self-direction are preferable employees.

The model is significant to SDL in linking learning to the workplace environment as well as the type of SDL learner who is more likely to be successful in such an environment. The authors' conclusions are based on two different study settings (a medical insurance company and fish processing industry) in which they conclude a strong correlation at one location based on the findings of a high variance at the other. No additional studies have been conducted regarding the specific model.

SDL as a Learning style

SDL can be viewed from the perspective of self-directedness as a personal characteristic. In other words, attention to SDL is focused on the individual as a learner and the "extent to which self-directedness is a priori personal characteristic and associated with other variables such as educational level, creativity, learning style, and so on" (Merriam, 2001, p. 10). Various characteristics have come to be associated with specific skills and qualities commonly found to be indicative of SDL. The stronger these characteristics are developed within an individual; the greater they will be reflected through higher levels of self-directedness.

Much of the research in this category of SDL is often associated with instruments of assessment. These instruments utilize quantifiable methods to determine to which degree a learner possesses the skills and qualities associated with SDL. The two most commonly used instruments have become the Self-Directed Learning Readiness Scale (SDLRS) and the Oddi

Continuing Learning Inventory (OCLI). Studies of the validation of these two instruments have been the subject of one fourth of all research into SDL during the 1980s and 1990s (Brockett, et al, 2000) causing SDL to achieve significant attention in the field of adult education (Brockett & Hiemstra, 1991). In addition to these two instruments, the self-directed orientation toward learning model was developed based on the assumption that SDL is a learning style.

Guglielmino. The Self-Directed Learning Readiness Scale (SDLRS) was developed by Lucy Guglielmino in 1977 with the goal of discovering more about the self-directed learner. She envisioned the SDLRS as a “means of determining an individual’s readiness for self-directed learning, as well as a device for measuring the efficacy of programs designed to foster the attitudes and skills which are involved in increased self-direction in learning” (Guglielmino, p. 3). Additional instruments developed by Guglielmino include the SDLRS-ABE, devised in 1989 for adults in basic education and non-native speakers of English, and the Learning Preference Assessment (LPA), a self-scoring format of the SDLRS formulated in 1991 (Guglielmino, 1989; Guglielmino & Assoc., 2005). Each instrument was developed using a modification of the Delphi technique:

The initial questionnaire included an open-ended listing followed by a check list of characteristics suggested by the literature. In round two, panel members received a list of responses suggested by all members in round one and rated them on a scale of 1-7, with the following points indicated: 1-unnecessary 3-desirable 5-necessary 7-essential. In round three they were provided with the results of the ratings and were asked to rate the listed attitudes, abilities, and characteristics once more, explaining any response for which their rating fell outside of the semi-interquartile range of the group’s ratings for that response. (Guglielmino, 1989, p. 64)

The SDLRS contains fifty-eight items (for example 'I love to learn') which are responded to via a Likert scale. The response to each item is assessed with intent to discover the individual's perception of the skills and attitudes commonly associated with SDL.

Guglielmino views the role of the learner as independent and persistent in learning. Characteristics include curiosity, responsibility, self-confidence, and competency in planning among others (Guglielmino, 1977). The goal of each learner is to achieve greater self-direction in all areas of content or interest. Consequently the role of the facilitator is to identify and promote characteristics in the learner conducive to SDL.

Numerous efforts have been made to validate the SDLRS; with positive and negative results (Guglielmino has estimated SDLRS reliability of .87). The use of the instrument internationally attests to the faith of educators in its reliability. However, it is worth reviewing the conclusions of selected studies which have called into question the reliability of the SDLRS: One third of the sample had to be eliminated due to confusion resulting in incomplete answers and claims that the test contents were irrelevant to participants' lives (Brockett, 1985); conclusion that learning contracts did not increase SDLRS scores (Caffarella & Caffarella, 1986); revelations of flawed methodological and conceptual developmental work (Field, 1989); and unstable factor solutions and lack of connection of SDL characteristics (Straka & Hinz, 1996).

These findings have resulted in criticisms concerning the SDLRS. Field (1989) summarized four major areas of concern: the use of the Delphi technique (primarily used as decision making aid) to create the instrument, failure to properly define self-directed learner within the study, utilization of negatively phrased items, and the addition of further items following the validation of the scale. Field has concluded that the SDLRS is at best vague in

what it measures. The meaning of opposites to answers within the instrument which have been traditionally regarded to indicate a preference for other-directed learning as opposed to SDL have also been questioned (Bonham, 1991). For instance, using again the example statement ‘I love to learn,’ a negative response may indicate a dislike for all learning and not a preference for other-directed learning. Possibly on the contrary, a positive outcome to the example statement is just as indicative of enjoyment toward any type of learning, not just SDL (Bonham).

Oddi. The Oddi Continuing Learning Inventory (OCLI) was developed by Loris Oddi in 1986 building upon Houle’s 1980 research into continuing professional education. Oddi desired to explore SDL beyond a mere process of learning. Of interest to her were the personality characteristics exhibited by individuals “whose learning behavior is characterized by initiative and persistence in learning over time” (Oddi, p.98). She became critical of the emphasis on self-instruction as being too narrow toward our understanding of the complexities of SDL. Through her study involving 271 graduate students, Oddi developed a 24 item instrument with seven-point responses (strongly disagree to strongly agree).

Through the OCLI, Oddi identified three overarching dimensions of personality traits: Proactive Drive versus Reactive Drive (PD/RD), Cognitive Openness versus Defensiveness (CO/D), and Commitment to Learning versus Apathy or Aversion to Learning (CL/ALL), with the self-directed individual predominantly exhibiting the first trait of each set. The purpose of the OCLI is to serve as a reliable aid in identification of the “personality construct self-directedness in learning” (Oddi, Ellis & Roberson, 1990, p.139). The instrument has numerous implications for practice including the potential to screen individuals for inclusion in various educational programs (Oddi, 1986).

Although the OCLI has not been as scrutinized as has the SDLRS, with 29% of research studies for the OCLI as compared to 71% for the SDLRS (Brockett et al, 2000); it has also come under criticism. Oddi's factor analysis resulted in three components which accounted for 45.7% of total variance (Oddi, 1986). As a result Oddi had to use the total OCLI scores in order to conclude satisfactory validity. In a validation study of the OCLI three years later, Six (1989) suggested the pursuit of simpler and more relevant factor solutions. Although Straka's 1996 attempt to administer and test the stability of the OCLI faced language translation (English into German) difficulties, he also concluded that additional factor solutions be explored (Harvey, Rothman & Frecker, 2006). More recent attempts based on the same guiding dimensions as pioneered by the OCLI continue to explain under "50% of the variance in the analyzed response sets," suggesting the need for additional development of the OCLI (Harvey et al, p. 199).

The SDLRS and the OCLI actually share numerous similarities. Both instruments' positive measurements can be interpreted as favoring all learning of intentional nature while negative measurements appear to be indicative of non-learning (Bonham, 1989). Furthermore the instruments place tremendous importance on motivation. The SDLRS and the OCLI make the assumption that SDL is generic as opposed to situation specific (Candy, 1991). Guglielmino and Oddi pay scant or no attention to the other-directed learner.

Bonham. Building on the work of the SDLRS and the OCLI, L. Adrienne Bonham proposes a tentative model based on the assumption that self-directed orientation toward learning (SDOL) is a learning style. Bonham defines a learning style as "a way of acting or thinking in a learning situation; the person feels comfortable with that approach and possesses any skills necessary for using it; when there is a choice, the person habitually chooses this approach" (1989, p.14). She argues that the literature supports the notion of SDOL as a learning style and

that experimental evidence suggests that it acts like one. Through her survey of the literature she suggests three models for learning. The first, the Other Directed Learner is clearly not a SDL situation. The remaining two: the Self-Directed Instructional Model and the Self-Directed Inquiry Model both produce SDL; however the two models are at contrast with each other.

The Other Directed Learner prefers to learn through a structured setting in which the teacher defines and organizes the objectives, necessary resources, and approaches to learning. Whereas this learner can find resources on their own they tend to exhibit aggression or panic if they do not receive considerable guidance. This learner, and the style in which he or she favors, is clearly not self-directed.

The Self-Directed Instructional Model features a learner that clearly prefers linear thinking. They are capable of detail in planning and outlining learning. This learner is self-directed and prefers a style which allows them to utilize methods that they perceive as being effective. The Self-Directed Inquiry Model features a learner who thinks of learning holistically. They tend not to create detailed plans and enter projects with the ability of receiving resources and information in sporadic intervals. Whereas this would cause a level of frustration for the Self-Directed Instructional Model learner it does not cause anxiety for the Self-Directed Inquiry Model. Instead this self-directed learner prefers a style in which they can organize the information for him or herself.

Although further research is necessary relevant to SDOL, especially in the area of identifying the appropriate context for all style elements (Bonham, 1989), Bonham's research into the learning styles of learners and their comfort level in applying such a style provides insight into the various types of learners. It provides insight into why SDL may not be for everyone. It also clearly defines two distinct and different types of self-directed learners.

Critical Interaction

This category includes perspectives and models of SDL which are grounded in critical theory. The concern of adult educators who support SDL from a critical perspective is the practice of self-actualization as focusing too heavily on individual freedom as opposed to the need for the individual to become observant and active toward social freedom (Pearson, 1999). Critical theorists promote understanding of SDL through the process of political self-awareness and the ability of individuals to create change. The perspectives of Brookfield, M. Collins, Hammond and R. Collins, and Mezirow represent those of an interactive nature based on critical ideology.

Brookfield. Stephen Brookfield is unique in that he has exhibited a gradual shift in writing and research focus. He reshapes his ideas over three decades from being an exclusive proponent of SDL (Brookfield, 1984, 1985a, 1985b, 1986) to an increasingly staunch supporter of varying critical theories of learning and approaches to adult education, which make only scant mention of SDL (2002, 2005a, 2005b). Whereas his initial writings closely resemble humanistic elements similar to the linear perspectives previously discussed, increasingly his viewpoints on SDL have been informed by the work of Marcuse, Gramsci, Fromm, and Habermas (2002, 2005a, 2005b).

His major critical contribution (to SDL) is the argument that SDL is an inherently political concept. SDL is based upon an adult's acknowledgement of their separateness and upon their awareness of personal power (Brookfield, 1985b; 1986; 2005b). At the heart of this concept of SDL is autonomy of which is viewed as an adult's awareness of multiple possibilities for any given situation (1986). SDL is repainted as a political ideal with the duty to stand against oppressive interests.

The case for self-direction as an inherently political concept rests on two arguments. First, that at the intellectual heart of self-direction is the issue of control, particularly control over what are conceived as acceptable and appropriate learning activities and processes. Second, that exercising self-direction requires that certain conditions be in place regarding access to resources, conditions that are essentially political in nature (1993, p. 232-33)

Brookfield believes that the primary requirement for adult education is to engage in critical questioning of any ideal or assumption that is and has been taken for fact or granted (Collins, 1991). Once we acknowledge his argument that the self is culturally formed, we can begin to realize the political aspects of SDL (Owen, 2002).

In his earlier work, Brookfield argues for facilitators who view themselves as “resources for learning, rather than as didactic instructors who have all the answers” (1986, p. 63).

Important to their facilitation of learning is in aiding the learner to discover their own learning style and to become critically aware of themselves as individuals. Inevitably proper facilitation should lead to self-directedness. Brookfield is also a proponent of self-direction occurring in groups, resulting with the same efficiency in either a group or individual setting. In his study conducted with a course of adults, the adults formed a learning group of which Brookfield ceded to control of the learning agenda and activities (1985a).

Again based upon his earlier work, ultimately the individual is responsible for their own learning (not the group or facilitator) and coping with the random events in life which can trigger significant changes in the learning path of individuals (Brookfield, 1986). Content may be whatever is deemed as relevant to the individual with the ultimate goal of critical self-awareness. Brookfield believes SDL to be a cognitive practice which is anchored in reflection and action

(Owen, 2002). Individuals can change their perspectives, shift conceptual dimensions, and reinterpret the world through another means (Owen). Brookfield is supportive of Long's sociological paradigm in which the learner seeks independent learning outside of the constraints of interpersonal and institutional pressures (Long, 1998).

Based upon his later work, a criticism of Brookfield is that he can be over critical of SDL. For example, he refers to the "folklore of the self-made man or woman that elevates to near mythical status those who speak a narrative of succeeding against the odds through the sheer forces of their individual efforts" (2005 p. 83). This reflects a significant change from his earlier perspectives and paints a new viewpoint in which he has little tolerance for such humanistic ideals to SDL. Further criticism can be made as to a lack of empirical evidence on behalf of his critical perspective to SDL. He has not proposed a specific model in regard to SDL. Thus empirical research has been largely limited to Brookfield's conceptual contributions to field dependence and independence.

M. Collins. Michael Collins (1991) presents a more rigid critical approach to SDL than does Brookfield. Collins warns us that right under the surface of SDL exist those who are trying to institutionalize the practice of SDL into mandatory schooling. He refers to the applications of technical and mechanistic formats as technicism and warns if unchecked will create a crisis that will threaten SDL. These formats are pre-packaged and preconceived artificial materials designed to control the learner and to lead them away from everyday life experiences. They are designed with the intention of controlling the decision-making process. Collins denounces SDL contracts as manipulative and tools such as the SDLRS as deceptive.

Adult educators must become aware of avoiding systematizing SDL into becoming directed (Collins, 1991). Instead they should work on "strategies to identify and preserve

valuable non-institutionalized learning endeavors that are threatened by bureaucratized and professionalized interventions” (p. 26). The threat of technicism is not limited to facilitation of SDL but also occurs in the research of SDL. Collins argues that adult educators that utilize conventional scientific research methods invade and define the everyday life of adult learners. Through this type of methodology, research becomes an intrusion and imposition.

Collins criticism of institutionalized methods may seem alarming. However, he builds a sound case for keeping watch against technicism and the possibilities of control-reasoned systematizing of SDL. He seemingly downplays the many positive intentions of his colleagues toward promoting SDL through traditional societal formats such as institutionalized learning.

Hammond and R. Collins. Meryll Hammonds and Rob Collins have merged an instructional model with critical practice. Their model proceeds with the notion that “critical awareness and social action to promote emancipation are desirable results of any educational intervention” (Hammond & Collins, 1991, p.13). The ultimate goal of this model is to promote a non-threatening, open and challenging, democratic atmosphere conducive for learning. In the center of the process is the learner and hence the learning climate philosophy. This climate may be affected by physical climate (the condition by which learning takes place), psychological climate (how the learner and other players perceive themselves, experiences, and other learners), social climate (the interplay between members of the learning group), intellectual climate (the comfort level of learners and their ability to accept, exercise and extend intellectual ideas and concepts), and administrative climate (the role of all members in the decision-making process for learning).

The model is significant to SDL in that it provides an instructional approach toward encouraging SDL based on a critical lens. The authors challenge the learner and teacher to adopt

critical SDL. Unfortunately the narrative style of the authors' manuscript, presented in the form of an instructional guide or manual, does not mirror the passion of their challenge, which in itself is unrealistic, presenting an enormous undertaking requiring a substantial leap into new educational strategy, a leap many traditional educators may simply choose to ignore.

Finally, it must be noted that Jack Mezirow (1985) has also contributed to a critical perspective of SDL. He argued that SDL can be better understood by examining three separate but related adult learning functions: instrumental learning; dialogic learning; and self-reflective learning. According to Mezirow, knowledge is found by coming to clearly understand oneself. This is achieved by identifying and correcting dependency producing assumptions that have become dysfunctional for our adult lives and by taking emancipatory action for change. Critical perspectives of SDL continue to post watch so that the original and ideal concept is not oppressed or subverted. All of the critical perspectives challenge facilitators to promote critical challenge.

Chronological review of SDL perspectives and models

Whereas it becomes obvious that certain shared characteristics allow the perspectives to be placed into distinct categories, it is appropriate to note additional similarities and differences that span across the linear, interactive, learning style, and critical interaction categories that have been discussed. It is most helpful to review and compare the various contributions, with the exception of the critical perspectives, from a general, chronological perspective in order to gain a better understanding for the development and expansion of SDL.

Any chronology of SDL begins with Houle, Tough and Knowles. As pioneers of SDL they laid the groundwork and began the foundation for additional perspectives to be expanded and constructed. This is not to suggest that their contributions are invalid; to the contrary. The

one characteristic that unites these three educators, along with Brockett & Hiemstra, and is still widely practiced today, is their shared view of the facilitator's role as someone who assists learners in acquiring the skills for inquiry.

The next significant contribution to SDL came from Guglielmino during the second half of the 1970s. Guglielmino, and later Oddi (1986), have offered instruments by which to measure characteristics related to self-directed learners. Their concept of SDL consisting of personal characteristics associated with other variables makes for an interesting comparison with Bonham's (1989) work into SDL styles and her identification of two distinct and different types of self-directed learners.

Also during the 1980s Spear & Mocker (1984) proposed organizing circumstance; that SDL is initiated by some change that occurs within the individual's environment. The notion of pure learner-control in SDL, as if acted out in a vacuum was successfully challenged and the importance of environmental effects has since been researched. Straka & Schaefer (1997) further concluded over a decade later that SDL is related to experienced environmental conditions.

1991 proved to be a watershed year for SDL with publications being released by Brockett & Hiemstra, Grow, Candy, Collins, and Hammonds & Collins. Grow's (1991) instructional model offered solutions for teachers to change their routine toward identifying and promoting self-directed learners. Candy's (1991) work focused attention on learner autonomy identifying four collective domains of SDL. Cavaliere (1992) presented an argument for a highly successful learning project employed and accomplished by the Wright brothers in their quest to conquer flight.

Since the late 1980s, adult educators have challenged that SDL not be continually observed from an external perspective, and that the cognitive learning process must also be researched. Garrison (1997) focused on three distinct yet interconnected, overlapping dimensions of self-management, self-monitoring and motivation. Long (1989; 1998) contended that psychological control is necessary for any learning endeavor to be termed as self-directed and alluded to Garrison's Educational Transaction Model as an imperfect but acceptable concept of control (1989).

Critical perspectives of SDL continue to post watch so that the original and ideal concept is not oppressed or subverted. Brookfield (1985b, 1986, 2005) identifies the positive and negative potential for personal power while Mezirow (1985) sheds light on the process of perspective transformation. Collins (1991) warns us of the overbearing power of technicism. Hammonds & Collins (1991) offer an instructional model in which democratic and open learning can be achieved. All of the critical perspectives challenge facilitators to promote critical challenge.

Research Topics in SDL

Three particular topics have been the subject of academic inquiry into SDL. They include SDL in human resource development (HRD), healthcare, and distance learning (DL)/information technology (IT). These fields comprise the bulk of empirical research within SDL and the literature pertaining to these areas is quite extensive. Although not to be considered an exhaustive review; the relevant findings in these subjects are still significant to the purpose of this study in order to further a broader and more comprehensive understanding of SDL. Following the review of these topics, a brief synopsis will examine four broad themes which emerge from the literature in regard to SDL.

SDL in human resource development

Human resource development (HRD) is concerned with improving the skills and workplace abilities of adult employees or learners. Typically human resource managers concentrate on formalized training or instructional methods. However, during the last four decades, the possibilities concerning SDL have been explored as an alternative to these 'other-directed' forms of traditional workplace training.

The literature examined for this section pertains to SDL in conjunction with HRD and public administration. Interestingly, a brief survey of the selected materials for this section reveals two adult educators as most prominently mentioned throughout the HRD literature: Knowles (21%) and Tough (17%). Of the twenty-nine core HRD articles surveyed, twenty are conceptual while nine are empirical. Slightly less than 20% of these materials are specific to the public sector, with materials pertaining to the private, non-profit sector (for example a non-municipally operated museum) being nonexistent. The literature revealed five categories of findings. These categories include advantages and roadblocks to SDL in human resources, SDL from employee learner and organizational perspectives, implementing SDL into training policy, learning projects, and SDL as utilized in the public sector. Each topic is followed by a brief discussion.

Advantages and roadblocks to SDL in human resources. Numerous advantages are cited for using or adopting SDL practices as well as existing roadblocks which impede SDL. The advantages of SDL in human resources can be divided into two categories: those which benefit the employee as an individual and those which benefit the organization or agency as a whole. No cases were found in which SDL was reported to benefit the employee over or at the expense of the organization or vice versa. Existing roadblocks to promoting SDL within human

resources can also be divided into two categories: employee learners and organizational trainers who have been conditioned or socialized into viewing education as a formal system as experienced through traditional classroom activities or training sessions and employees and organizations that have little knowledge of or understanding in regard to SDL.

The key advantage for employee learners in SDL is personal growth (Cho, 2002; Dearborn, 2002). As a result of their personal development employees become inspired and motivated to recognize and to make positive changes in their workplace (Dearborn; Gerber, 2006). With careers no longer confined to lifelong positions or individual companies; employees become responsible for the pursuit of their own improvement and learning through SDL (Inkson, 2004). SDL is ideally situated to the employee learner's preference of self-paced learning; learning how and when they feel it is warranted (Gerber).

The most widely cited advantage for organizations to utilize SDL is that it requires less intervention on behalf of the organization to provide employee training and instruction (Lowe & Holton, 2005; Smith, 2001, 2002; Willis, 2000). Organizations no longer have to constantly provide for re-training as employees will seek learning on their own and therefore diminish their need for external instruction (Smith, 2001; 2002). In other words as learners increase their self-directedness their need for external support decreases (Lowe & Holton).

With SDL the organization has less of a formal determination as to what instruction or training is appropriate or necessary to offer employees. This can be greatly advantageous with continued changes becoming the natural responsibility of the employee learner, who, due to their closeness to the work, will know better than the organization as to which skills and education will be necessary (Willis, 2000). Implementation of SDL provides economic and commercial benefits to the organization (Garger, 1999; Smith, 2001). This occurs in two ways: savings in

actual training expenditures and savings as a result in greater efficiency of self-directed employees. In only one case was SDL purported to be outright superior to traditional modes of employee instruction or training (Garger).

A fundamental roadblock to SDL has been the traditional experience of education. This experience is typically one in which the student is dependent upon the instructor and all learning activities are teacher-directed (Knowles, 1989; Slusarski, 1994). These conditioning result in reluctance on the part of the adult to assume an active or controlling role in the learning process as is required by SDL. Employee learners feel 'safe' in traditionally structured training programs in which an instructor is immediately available to answer questions or address concerns (Smith, 2002). Self-directed experiences are not valued on an equal footing with traditional methods; especially in regard to employee performance evaluations (Foucher, 1998).

As a result of their experiences, employees have relatively little understanding of or desire to pursue SDL in order to advance their learning and skills. Outright myths exist among training instructors such as the promotion of SDL will diminish the sharing of ideas among employees and will reduce social interaction (Garger, 1999). Organizations and agencies rarely contribute to aiding employees in learning how to learn (Foucher, 1998). Furthermore, research surveys indicate few organizations even consider SDL in their training policy resulting in a 30% decline in employee responsibility for learning (Foucher). Research also indicates a divide between professions of employee learners with healthcare learners showing a higher preference for SDL than business learners (Smith, 2001). Employees who engage in training which requires metacognitive activity on greater levels have a tendency to develop skills and practices more associated with SDL (Schmidt & Ford, 2003). Often SDL is a process that employees may

actually be engaged in without recognition from the organization or agency (Filipczak, Ganzel, Gordon, & Lee, 1998).

SDL from employee learner and organizational perspectives. SDL is a complex phenomenon. A genuine understanding of SDL must be attained in order for SDL to become a successful method of HRD. This understanding must occur on two very distinct levels: from the perspective of the employee learner and from the perspective of the organization or agency.

The literature regarding SDL for employee learners is usually reflective of those in a supervisory or management role (Foucher, 1998). Indeed, the majority of employee learners indicate improvement of management and supervisory skills as their major goals for learning (DeJoy & Mills, 1989). These employees are encouraged to realize their ability to learn and are expected to do so independently (Confessore & Kops, 1998; Gerber, 2006; Slusarski, 1994). In a survey of organizations that had a formal policy for training, managers are assigned responsibility for their own learning in 65% of the organizations (Foucher). A ten-year study revealed 80% of the participants changing their employer and 59% changing their occupation with 38% of these position changes occurring for advancement or promotion (Inkson, 2004). Such movement in the workforce necessitates employees taking responsibility for their own learning or risk becoming non-competitive.

Employee learners who practice SDL have reported significant changes in their job routine. They indicate a feeling of greater value, improved communication skills, and ability to welcome and address greater challenges (Confessore & Kops, 1998). Furthermore they have noticed an improvement in their capacity to build and strengthen relationships (Confessore & Kops; Dearborn, 2002; Gerber, 2006). When properly supported by the workplace organization

or agency SDL continues to produce significant results (Durr, Guglielmino, & Guglielmino, 1996).

As stated previously, SDL is the exception as a training policy within most organizations, with only 40% recognizing the need for employees to take control of their own learning (Foucher, 1998). Organizations who do accept a responsibility for the development of their employees' self-learning are open to continuous and expanding learning opportunities and the benefits which accompany them (Dolezalek, 2004; Hall & Moss, 1998). These organizations encourage a concept called organizational learning. According to Dixon, organizational learning can be explained "as a process by which information, determined by the collective as meaningful, is communicated by and throughout the collective" (Confessore & Kops, 1998, p. 366). In such organizations SDL serves as the connection between independent and collective learning aspects (Cho, 2002). Together, all interested parties come to create a conglomeration of corporate knowledge which defines, shapes, and guides the organization. Active participation by employee learners in debating and establishing such organizational goals only serves to further promote SDL in the workplace of the organization (Confessore & Kops). In addition SDL can serve as 'watchdog' to prevent organizations or agencies in attempting to manipulate or control knowledge for specific or devious aims (Contu, Grey, & Ortenblad, 2003).

Implementing SDL into training policy. In order to introduce SDL into training policy and therefore create a learning organization; a paradigm shift may be initially required of both employee learners and human resource facilitators, especially if they are unfamiliar with SDL. One way of determining which skills may require attention is to administer the SDLRS. Once the necessary skills are identified skill-building exercises should commence with learners (Knowles, 1989; Slusarski, 1994). This can be accomplished in-house by trainers

knowledgeable in SDL or taken to special centers designed specifically for the facilitation of SDL. An example of such a center is the Georgia Center for Continuing Education's Learning Lab which includes and specializes in self-paced resources, SDL assistance and methods of self-assessment (DeJoy & Mills, 1989).

The continued goal for the employee learner is to increase their ability for independent learning and autonomous behavior. One alternate form to teacher control that can be applied within HRD is the learning contract. The use of learning contracts works well in HRD with employee learners who have high levels of goal orientation and setting skills (Heintz & Steele-Johnson, 2004). They also serve as an elementary means in aiding the employee learner toward increasing their ability for independent learning and autonomous behavior (Knowles, 1989). Learning contracts can provide assurances to organizations and agencies that SDL is occurring based upon the goals and establishing a means of evaluation as set forth in the contract (Confessore & Kops, 1998). Each employee learner must play an active role in determining which learning goals have the most significance and meaning to them as self-directed learners. This can be most successfully achieved inside a supportive environment of relationship-building with other employee learners who provide each other with continued support and encouragement (Dearborn, 2002; Knowles, 1989; Slusarski, 1994; Smith, 2001).

Instructors too, must redefine their role in the learning process as facilitators. This requires the facilitator to mentor and guide, not to merely dispense content (Slusarski, 1994). Facilitators need to develop skills and increase understanding as to when intervention into employee learning is appropriate (Ellinger, 2004). Differences in learners and their various SDL capacities are to be recognized and accepted by facilitators (Confessore & Kops, 1998). New techniques of evaluation will be required. In SDL self-evaluation by the employee learners

becomes of at least equal importance. Evaluations can measure training outcomes through skill competency, cognitive abilities, and changes in attitude and motivation (Della, 2004). In addition to assisting employee learners through evaluation; facilitators are to evaluate themselves not only as facilitators, but also as learners.

The need for employee learners to master ever changing information technology (IT) continues to spark interest in SDL. Often an employee's environment is suddenly changed with the purchase of new software or computer instrumentation which propels the employee into pursuit of independent learning. DeJoy & Mills (1989) point out how this learning phenomena in HRD so accurately mirror's Spear & Mocker's 'organizing circumstances.' Computer instruction is the most frequently requested topic by adults in the local community who utilize the Georgia Center for Continuing Education's Learning Lab (DeJoy & Mills).

IT can be a useful tool in facilitating SDL within HRD. Computer based instruction can be "referred to as self-directed learning because the learners use it at their own pace, at their own convenience, and with little or no human contact and because the process of learning is the responsibility of the learner" (Lowe & Holton, 2005, p. 168). In choosing resources to aid in their independent learning adults have been found to select computer-assisted means 79% of the time (DeJoy & Mills, 1989). Computer based training can be accessible at anytime and does not require a facilitator, making it very appealing to organizations or agencies with dispersed employee learners (Bell & Kozlowski, 2002; Garger, 1999).

Effective computer based instruction must account for and will include varying levels of self-directedness (Lowe & Holton, 2005). One method which has been designed to provide diagnostic and interpretive assistance to enhance self-regulation during computer instruction is adaptive guidance (Bell & Kozlowski, 2002). An obvious criticism of this study is that the

young age (undergraduate students; 86.3% of whom were between the ages of 18-21) and geographical limitation (contained to one Midwestern university) of the study sample is not reflective of the older age and wide diversity of the employee learner. Despite its many positive possibilities, if not properly designed and implemented, computer instruction can also result in discouragement and negative feelings toward learning (Bell & Kozlowski). Organizations and agencies should not view computer instruction as all encompassing and will be wise to still promote other SDL methods (Sadler-Smith, Down, & Lean, 2000). Additional findings regarding IT outside of HRD are discussed in the SDL in Distance Education and Information Technology category.

Learning projects in HRD. Learning projects have significant implications for employee learners and organizations. The basic discoveries and ideas in relation to learning projects as proposed by Tough (1968, 1979) are confirmed by the HRD literature (Clardy, 2000; De Joy & Mills, 1989; Filipczak et al, 1998). The Georgia Center for Continuing Education's Learning Lab has witnessed what it prescribes to as learning projects echoing all of the components of Tough's descriptions on behalf of adults seeking to obtain skills and knowledge via the center's facilitation services for SDL (De Joy & Mills). The HRD literature has also revealed that at least half of adults seeking learning projects are doing so in conjunction with employment learning experiences.

Research into learning projects inside the Motorola Corporation not only verified their prominent existence but also exposed the lack of credit in which employee learners were receiving for their SDL (Filipczak et al). In a study with nonexempt employees (clerical, technical, labor, administrative, etc. as classified by the United States Fair Labor Standards Act)

three types of learning projects, in this case deemed vocationally oriented SDL projects (VO SDLPs), were identified and defined (Clardy, 2000).

The data from this research demonstrate that nonexempt employees do engage in vocationally oriented self-directed learning projects. The data suggest that there are three distinctive types of VO SDLPs. Induced VO SDLPs are triggered by specific events affecting a job that require further, limited learning in order to redress a specific imbalance between duties and skills. Voluntary VO SDLPs are courses of action that include learning that the employee elects to undertake at any time without any precipitating changes occurring in the job. Synergistic VO SDLPs arise in situations where there are new enabling organizational conditions that ignite a latent employee readiness to act and learn. (Clardy, p. 121)

SDL as utilized in the public sector. As stated previously, less than 20% of the materials gathered from the HRD literature for this section are specific to the public sector or government agencies. Although less in number these materials provide useful insight and information regarding SDL. They can be divided into two basic categories: inadequacies in the public sector utilizing traditional work training and the advantages and application of SDL within the public sector. Unfortunately, no materials were located pertaining to SDL and HRD in the private, non-profit sector.

The effectiveness of traditional training methods within the public sector has increasingly come into question (Della, 2004; Siebert, 2006). Even political candidates have recently campaigned to change what has been termed an inadequate system and to re-energize it with, among other improvements, opportunities for independent learning (Strausberg, 2000). Problems with traditional training have been identified as creating passive employee learners

who merely wait for instruction as opposed to actively seeking learning (Siebert). Such training fails to inspire employees and contributes to wasting the management of an agency's human resources (Della).

With the changing demands of government in asking fewer employees to provide more tasks with greater efficiency, the need for shifting HRD away from traditional programs and toward SDL has been recognized. Through SDL employee learners can begin to improve the motivational and resiliency skills that are being identified as necessities for success in today's public sector (Siebert, 2006). The principles of Knowles' andragogy are being incorporated into new training programs such as the Rocky Mountain Program (training for state and local officials) as well as being proposed to the Federal Bureau of Investigation (Bauman & Weschler, 1992; Della, 2004). These SDL training programs value and focus on an acceptance of employee learners as self-directed and self-responsible with anticipated goals for improved self-development. Reflection upon successful attempts to implement SDL in the public sector requires agencies to promote autonomous employee learners, install competent and motivated management, and to accept non-sequential and unplanned activities for learning (Confessore & Kops, 1998).

Implications of HRD findings to SDL. Although the literature has revealed interesting implications and practices of SDL in HRD further questions remain. In regard to organizations and agencies which do not utilize SDL, what is the impact of their policies on the autonomy and SDL of their workers both inside and outside their place of employment? In cases where HRD research has suggested that employees make poor use of learner control (see Bell & Kozlowski, 2002); what elements of SDL training were implemented into the training of employee learners and which were not? Do basic characteristics exist among organizations and agencies which

have successfully implemented SDL which can be categorized and applied to a large and diverse group of organizations with consistent results? Do learning centers for SDL and instruments for SDL readiness have a positive affect on employee performance and evaluation? These are of course only a small sample for future avenues of possible research. In addition, further studies are warranted and needed concerning SDL and HRD in the public sector and private non-profit organizations.

SDL in Healthcare

The literature examined for this section pertains to SDL in conjunction with the field of healthcare, including nursing. Healthcare is concerned with exploring the possibilities of SDL in regard to practitioners, learners, and patients. Whereas obvious implications for adult education exist, the vast majority of authors from this literature are licensed medical practitioners. Constant advances in medicine and practice can result in quickly dating topics relevant to healthcare. Therefore, with the exception of one foundational piece (Ash, 1985); this literature review was restricted to articles dating no further than 2000.

Of the twenty-three core articles selected, fifteen are empirical while seven are conceptual, and one provides a hypothesis for a future empirical study. A brief survey of the selected materials for this section reveals a heavy reliance and acceptance of Knowles' definition and explanation of SDL. Of the fourteen articles that provide a reference in conjunction to SDL as explored within the adult education literature; nine rely solely on Knowles' explanation (Borduas, Gagnon, Lacoursiere, & Laprise, 2001; Ibarreta & McLeod, 2004; Kell & van Deursen, 2000; Ladouceur, Rideout, Black, & Crooks, 2004; Lunyk-Child, Crooks, Ellis, & Ofosu, 2001; Patterson, Crooks, & Lunyk-Child, 2002; Shannon, 2000; Shershneva, Slotnick, & Mejicano, 2005; Williams, Sewell, & Humphrey, 2002), while two mention Brookfield in

addition to Knowles (Hewitt-Taylor, 2002; Williamson, 2007). Although Shannon refers to learning projects; no reference is made to Tough. The exceptions to such limited SDL perspective background is Ash (1985) and the three articles by Rager (2003b; 2004; 2006). Of interesting note; only a slight majority (n=12) of the core articles originated from the United States; with eight hailing from Canada and three from the United Kingdom.

The healthcare literature in regard to SDL reveals three categories of findings. These categories include SDL in healthcare curriculum, SDL in continuing medical education and SDL and the patient. Each topic is followed by a brief discussion including conceptual and empirical findings/ conclusions as well as criticisms.

SDL in healthcare curriculum. Over half of the articles (n=15) surveyed for this review pertain to SDL in healthcare curriculum. This is consistent with the findings of Brockett et al. (2000), which determined that a substantial amount of SDL articles describing practices of teaching are relevant to healthcare, especially nursing. Studies will be reviewed from the perspective of three sub-topics including descriptions and ideas for improved curriculum, teacher and student views of SDL, and creating instruments to measure and assess SDL.

As the demands of the student population in healthcare continue to change so does the need for descriptions and ideas for improved curriculum. Practical considerations to improving curriculum center on increasing future populations. For instance, the number of older Americans (age 65 and older) is expected to reach 20% within the first quarter of this century (Sauer, 2006). Healthcare positions to serve this population will be in increased demand. In Sauer's study to promote SDL skills and to foster better understanding of the elderly population, pharmaceutical students were exposed to a low-income community-based geriatric experience, in which, through pre-experience and post-experience essays, students discovered and reversed preconceived

stereotypes. The student population is changing as well. Nursing shortages are well known, and schools must meet possible student needs in order for effective recruitment. Common among student complaints regarding traditional teacher/other-directed healthcare curriculum is the inflexibility of hours which conflict with students' working schedules (Foss, Janken, Langford, & Patton, 2004). SDL provides an economical and practical solution in accommodating student and teacher schedules (Trapp, 2005). Courses can be offered non-sequentially provided they are based upon suitable pre-requirements in knowledge (Girard, 2004).

Change toward implementing SDL can meet with resistance, as the vast majority of instructors come from environments of traditional training which stress ideals of higher education practices, not necessarily SDL (Girard, 2004). Utilization of Knowles' theories of learning can and does serve as a solid background for reformulating healthcare curriculum toward SDL principles and ideals (Foss et al., 2004; Patterson et al., 2002). Physicians in training have been discovered to exhibit the same type of innovation toward utilizing resources as described by Knowles (Shershneva et al., 2005). Furthermore, SDL does not occur in healthcare curriculum in isolation, as described by Knowles, it requires learning successful interaction among colleagues and facilitators (Patterson et al.; Trapp, 2005).

Increasing SDL in healthcare curriculum can increase students' ability to think critically (Foss et al., 2004; Ibarreta & McLeod, 2004). Problem-based learning has been demonstrated to increase SDL skills among health students (Lohse, Nitzke, & Ney, 2003; Williams et al., 2002). Journal keeping has also been utilized with success toward promoting SDL within the field of healthcare. However, journal writing, when not creatively encouraged, can become a simple system of listing activities in order to demonstrate achievement of objectives, and not a true reflection of a student's learning (Foss et al.). Student suggestions concerning improving the

experience and usefulness of journal writing include greater facilitator feedback and examination of possible theories which may be reflected in their learning experiences (Ibarreta & McLeod).

Another sub-topic concerning SDL in healthcare curriculum are teacher and student views of SDL. Until recently, few attempts have been made toward gaining an understanding of how teachers and students perceive SDL (Lunyk-Child et al., 2001). Interestingly, the three empirical studies conducted concerning healthcare teacher and student views of SDL are in conflict with one another. Lunyk-Child et al. conclude that both students and faculty reveal sufficient ability to be able to define SDL while Hewitt-Taylor (2002) concludes that both teachers and students have difficulty in precisely defining SDL and that both considered SDL only of value when utilized along with teacher directed methods of education. A third, though slightly different study, revealed that instructors believe entry level health students have the necessary basic understanding of SDL in order to perform required clinical skills (Jette, Bertoni, Coots, & Johnson, 2007).

Despite the conflicting findings, several conclusions can be reached. Defining SDL can be complex, especially when one considers Bonham's (1989) conclusion that an inclusive definition of SDL is impractical. SDL occurs on a continuum and requires time for healthcare students to develop necessary skills. Within the Lunyk-Child et al., (2001) study, questions and concerns arise among teachers and students as to how to administer SDL consistently and how to obtain and effectively practice the skills associated with SDL. Possible issues regarding autonomy and control over learning must be acknowledged (Hewitt-Taylor, 2002). Regardless, students, preferably with the assistance of teachers, have to develop SDL skills in order to be successful within the field of healthcare (Jette et al., 2007; Lunyk-Child et al.).

Creating instruments to measure and assess SDL form the third sub-topic concerning SDL in healthcare curriculum. Despite debate within adult education concerning the appropriateness and effectiveness of instruments which utilize quantifiable methods to determine to which degree a learner possesses the skills and qualities associated with SDL (see previous category concerning SDL as a learning style), attempts continue to develop such instruments. Two of the instruments relating to healthcare are based upon Guglielmino's (1977) SDLRS; a longitudinal study utilizing a modification of the SDLRS (Kell & van Deursen, 2000) and the self-rating scale of self-directed learning (SRSSDL) (Williamson, 2007).

The 60-item SRSSDL is an instrument developed for measuring the level of self-directedness in one's learning process. Knowledge of learners' levels of self-directedness will benefit both learners and educators. Firstly, students responding to the SRSSDL items will not only reveal their own levels of self-directedness in learning, but will also have the opportunity to develop an insight into self-directed learning and a better understanding of the concept, which is crucial for developing of self-directed, independent and lifelong learning. secondly, teachers, having identified learners' levels of self-directedness and deficits in learning, will be better able to guide students from their positions of learning dependence to independence, considering each student's individual learning needs. (Williamson, p. 68)

A third study conducts a qualitative approach toward developing a self-rating scale of SDL in nursing (Ladouceur et al., 2004). All three studies were conducted outside of the United States (two in the UK and one in Canada) and in settings of higher education.

Findings include the discovery that mature students are more self-directed than younger students upon admission with both groups becoming more self-directed during their university

experience (Kell & van Deursen, 2000). Curriculum design and facilitation of learning needs to be aimed toward developing the self-directedness of the student (Kell & van Deursen, 2000; Ladouceur et al., 2004; Williamson, 2007). Initial anxiety concerning SDL will pass as the student develops their SDL skills (Williamson).

SDL in healthcare curriculum is open to basic criticism. The virtual undisputed reliance on Knowles as a basis of understanding adult learners and for promoting SDL within the curriculum is far too limiting. With the exception of one study (Hewitt-Taylor, 2002) criticism and counter arguments to Knowles does not exist in sincerity, exposing a major weakness in this aspect of the literature. Ambiguities and confusion concerning conflicting data of teacher and student perspectives of SDL require further research for clarification. Instruments of self-directed readiness are being utilized to serve as evaluation tools for appropriateness of curriculum. With the jury still out on the effectiveness of such instruments an argument can be made as to questioning the wisdom of proceeding in this direction.

SDL in continuing medical education. Medical practitioners are required to constantly focus on obtaining new and relevant skills. With the frequent changes and advancements in healthcare, continuing education becomes a constant preoccupation. SDL is highly suitable to this type of learning situation and environment; meeting the needs of individual practitioners (Ash, 1985; Winslade, Tamblyn, Taylor, & Schuwirth, 2007). SDL becomes lifelong learning to those in the field of healthcare (Ash; Shannon, 2000).

SDL is considered an important method for obtaining continued education (Ash, 1985; Winslade et al., 2007; Shannon, 2000). In order to ensure continued education within healthcare, most nations and divisions of government require maintaining of certification and/or licensure (Winslade et al.). The Royal College of Physicians and Surgeons in Canada acknowledges

physicians as self-directed learners and values their ensuing activities through the dispensation of certification credit (Shannon). Credits can be earned through scanning scholarly journals, searching relevant literature, and performing personal learning projects. In the United States orientation programs and self-directed in-service opportunities are offered to hospital nurses (Ash).

Recent SDL studies have focused on development of a continuing medical education model, needs assessment, and reduction in pharmaceutical error. Key to any method for continuing healthcare education is the inclusion of the views of the learner/ practitioner (Borduas et al., 2000; Curran, Hatcher, & Kirby, 2000). Physicians are able to examine their own self-directedness through a longitudinal case study model of continuing education by which participants react and then examine their actions with those of their peers and the actual physician conducting the study (Borduas et al.). Reflection of their action and comparison builds recognition of their own SDL skills and introduction to the SDL skills and alternatives demonstrated by their colleagues. Basic assessment of needs and the consequent development of needs assessment strategy can greatly enhance and aid the self-directedness of healthcare practitioners (Curran et al.). Findings point toward consistent time spent on informal learning activities and engagement in internet resources for SDL. They also reveal disparities between rural and urban Canadian physicians in their continuing education activities as well as available resources for learning (Curran et al.). Practical, systematic approaches, such as an eight-step approach suggested through research, to such routine activities as prescribing drugs when coupled with continuous SDL can add to the continuing educational experience of physicians (Pollock, Bazaldua, & Dobbie, 2007).

Criticisms of SDL in continuing medical education include questioning of evidences of learning through the self-directed process. Without an outside party to judge or assess learning objectives and accomplishments based upon routine and standard criteria, what has the self-directed learner actually learned which can be truthfully applied toward accreditation? The mere scanning of medical journals does not automatically produce SDL. Further complications exist as to the unfamiliarity of the Canadian medical system and the lack of ability to identify the major similarities and differences between healthcare in the United States and Canada.

SDL and the patient. The final category to emerge from the SDL in healthcare literature is SDL and the patient. In the cases reviewed, SDL is perceived as a form of learning and method of coping for patients who have been diagnosed with a serious medical condition or chronic disease. However additional studies can be found in which patients are encouraged to utilize SDL skills in establishing objectives for observable improvements, such as in the case of exercise (Haber & Rhodes, 2004).

In developing a conceptual model for addressing the needs of diabetes patients; intentional change theory presents useful possibilities in addressing patient needs during their self-directed experience into learning and personal change (Dyck, Caron, & Aron, 2006). Intentional change can occur intentionally or unintentionally. Positive emotions, individual ideals, strengths, and hopes, arouse the parasympathetic nervous system while negative emotions, individual concerns, weaknesses, and difficulties, arouse the sympathetic nervous system. For example:

Activation and accentuation of positive versus negative emotion have been shown to exert a differential impact on human thought, in terms of cognition and perception, and behavior, in terms of performance and ability to function. Positive emotion has been

shown to have important and often positive effects on cognition and performance while negative emotion has been shown to have important but often adverse effects on thought and behavior (Dyck et al., p. 673).

Understanding positive and negative emotions may be useful in aiding patients into discovering SDL and in improving their self-awareness.

Identifying a need for further research into the experience of SDL and breast cancer; Rager has qualitatively explored the experiences of women with SDL and breast cancer (2003b; 2004) and men with SDL and prostate cancer (2006). Four themes were discussed about women and their experiences with SDL and cancer: empowerment as a result of the self-directed efforts, connectedness with other cancer patients, seeking selective learning which provides positive perceptions, and a personal search for meaning as to their individual experience. The experience of the male patients was strikingly different in that the men found a real reluctance in discussing their health problems. Additional themes included coping with their reality, struggling with emotions, and the continuing process of dealing with cancer. A distinct finding of the 2006 study is the continued need for developing increasing support for SDL within the medical community for cancer patients.

SDL has been discovered to provide a sense of control and a method for coping with chronic disease on the part of the patient (Dyck et al., 2006; Rager, 2004). Although Dyck, et al. have observed that patients will not automatically accept self-directed or autonomous learning. Possible concerns into the findings of these studies are the limited population and the possibility that the male cancer patients are an exception to most other men in the fact that they actually discussed their experiences and emotions with a researcher. Furthermore conducting such research can be emotionally draining and challenging for the researcher (Rager, 2005).

Implications of healthcare findings to SDL. The literature pertaining to SDL in conjunction with the field of healthcare has provided numerous insights. Most notable are the similarity in conclusions which can be directly attributed to Knowles' contributions to SDL including the basic elements of andragogy and the traits of self-directed learners. The literature provides ample empirical studies and has a large sampling of qualitative studies as encouraged by Brockett & Hiemstra (1991) as necessary toward fully understanding SDL.

Empirical studies into the effectiveness of different types of curriculum programs and strategies for increasing SDL on both the level of health student and continuing education professionals will prove beneficial. Exploration into non-autonomous learners and comparisons to self-directed learners may provide insight into fundamental and significant differences. Clarifications into teacher and student perspectives of SDL within the field of healthcare are warranted and may resolve current debate of findings. Continued research is necessary into the emotional affects and needs of disease patients (Dyck et al., 2006; Rager, 2004). Finally, further research into various viewpoints and perspectives of SDL other than Knowles will also prove beneficial to expanding the literature.

SDL in Distance Learning and Information Technology

Distance learning (DL) and information technology (IT) are continuing to play increasing roles in adult learning. The convenience and continued expansion of the internet as well as greater access to computers and IT have impacted virtually every classroom in the technology-oriented nations of North America and Asia. Statistics in regard to actual participation in the internet show expanding use although exact numbers are difficult to ascertain due to people logging in outside of their home computers in locations such as libraries, schools, or places of

work (Rager, 2003a). DL courses report an estimated thirteen million users for the twentieth century with participation expected to show considerable increase (Hsu & Shiue, 2005).

The literature examined for this section pertains to SDL in conjunction with DL and IT. These areas demonstrate an obvious importance to SDL. The very nature of web-based instruction encourages SDL (Hsu & Shiue, 2005; Sacchanand & Jaroenpuntaruk, 2006; Tsay, Morgan, & Quick, 2000). Learners need to implement individual skills and discipline while being allowed greater and more flexible access to information and possibilities for learning. Learners are often separated from teachers who must encourage principles of self-directedness in learning in order for their students to be successful (Hsu & Shiue). Indeed teachers must change themselves from traditional dispensers of knowledge into facilitators and mentors of SDL (Hopper, 2001; Phillips, 2005).

Of the seventeen core articles selected, six are conceptual while eleven are empirical (four qualitative, six quantitative, and one mixed). A survey of the selected materials for this section reveals a heavy reliance and acceptance of Knowles' definition and explanation of SDL. Of the six articles that provide a reference in conjunction to SDL as explored within the adult education literature; half rely solely on Knowles' explanation (Boyer, 2003; Phillips, 2005; Tsay et al., 2000), while, in addition to Knowles, two mention Guglielmino (Chang, 2007; Hsu & Shiue, 2005) and one mentions Spear and Mocker (Rager, 2003a). Of interesting note; the articles form a diverse representation of two continents with almost sixty percent (n=10) of the core articles originating from North America with the remaining articles hailing from Asia.

The DL and IT literature reveals two fundamental categories of findings in regard to SDL. These categories include DL and technology in the classroom and retrieval of information

via technology through libraries or the internet. Each topic is followed by a brief discussion including conceptual and empirical findings/ conclusions as well as criticisms.

DL and IT in the classroom. The literature in this area pertains to DL and IT from two slightly different perspectives. The first presents an overall view of how course materials and learning strategies are to be established. Generally the main area of concern here is that the coursework is meeting the needs of the student. The second perspective examines such programs from the effectiveness and improvement of teaching strategies. Again, the ultimate goal is to meet the needs of the student though improving teaching methods toward accommodating self-directed learners. As the self-directedness and success of the student serves as the goal for both perspectives, for the sake of this review, no distinction or sub-category will be made for these differences.

Conceptually, distance or technology enhanced coursework development should recognize what has been termed as scaffolding, or providing the adequate support and structure for the student within the learning environment (Dabbagh, 2003). Ideally the degree of scaffolding is to be determined by the student and not the teacher, a concept which can be challenging as the teacher and student may not have the advantage of meeting face to face during the on-line experience. This does not diminish the expectations of the online experience. On the contrary, online education is seen as the same quality as any traditional classroom or learning experience. Seven principles of excellence have been suggested to serve as guidelines for ensuring quality on-line. These include high expectations, cooperation between students, active involvement or learning by the student, time management and keeping on task, meaningful feedback, significant interaction between student and instructor, and respect in regard to diversity (Phillips, 2005).

This does not mean to suggest that educationally effective, traditional classes can simply be converted to online courses. Forcing instructors to utilize the internet and computer technology can add unnecessary burden (Manuel, 2001). Certain fundamental changes in philosophy must occur prior to the development of any online course. As Hopper (2001) explains, generally educators begin implementing the web from a limited standpoint. This may include a single webpage or assignment in regard to the regular class syllabus. Eventually as the instructor becomes more comfortable and familiar with the internet and IT they will begin to consider utilizing the internet in an authentic teaching role. Furthermore not every experience can be placed online, nor can every course, if the style of teaching or content delivery cannot be accommodated to appropriate online technique and approach. This being said, the traditional teacher-centered approach must change for one basic reason: the approach does not lend itself technically toward delivery of an internet course (Hopper).

Empirically numerous observations have been made in regard to SDL and DL. To begin, empirical evidences help to quell the common misconception that little or no structure exists in online learning or SDL.

While SDL allows for the development of individual interests in a manner that is aligned to the learning patterns of the student, this does not necessarily mean a lack of overall structure. Students in virtual learning groups appear to thrive on a clear expression of guiding concepts and the provision of helpful resources along with frameworks and scaffolding for obtaining knowledge. (Boyer, p. 381, 2003)

Structure may be provided by the self-directed learners or students themselves or by the course instructors, who as facilitators can and should become involved in the self-directed activities of their students and online offerings. ChanLin and Chan (2007) have observed instructors'

interaction to include reminding students of what they need to accomplish and for ensuring that students check and evaluate their own progress as well as providing comments and responses to student actions and work. Studying the online interactions of students and their written reflections it was identified that cognitive and affective support proved beneficial toward their self-directed web-based learning (ChanLin & Chan).

The importance of teaching method for online courses may be underscored by material design. Findings in a recent study suggest that students are not influenced by teaching method as much as they are influenced by the design of the web-based teaching material (Jang, Hwang, Park, Kim, Y., & Kim, M., 2005). Unfortunately in their study to determine the impact of competency-based web learning materials, it was concluded that the specific learning materials in the study do not necessarily have a significant affect or influence on the SDL aptitude of students (Chang, 2007). Therefore future research studies will be necessary to continue to explore the importance of materials as opposed to teaching method. However, if the conclusion proposed by Jang et al. is true, then the development of such materials becomes of utmost importance and may mark a significant difference between online and DL as opposed to traditional classroom venues.

This leads to an important question. Is there a difference in learning quality and outcome between online and DL courses as opposed to traditional classroom experiences? In their study to determine any differences between students in traditional face-to-face learning situations as compared to two-way distance learning situations, it was concluded that both groups perform equally (Hsu & Shiue, 2005). Similarly in an effort to determine differences between students in a traditional classroom lecture format learning situation as compared to those in a distance learning situation yielded that both groups perform equally in regard to levels of motivation to

learn and satisfaction in learning (Jang et al., 2005). Furthermore, in developing a self-directed computer-based training module for performing basic suturing it was discovered that first year students in the program had obtained similar performance to final year students who had trained through the traditional manner (O'Connor, McGraw, Killen, & Reich, 1998). However, as O'Connor et al. acknowledge, real limitations exist in regard to this study in areas such as knowledge and long-term skill retention of the first year students. However differences were observed between online and traditional students in respect to the content knowledge being lower for web-based instruction students and higher in regard to interpretation of electrocardiography recordings (Jang et al.). Also discovery was made relevant to students with higher grade point averages as well as those with higher tendencies for SDL readiness as being more critical for those students seeking the on-line classes as opposed to traditional academic exercises (Hsu & Shiue, 2005).

For the most part studies have revealed that students appreciate the increased autonomy and self-directedness which accompany online learning. For example, through the self-directed activity of negotiating curriculum in a technology-enhanced foreign language classroom students praised their greater voice and increase in autonomy (Luke, 2006). Furthermore no difference seems to exist in regard to the importance of autonomy and SDL between current students involved in online learning as opposed to those, who for whatever reason, did not continue with their distance learning (Tsay et al., 2000). As this autonomy has also been viewed as a necessary tool for success in online learning; a self-directed online inventory was developed to assist program preferences for potential university students. It was concluded that the students believed that the instrument helped them to understand their psychological characteristics in matching them with appropriate course and program selection (Zhang & Yeung, 2003).

However, not all students have openly embraced SDL. Resistance has been observed, particularly among more mature students or those with a strong background in traditional education, as finding conceptions such as autonomy and self-planning as intimidating or even overwhelming (Boyer, 2003; Luke, 2006; Manuel, 2001).

Concerns arise as to the empirical conclusions of DL and IT in the classroom. First of all, a vast majority of the studies focused on very young adults, with most of the participants ranging from seventeen to twenty-two years of age. Additionally, most of these students were fulltime attendees to universities or well suited to academic life as opposed to say older adults who may be continuing their education. As in relation to their youthfulness they have also been more likely to have received greater exposure to IT and the internet since a young and impressionable age.

Secondly, substantial cultural differences may exist between the sample populations of the various studies. For instance, Zhang and Yeung (2003) discovered prominent differences to personal attributes toward self-directedness in people of Hong Kong as opposed to western countries. They point to Hong Kong's limited natural resources as well as strong emphasis upon a service economy. In addition the prominence that Hong Kong plays in computer and communication technology may be arguably more dominant to that of western countries. In their Thai-based study a comparison is noted between Asian cultures as opposed to that of the west.

The individual takes preference over society, and thus there is more emphasis in the West on maintaining control over one's destiny. This results in the desirability of nurturing self-reliance, independence, and other attributes that may be beneficial for SDL. On the other hand, the individual rights of Chinese are derived from society and are subordinate

to social interests, such as ethical conduct, public benefit, and social responsibility. (Tsay et al., p. 51, 2000)

Interestingly, Taiwan has for many years disregarded SDL, viewing it as a contradiction to the traditional methods of teaching and education within Taiwanese institutions of learning where students are taught to memorize content and produce static answers for written examinations (Hsu & Shiue, 2005). In this case, Taiwanese students are being introduced to self-directed skills of learning.

Technology information retrieval through libraries or the internet. The availability of information via the internet and World Wide Web provide a powerful tool for SDL while also presenting a dilemma of false information and unreliable sources (Rager, 2003a). The internet supports the student learner's need for self-directedness through allowing instant facilitation of new knowledge as well as a medium in which to share and discuss knowledge with others (ChanLin & Chan, 2007). Indeed access to such information has been argued by Rager to have had a profound impact on Spear and Mocker's (1984) organizing circumstance; effectively enlarging individual learners' environment for learning. Inevitably self-directed learners need to add additional skills regarding distinguishing credible information while searching on the internet. Categories for determining such credibility can include accuracy, authenticity, objectivity, currency, and coverage (Kapoun, 1998). This is an area in which librarians, as facilitators of information, can lend their expertise and assistance in identifying and promoting proper SDL skills for users (Ellis, 2004). "Librarians play a critical role in facilitating access to information, and this is reflected in the changing titles that librarians are now given - including cybrarians, webrarians and knowledge officers. Librarians provide a wide variety of formal and informal instructional programs" (Sacchanand & Jaroenpuntaruk, p. 503, 2006).

Despite original concerns that libraries would be rendered useless through digital technology (Hopper, 2001), they are playing an increasing role in the promotion of SDL within DL. Plainly stated, the basic function of librarians should be to encourage the self-directedness of information seekers (Sacchanand & Jaroenpuntaruk, 2006). Increasing attention is being paid toward empirically studying electronic library use as well as libraries and their role in DL. In their study of a web-based self-training package Sacchanand and Jaroenpuntaruk discovered strengths of accessibility, flexibility, and simplicity in use, as well as limitations of appearing over simplistic for more knowledgeable users and difficulty in universal compatibility with additional systems (technical difficulties and limitations).

Course offerings are another possibility by which university librarians can increase student knowledge and skills in accessing information digitally (Manuel, 2001). In her study of an one credit fundamentals of information literacy course at California State University, Hayward, Manuel found that participants (in this case most of whom were female, over the age of twenty-five, with dependents and were employed) often had difficulty adjusting to the web-based learning environment and displayed a high attrition rate with less than 20% completing the coursework. Although it became obvious that these students had not mastered the basic SDL skills necessary to survive in DL, realistically they merely dropped a one credit course! Obvious criticism concerning this category revolves around the current lack of empirical studies.

Implications of DL and IT findings to SDL. SDL in DL and IT offers numerous benefits for self-directed learners. It provides for easy access, has the ability to accommodate learners in various stages of self-directedness or autonomy, promotes SDL, and provides for new and exciting interactive learning possibilities. Additionally it can encourage increased enrollment

and access by those in remote or distant areas negating the need, expense and time requirements of physical travel.

However, on the other hand DL and IT can contribute to the growing digital divide as well as creating institutions of “digital diploma mills” (Noble as cited by Hopper, 2001, p. 35). Furthermore while promoting and developing the skills necessary for cyber communication, certain social skills and the ability of students to interact socially, and in person, may be diminished. For example, findings are beginning to show a diminishing preference for personal meetings as students value face-to-face meetings lower, perhaps due to their enrollment and familiarity to the open university and its use of distance learning (Tsay et al., 2000). Through DL programs the dimensions of physical and verbal communication and the advantages gained through travel and physical presence are lost.

Finally adult educators and self-directed learners must be on the vigilant watch to prevent technicism. Technicism, as presented by Collins (1991) is the process by which individuals or institutions distort and manipulate learning through technical and mechanical formats. Whereas SDL in DL and IT can provide for an avenue of information freedom and unlimited possibilities for SDL it may also be controlled and distorted.

Synopsis in regard to SDL

Four interesting themes emerge from these three research topics in SDL. Included is the resistance toward embracing autonomous learning, participant samples of SDL studies, the importance of environment in SDL; and traits typical to self-directed learners. Each theme will be discussed individually.

The resistance, or perhaps mere reluctance, to embrace SDL by learners as well as educators/ trainers in conjunction with educational and training institutions is revealed in the

research studies. Knowles (1975; 1989) has continually addressed the essentialness of overcoming this obstacle in order to promote self-directedness. As creatures of habit, many students are more familiar and therefore more secure with traditional methods of other-directed learning (Knowles, 1989; Slusarski, 1994). Furthermore studies reveal that more mature students, hence those who have probably been exposed to traditional formats of education over longer periods of time, are more resistant to SDL (Boyer, 2003; Luke, 2006; Manuel, 2001). Institutions may resist SDL based on ideal systems which place greater emphasis on traditional methods of education (Girard, 2004) or who may be weary of the potential autonomous learning can present in the form of critical evaluation of institutions and instructors in the control of learning (Contu et al, 2003).

The participant samples, particular those conducted in Asia, have expanded the typically limited participant samples of past SDL studies. In these traditional studies, most self-directed learners who have participated in research samples have been white, middle class males (Brockett & Hiemstra, 1991; Brookfield, 1985b, 1986; Candy, 1991; Houle, 1961). Similar findings among Asian samples provide support for Brockett and Hiemstra's argument that research has indicated that various other groups in addition to white middle class adults have also demonstrated capabilities for self-directed learning outside white middle class adults as well as Brookfield's (1986) contention that the research into self-directed learning is still valid with homogeneous samples despite ethnic, economic, and gender similarity. Despite this ethnic expansion of participant samples the economic background continues to be middle to upper class. Also the research studies reveal SDL as being reflective as an opportunity for those maintaining supervisory roles (Foucher, 1998). This lends support to critical views of SDL, in which SDL is institutionalized by the privileged elite (Collins, 1991).

It is evident from the research studies that environment plays an important role in the SDL activities of adults. The studies reflect Spear and Mocker's (1984) organizing circumstance or learning which is initially not planned by the learner but rather formulated by the circumstance of their environment (DeJoy & Mills, 1989; Rager, 2003a). In numerous cases autonomous learning is pursued as the type of learning most suited to the needs of the individual learners due to their immediate environmental situation (Ash, 1985; Winslade et al, 2007). These learners quickly attain the skills and basic qualities necessary for pursuing autonomous learning (For example: Jette et al., 2007; Lunyk-Child et al., 2001) and are thus enabled through the expectations and resources of their social context (Brockett & Hiemstra, 1991). Not only does SDL become practical in these situations it can also be viewed as economical (Trapp, 2005).

Traits which are associated as typical to self-directed learners are apparent throughout the studies. Self-direction occurs on a continuum with observations of increased self-directedness and decreased need for external support among adults in situations where autonomous learning is supported (For example: Kell & van Deursen, 2000; Lowe & Holton, 2005). Evidences suggest personal growth among autonomous adults (Cho, 2002; Dearborn, 2002) as well as an increase in the ability to think critically (Foss et al., 2004; Ibarreta & McLeod, 2004). In addition, SDL has been found to provide adults with necessary control and coping methods in regard to chronic disease (Dyck et al., 2006; Rager, 2004). Interestingly all of these findings relevant to traits in autonomous learners also serve as confirmation for two of the pioneers in SDL, Allen Tough and Malcolm Knowles, including the basic conceptions regarding Tough's learning projects (Clardy, 2000; De Joy & Mills, 1989; Filipczak et al, 1998) as well as the fundamental principles of Knowles' andragogy (Bauman & Weschler, 1992; Della, 2004; Patterson et al., 2002).

Nonformal Education and Free Choice Learning

To learn how SDL occurs within the museum environment it is essential that we examine nonformal education (NFE) and free choice learning. Museums can be places of formal education as well as NFE. For the setting of this study the learning will take place inside of museums within a nonformal context. SDL must also be viewed under the umbrella of NFE from the standpoint of educational activities occurring outside of the traditional boundaries of formal education. However, it is important to remember, that just as SDL can take place inside of formal educational settings, so can directed-learning take place within nonformal educational settings.

The bulk of the literature comprising NFE pertains to international development and rural program studies. Consequently a large focus is placed upon social inclusion, political involvement, and economic development (Bock & Papagiannis, 1983). Whereas NFE is recognized as existent in western industrialized society (Ahmed & Coombs, 1975) scant empirical work has been completed in regard to NFE in North America (Taylor, 2006).

NFE has been defined as “any organized, intentional and explicit effort to promote learning to enhance the quality of life through out-of-school approaches” (Reed, 1984, p. 52) and as “the motley assortment of organized and semi-organized educational activities operating outside the regular structure and routines of the formal system, aimed at serving a great variety of learning needs of different subgroups in the population, both young and old” (Ahmed & Coombs, 1975, p. xxix). Key to these two definitions, as well as other explanations of NFE (see: Ahmed, 1975, p. 10; Evans, 1981, p. 28), is the existence of purposeful and varying degrees of organized effort to learn.

Nonformal and formal education share certain similarities. For instance, both are affected by the social and institutional norms and situations in which the education activities are taking place (Bock & Papagiannis, 1983). Some of the similarities between nonformal and formal education contrast their shared differences from informal education. “Formal and NFE are alike in being very definitely differentiated from informal education. Common to both forms is the notion of there being organized activities with specified objectives, audiences, and modes of operation” (Harman, 1976, pp. 3-4).

Various categories have been created for NFE by Evans (1981) and Brennan (1997). Evans proposes four possible types of NFE either adding to areas of formal education or filling voids that have been created by formal education: complimentary, supplementary, replacement, and merged. As described in greater detail: “complementary education, which rounds out the school curriculum; supplementary education, which adds on to schooling at a later time and place; and education which replaces schooling. A fourth category may be emerging in the future in which formal and NFE merge into a unified process of education which is available throughout the lives of learners” (Evans, p. 19).

Based upon his work on Asian, African and Pacific developing nations Brennan (1997) offers sub-types of compliment, alternative, and supplement NFE. He describes compliment NFE as “required to perform functions which formal education was designed to fulfill but had not been able to achieve, partially perhaps but not totally” (Brennan, p. 187). The other two sub-types deal directly with developing nations: alternative as elements and functions of education which existed prior to colonialization and supplement which “represent the sorts of educational responses that are related to recent important stages in the development of the nation” (p. 187). As with the categorizations proposed by Evans (1981), Brennan argues that all three of these

sub-types co-exist and relate directly to formal education, although they are certainly not a part or concern of formal education. In addition to his sub-types, Brennan also proposes a system of discussion for which to further examine nonformal learning including “NFE as a system, setting and process” (Brennan, p. 189).

Numerous educational activities can be better served outside of the formal environment (Evans, 1981). Most nonformal educational programs and activities have a local experience. Many private and grass root organizations participate in and conduct nonformal activities. Contextual situations for nonformal learning often occur in public places (Taylor, 2006) affording greater access to participation. Materials can often be shared and recycled among smaller groups of participants (Ahmed, 1975) lowering costs of resources (Norland, 2005). Participation in NFE is overwhelmingly voluntary. Participants can be from “any group within society, regardless of age, it can operate at any level” (Harman, 1976, p. 3). Interestingly, this voluntary participation can offer its own dynamic with learners feeling and exercising their freedom to join or leave an activity at their own discretion (Taylor). As a result, relationships within NFE are often casual, even personal, as compared to formal education (Norland; Wiltz, 2005). Nonformal educators have more openly interpreted responsibilities. They are faced with the challenges of a flexible and open curriculum (Harman, 1976; Norland). They often lack formal training (Taylor; Wiltz). “Roles are more tenuous and are often defined by an individual’s skills as they become apparent or are based on the needs of the project at hand as opposed to one’s job title. There is a conscious spirit of the collective effort to accomplish a mission” (Wiltz, p. 22).

Typically NFE has only been viewed in relation to SDL as the opposite or ‘non’ of formal education. The emphasis on study within NFE remains in international development and

rural program studies. Recently, however work is being conducted into 'local' NFE within developed countries emphasizing education in museums, natural parks, community centers, and other cultural and historical sites (Taylor, 2006; Taylor, Neill & Banz, 2008). However these studies explore NFE from the perspective of the educator and not the self-directed learner.

Investigations have been conducted within museums into 'free-choice learning' or "learning individuals do because they want to rather than because they have to" (Falk & Dierking, 2000, p. 213). This concept has been incorporated into the Interactive Experience and Contextual Learning Models of Falk and Dierking (1992, 2000). However similar in appearance, free choice is not SDL. Free choice was developed to supplant the conceptions of informal and nonformal learning (Bamberger & Tal, 2007). Free choice is commonly viewed from the perspective of the learner as opposed to SDL which is viewed from the lens of learning. Often activities of free choice such as learning through watching television more resemble 'incidental learning' within adult education. Five categories or identities of free-choice learners have been identified: Explorer, facilitator, professional/hobbyist, experience seeker, and spiritual pilgrim (Falk & Sheppard, 2006). However, these differ from the characteristics of self-directed learners in that not all identities are self-directed (or can vary depending upon the situation) nor do these identities occur on a continuum (Banz, 2008). Much research has been focused on family groups as opposed to individual adults and questions arise as to how really free is free choice? (Rennie & Williams, 2006) Furthermore, free choice learning is emphasized as overwhelmingly taking place outside of schools and the workplace (Bamberger & Tal; Callison, 2003) while SDL has been thoroughly researched in formal as well as nonformal environments (including higher education and workplace environments).

Free choice learning has much to contribute in our understanding of adult learning in museums. Interestingly, the term is not found within foundational texts of adult education literature (for ex: Merriam, Caffarella & Baumgartner, 2007; Wilson & Hayes, 2000), therefore further demonstrating the gap between the adult education and museum literature. SDL presents a broader framework in which to view adult learning, both within and outside of museums.

Museum Education

Museums resemble facets of nonformal education in regard to programming which is predominantly self-directed. Part of the purpose of this study is to gain insight into SDL within a museum environment from the perspective of the learner. In this case learners will be random museum visitors. A review of the museum literature is key to understanding the experience of these museum visitors and the setting in which they will be learning; especially if the museum environment is truly capable of producing optimal learning conditions for the self-directed visitor as conceptualized by the PRO Model (Brockett & Hiemstra, 1991) .

Overview of museum education

Preserved within the walls of museums exist many of the greatest accomplishments of human thought, science, and culture. Traditionally viewed as special places of knowledge, museums can offer unique learning opportunities for the adult learner. Although these institutions serve as the physical depositories for art, artifacts, and documents, the mere collection and preservation of significant objects and relevant materials of antiquity does not wholly define the purpose or constitute the single objective of the museum. Museums are also cultural and social institutions with the basic and significant mission to provide education and enrichment to the community.

In America, museums evolved from prestigious individual collections and elite community libraries. During the nineteenth century museums witnessed monumental growth and attraction by the upper class and, for the benefit of greater society, public museums were born. This significant step was a beginning for greater access by learners; however public education, with the exception of service to the upper or privileged class was not yet an objective for most museums. As Grinder & McCoy (1985) note, in addition to the upper class, museums were places usually frequented only by scholars. With the dawn of the twentieth century attitudes toward social inclusion continued to change and the field of museum education began to reach out to a wider audience of adult learners.

Museum and gallery education has evolved into a small, yet determined profession (Hooper-Greenhill, 1991). Despite the professional development of museum education two gaps continue to exist within the literature. First, the majority of literature concerning museum education has been and continues to center upon children programming (Chobot & Chobot, 1990; Sachatello-Sawyer, et al., 2002). Museums welcome adult visitors. However, few museum education programs have been traditionally planned for adults or have museums, until relatively recently, recognized their uniqueness as learners. Secondly, empirical studies continue to be largely outnumbered by conceptual pieces. Unfortunately, empirical studies in museum education have traditionally been unusual, even in *Museum News*, a major journal of the field (Zeidler & Surber, 1999).

Museum educators began to recognize the field of adult education during the 1930s (Grinder & McCoy, 1985; Adam, 1937) in which adult museum education was initially viewed to be a form of social democracy (Adam). With the increased inclusion of professional staff, museum education continued to develop. Today, museum educators espouse the general theories

of education and promote the academic research of museum studies (Grenier, 2005). As institutions of learning, museums have far distanced themselves from their origin as elite private collection centers during the nineteenth century. The major difference between the collections of yesterday and the museum institutions of today are the meanings assigned to the artifacts by professional education staff coupled with an open accessibility to them by the general public (Smith, 1989; Tan, Chisalita, Raijmakers & Oinonen, 2008). During the past fifteen years museums have become increasingly aware of cultural diversity and have reformed their image as cultural centers (Message, 2006). In brief, museums have become more professional places for learning, offering a wide range of experiences to its visitors (Hein, 1998).

Museum educational theory

In order to realize and maximize their role as institutions of education and learning; effective and professional museums adopt and practice consistent educational theory. This theory should be reflected throughout the museum mission, exhibition, educational curriculum, and staff viewpoint. Without such a consistent theory, the museum presents an eclectic and fragmented message resulting in confusion for the museum visitor (Hein, 1998; Smith 1989).

Unlike institutions of higher learning or programs of adult education; the need for consistency is further complicated by the wide range of museum audiences which generally include school age, adult, and family visitors. In regard to adult visitors and learners, since the 1980s, many museum educators have placed into practice the ideals and concepts of Knowles' andragogy. This is largely the result, according to Dufresne-Tassé (1995), of the promotion of andragogy by the American Association of Museums through their publication and subsequent reprint of "Museums, Adults and the Humanities: A Guide for Educational Programming" (Collins, 1981).

The development of a museum educational theory requires examination of epistemological, learning, and teaching theories (Hein, 1998). How a museum displays and interprets artifacts plays an integral role in the development of educational theory. Within the museum literature Hein defines four significant, broad categories of educational theories in use by museum educators. These categories include didactic, expository education; stimulus-response education; discovery learning, and constructivist learning.

Didactic, expository education involves development of a lesson based upon subject matter, which is then taught or lectured. Museums that practice didactic expository education are normally organized sequentially and utilize didactic components of written labels often to achieve specific objectives (Jordanova, 1989). Didactic education is what we commonly associate with traditional classroom pedagogy. Most museums, especially history museums, still operate in conjunction with didactic, expository educational theory (Hein, 1998). Indeed numerous art museums do the same, grouping individual art collections chronologically or by other organized means, and taking an aesthetic view that visual exposure to the collection is reason enough to facilitate learning (O'Neill, 2002; Vergo, 1989). The advantage of the didactic approach is the sequential order presented to museum visitors. Exhibits have a clear beginning and end. Major points are highlighted and learners are fed the essential points of the lesson or program. Disadvantages include a rigid, often one-sided approach to subject matter which is determined within the actual text. Visitors are forced to follow a strict path and are not challenged to exercise their personal creativity.

Stimulus-response education, a form of exhibition technique used in conjunction with self-directed visitors, is grounded in behaviorist philosophy. These exhibitions “have reinforcing components that repeatedly impress the stimulus on the learner and reward appropriate response”

(Hein, 1998, p. 29). Stimulus-response programs are visitor and learner-centered. Proponents of this concept advocate arrangement of the museum environment, exhibition ideas and artifacts to produce a predetermined observable behavior in museum visitors (Screven, 1974). The strengths of this approach are its focus upon the results of the visitor's learning and the ability to evaluate exhibitions and to measure success. The end product is measurable change in the visitor, not the desired or influenced change subject to the judgment of the curator or museum educator.

Controversy surrounding types of exhibitions used in museum stimulus-response education comes into play when the response or answer is not concrete. Visitors may also learn passively through the observation of others' actions as opposed to actions of their own (Tennant, 2006), learning a wide variety of items, not just the predetermined objectives of the exhibit (Dufresne-Tassé & Lefebyre, 1994). Further concerns arise relevant to the limitations of behavioral objectives used in stimulus-response methods. Indicators of behavior may be difficult to predict in advance (Tennant). Strict or simple objectives can be viewed as impositions upon the learner's creativity (Elias & Merriam, 1980; Kirschenbaum, 1979; Rogers, 1970).

Discovery learning embraces active learning methods that result in a change of understanding for the learner. As adults continue to frequent museums they accumulate and develop specific learning skills over time which aid to enhance their experiential learning (Lachapelle et al., 2003). Experiential learning is not merely observing an object being studied it also seeks to test the dynamics of reality to learn more about it or about applying theory to it in order to achieve a desired outcome (Lachapelle et al.). Often discovery learning in museums consists of physical or hands-on activities. Museums that practice discovery learning have exhibitions that allow for exploration and do not require a specific path, labels that ask questions, and interactive adult workshops (Hein, 1998). Proponents of discovery learning can differ

greatly by advocating unorganized and sporadic learning or planned and pre-determined experiences of discovery (Grinder & McCoy, 1985). In either case, museum visitors categorize their own experiences and arrange for appropriate individualistic learning opportunities. The advantage of adopting discovery learning is that the experience is non-threatening for adult visitors and requires more involvement on behalf of the visitor resulting in greater attention and higher stimulation (Grinder & McCoy). Disadvantages include difficulty in anticipating what visitors may do in a discovery situation (Grinder & McCoy), frustration for museum educators in switching to this type of unstructured teaching strategy (Adams, Moreno, & Buck, 2003), and whether or not adults will give attention to the aspects and situations that museum educators feel is relevant to their learning experience (Hein). Finally, hands-on experiences are sometimes difficult or costly to produce.

Constructivist learning involves participants constructing meaning and making sense of their experience. Two essential components exist to constructivist learning in a museum setting: active engagement on the learner's part in the learning process and a confirmation of learning through the learner's own thought process (Mayer, 2005). Learners construct knowledge through a connection of their personal lives with the artifacts and exhibitions they come across during the museum visit, creating meanings which are very individual or personal (Hein, 1998). Furthermore Hein states that for constructivist learning to occur that the museum visitor must become actively engaged through participation and that their conclusions must make sense within their own constructed reality. Therefore the process of learning is validated internally as opposed to confirmation of external 'truth.' Museums that practice constructivist learning allow for numerous entry points to their exhibitions, represent a wide range of viewpoints, and enable adults to connect with objects via life experiences (Hein). The advantage of constructivist theory

within the museum is that the visitor is active and able to construct their own meaning of their experience (Dufresne- Tassé & Lefebyre, 1994). A possible disadvantage is that the museum is surrendering its authority to determine for the visitor exactly what truth is, which can result in a very radical personal construct of meaning. To clarify this point; a possible example may be an extremist concluding as their own reality that National Socialism was justifiable while visiting a Holocaust exhibition.

Exploring educational theory helps a museum to examine its mission statement and the needs of its audiences. It also creates a realistic approach toward fostering learning as opposed to mere exhibition of objects for aesthetic display. Once a theory is selected, the museum must concentrate on making certain that the theory is then converted into sound and effective practice (Mayer, 2005).

Museum collections

Museum programming and exhibitions are driven by the museum collection. These artifacts and documents comprise the heart of the museum's purpose and mission. Hopefully each institution has taken this mission seriously by defining what objects are appropriate to be included in the collection. The use of the collection as an educational tool makes the museum unique in the field of adult education. Museums and their objects are often interdisciplinary in nature therefore transcending subject boundaries (Hooper-Greenhill, 1991). The range of possible interpretations of the collection allows for unlimited types of learners and learning skills such as learning of objectives, changing realities, and visitor interaction.

The concept of object exhibition is distinctly modern, and consequentially museum professionals are still learning how to best utilize it (Vergo, 1989). The exhibitions and galleries within the museum create messages for the learner (Hooper-Greenhill, 1991; Maroević, 1995).

They do this through a combination of objects, textual labels and physical space (Bitgood, 2002; Falk & Dierking, 2000; Leinhardt & Knutson, 2004; Sutton, 2007). Each object has its own complex presence which allows the learner to have multiple interpretations (Smith, 1989). Often these messages include broad social and cultural meanings (Chung, 2003; Ebitz, 2005). The messages produced by the grouping of objects or by the entire collection aid to stimulate production of new information, thereby forming the fundamental basis of museology (Hooper-Greenhill; Maroević).

Museum objects and the messages they produce help to bridge the past with the present and with perhaps vastly different cultures. Ironically the artifacts themselves are social discards, having had an importance or function to a society that is no longer present (Maroević, 1995). The information maintained about each particular object helps to fill in a piece for understanding the society or culture of which the object belonged (Kräutler, 1995; Smith, 1989). This information associated with the objects is actually more important than the preservation of the objects themselves (Fahy, 1995).

The messages that are interpreted from an exhibition and its objects are in fact, at least to some degree, an artificial reality. An exhibition represents one time in one space where the museum audience comes into contact with objects and messages from another time and place (Jeffers, 2003; Maroević, 1995; Roberts, 1997). Exhibitions simply do not tell the story of another culture; they tell that story through the lens of the culture conducting the exhibition. The challenge for museum professionals is to convey as much of the object's original purpose and cultural setting as possible (Chung, 2003). Exhibitions have limited lives; they can quickly become dated or labeled as no longer appropriate. The meanings that adults interpret from the

objects and exhibitions in conjunction with the museum's efforts to communicate and partner with the greater community comprise the public language of the institution (Kräutler, 1995).

The artifacts themselves have complex histories of change and travel. The significance of these objects can also vary over time (Hooper-Greenhill, 1991). Too many museums and their audiences opt to have objects restored to their original condition, therefore erasing the marks and messages of time (Smith, 1989). A common misconception is that once artifacts make it to the museum they become safe and conserved forever. Smith explains that museums can change epistemology and discard objects that they view as no longer relevant. Entire collections pursued by one curator may be forgotten and efforts to collect redirected.

Pressures facing museums

Every educational institution has to deal with its own set of political challenges and societal pressures. Unfortunately most of the public possess scant knowledge or understanding of the internal operations of museums (Mayr, 1998). Problems that may not be fully understood by the visitor may impede their learning experiences or even cause them to lose interest in museums in general. Whereas it is the responsibility of the museum to correct such problems, the cause and solution may exceed the abilities of the professional staff. Problems will of course vary by institution, however, for the sake of any study involving a museum setting it is important to at least be aware of how these issues are addressed through the literature.

Museums, similar to many institutions which require financial support, are often controlled by powerful minorities and their private interests (Jeffers, 2003). Traditional sources of public funding have been challenged (Tan et al., 2008) and museums will often surrender autonomy in return for financial support (Mayr, 1998). Private donors can apply pressure through funding of traditional values such as collections or curatorial related projects over

educational goals (Ebitz, 2005). Adult programs can and are commonly viewed as venues that should help support the institution's budget rather than produce long range learning outcomes (Sachatello et al., 2002).

Interference can infringe on academic freedom. Many debates have arisen concerning the proper role of museums in interpreting subject matter (Crew, 1996). It can be argued that museum educators and professionals have an ethical responsibility to represent various ideas and attitudes (Roberts, 1997). Mayr (1998) makes the point that museums can overcome problems by establishing a sound intellectual, not political, base that defends responsible interpretations of various collections.

The micromanagement of museums by donors and private interests has resulted in educators viewing themselves as secondary citizens (Sachatello et al., 2002). In the traditional hierarchy of museum governance the professional staff comprises the lowest level (Mayr, 1998). Additional barriers, such as disengaged trustees, directors without vision, poor facilities, and a lack of teamwork or cooperation among the staff may also stifle efforts to improve adult programming (Sachatello et al.).

The traditional practice of viewing curators as superior to museum educators has been a common problem within the profession. Museum educators have had to challenge rigid practices in order to advocate for the direction of interpretation to focus on visitors as opposed to scholars (Roberts, 1997). Collections and education are often divided into separate departments having to come together in the exhibition planning process. As a result of the efforts of museum educators, an increase has been observed in the mere presence of interpretation, an improved language in which interpretation takes place, and an overall improvement in the content of museum messages (Roberts).

Now that museums are being viewed as public institutions they are rightfully expected to be efficient and beneficial to society. The time when museum professionals were able to pursue academic avenues merely for personal fulfillment have ended (Crew, 1996). Museum staff must be readily accessible to the public. Requests from visitors must be completed in a timely and pleasant manner or run the risk of jeopardizing the institution's reputation of goodwill (Mayr, 1998; Tan et al., 2008). To their credit, museum educators have embraced and engaged in criticism of the institution and their profession (Roberts, 1997) in order to facilitate improvement.

The pressures confronting museum educators is covered well by the literature. The importance of serving the public through prompt and satisfying action is understandable and should be accepted positively. Board or special interest interference can be more difficult to understand and often places the museum professional in an uncomfortable position with scant support from their own board. Board members are commonly untrained and can be reluctant to stand up to one of their own or to be heard in defending ethical issues. Further research must be dedicated to the board management of museums and the benefit of proper training for board members.

The adult museum visitor

Through the use of visitor studies museum educators have discovered various traits and habits of the adult museum visitor. These discoveries are crucial, especially in an era when museums are encouraging active participation of the learner within the museum environment and when one considers that most education within the museum setting is nonformal (Hein, 1998). Learning for the museum visitor is what the adult makes of his or her experience.

Adults find museums to be places of pleasant social interaction (Bitgood, 2002; Falk & Dierking, 2000; Leinhardt & Knutson, 2004; Rennie & Williams, 2006). Of adults who visit museums, the majority of them do so with other adults or family; rarely do adults visit museums alone (Bitgood; Falk & Dierking, 1992; Hein 1998; Hooper-Greenhill, 1991; Leinhardt & Knutson). The greatest number of adult visitors range in age between 25 and 44, are mainly of Caucasian ethnicity, generally well educated, and live in urban areas (Chang, 2006). Overall women are more likely to visit museums than are men, particularly in regard to art museums and reversed in the case of science museums (Falk & Dierking). Adults who are currently enrolled as students will visit museums more frequently than adults who are not (Chang).

Regrettably many adults do not take advantage of the learning potential that museums have to offer. Merriman (1989) notes that up to one third of the adult population maintain a negative view of museums in general. This negativity is brought on by their view of museums as exclusionary institutions of higher culture. Additional barriers include substantial fees, possible undesirable physical location of a museum, lack of encouragement from friends to attend, and poor museum image (Knox, 1981b). Although they have made progress in regard to various marginalized groups (Sandell, 2007); museums are still predominately mirrors of white European values, and fail to be inclusive of multiculturalism (Hooper-Greenhill, 1991; O'Neill, 2002). Even most tracking studies fail to acknowledge social differences among visitors, viewing all as a homogeneous group (Kavanagh, 1995). Work is continuing in social inclusion (Message, 2006).

Museum educators must become active in pursuing the adult audience or risk losing them to continuing education and other competing institutions (Allen, 1981). Most adults are willing to work to overcome barriers in visiting museums if they receive a connected sense of

purpose (Kavanagh, 1995). In other words, museums must reach out to all groups removing social and cultural barriers during the process with the basic goal of making museum visitors feel more welcome (Knox, 1981a; O'Neill, 2002; Sandell, 2007).

SDL and museum education

SDL has real implications for adult museum education. Significant to this study is the relationship between the two which will be reviewed through a discussion of how SDL is represented within museum education. This shall be accomplished by addressing SDL as it is implied or woven through the museum education literature and SDL as it informs our understanding of adult learning in museums. As the purpose of this endeavor is to properly place SDL into the museum context, whenever possible citations will be taken from the museum education literature as opposed to the adult education learning literature.

SDL as implied or woven through the museum education literature

If one turns to the index of most museum education texts, SDL is seldom found. Whereas it has been observed that little documentation exists on adult education within the museum education literature (Dufresne-Tassé, 1995), as is obvious, even less exists on SDL and its relationship and implication for museums. Self-directed adults are among museums' largest audience of visitors (Wright, 1989). As a result of this often taken for granted audience, SDL is implied and woven throughout the museum education literature.

In 1981, the American Association of Museums published a work on adult learners and museum education, based largely upon previous seminars presented on the topic (Collins, 1981). Authors included prominent adult educators such as Roger Hiemstra, Malcolm Knowles, and Alan Knox. This guide remains the most comprehensive text within the museum literature on the subjects of andragogy and SDL in museum education. However, as is not surprising given

the adult education background of its SDL contributors, the information presented on SDL is general in nature, providing the basic essentials, and is less concerned with its practical application and affect in regard to museum education (Dunfresne-Tassé & Lefebvre, 1994). Additional literature has acknowledged that museums are centers of SDL (Carr, 1985; 1991; Hein, 1998; Hooper-Greenhill, 1991; Wright, 1989). However, most of the museum literature presents merely the general characteristics of adult learners (Bitgood, 2002; Falk & Dierking, 2000; Merriman, 1989; Wright, 1989) or refers to Knowles' characteristics of adult learners (Grinder & McCoy, 1985; Gunther, 1994; Hein, 1998; Jensen, 1994).

Although implied, SDL is rarely directly mentioned in regard to museum education. Why is SDL so conspicuously absent from the museum literature? The answer to this question is twofold. First, an on-going struggle continues to exist among museum professionals over whether museums should concentrate on identifying themselves as collecting institutions versus education institutions (Dunfresne-Tassé, 1995; Fahy, 1995; Hein, 1998; Mayr, 1998; Roberts, 1997; Sachatello-Sawyer et al, 2002). Second, when education is stressed, it is viewed through the development of object interpretation through the creation, fabrication, and presentation of the museum exhibition (Burcaw, 1983; Hein; Hooper-Greenhill, 1991; Kräutler, 1995; Maroević, 1995; Smith, 1989; Vergo, 1989). The museum concentrates on the objects and materials on display, "it is not organized with a primary concern for the viewer's interest, or the meanings the viewer might make from the material" (Hein, p. 21). Furthermore, learning strategies and aids for self-directed visitors rarely exist (Carr, 1985; 1991). Museums "tend to believe that the people who go to exhibitions 'get something out of them', even if we are hard put to define what that 'something' is" (Vergo, 1989, p. 46). This notion is further complicated by the wide range of learner activities that can occur within the museum and the debate among museum educators

as to what actually constitutes a learning experience. For example, “Discovering structure and enjoying beauty?... Experiencing a possibly sensational feeling of communication with a person or community from the past?” etc. (Tan et al., 2008, p. 94).

Museums lack distinct curriculum (Hein, 1998; Hooper-Greenhill, 1991). There is no requirement of attendance and the need to respect individual learners is stressed (Bitgood, 2002; Hein). The act of learning within the museum becomes the visitors’ responsibility (Adam, 1937; Rennie & Williams, 2006). These, of course, are some of the characteristics which classify museums as places for SDL.

Despite the lack of attention to SDL in the museum literature, museums embody many of the basic concepts behind SDL. Museums promote autonomous individual learning (Carr, 1985). Museums accommodate self-directed adults interested in pursuing their own education with a purpose in discovering immediate applications of learning (Allen, 1981). The main responsibility for learning, what the adult wants to learn and how, is left to the discretion of the museum visitor (Knox, 1981a; Mayer 2005). As environments of nonformal learning, adult learners can choose when to visit museums and for how long to stay (Allen; Hein, 1998; Mayer; Rennie & Williams, 2006). Museums foster social activity and allow for interaction among learners (Falk & Dierking, 2000; Leinhardt & Knutson, 2004). Empirical research has revealed that adults attend museum learning programs to seek knowledge, socialize, build skills, and for the love of museums; as well as are expecting outcomes of acquired knowledge and an increased appreciation and meaningfulness for the world in which they live (Rennie & Williams, 2006; Sachatello-Sawyer et al., 2002; Tan et al., 2008).

Museums can appeal to the very intimate needs of the self. They can be perceived as instruments of self-renewal that evoke inspiration and emotion (Carr, 1991; Tan et al., 2008).

Presenting dimensions of learning not possible in the classroom, museums, as with other cultural institutions, allow for a freedom of nonintervention that invokes the personal desires of self-directed learners (Carr, 1985). These personal requirements can be very specific making museums and the motivations of their adult visitors unique from other nonformal learning environments (Bitgood, 2002; Sachatello-Sawyer et al., 2002). Adults can derive aesthetic and intellectual pleasure in addition to the pleasure of self-discovery through successful museum visits (Dufresne-Tassé & Lefebvre, 1994).

At the heart of every museum is the museum collection. The significance of the museum collection continues to attract self-directed visitors. For example, the increased interest or awareness of popular and material culture is present for the most part only in museum collections (Daniels, 1996). Artists and art students are emphasizing the need for experiencing art firsthand by visiting museum galleries (Luehrman, 2002). Art students have been found to be spending 63% of their study activity time outside of the art classroom inside museums (Henry, 2004).

With the acknowledgement of museums as educational institutions, a wider variety of museum experiences are being increasingly offered for adult education (Adams et al, 2003). The adult visitor has at their disposal various human and non-human resources to facilitate SDL. However, museums can be institutions of formal as well as nonformal learning. The directed tour and museum lecture are the most typical programs associated with formal education in the museum (Adam, 1937; Sachatello-Sawyer et al., 2002). Whereas activities such as workshops, docent training sessions, gallery demonstrations, and drama productions can be SDL activities, these often become planned formal activities with distinct objectives and outcomes when delivered in museum education (Chobot & Chobot, 1990; Hein, 1998; Sachatello-Sawyer et al.;

Schindel, 2002). The self-guided tour remains the primary method by which museums have become and remain places of SDL.

SDL as it informs our understanding of adult learning in museums

Within the exhibition, the choice of what to observe, how to interpret the information, and the consequential messages and conclusions fall squarely on the shoulders of the self-directed learner. Self-directed visitors must develop ‘museum literacy,’ a term coined to signify a visitor’s ability to comprehend and utilize the services and educational possibilities offered by museums (Stapp, 1984). This is consistent with Tough’s (1968) discoveries that self-directed learners select a goal and then decide upon an effective skill or strategy to achieve that goal. Learning in this situation also requires a certain level of personal autonomy on behalf of the self-directed visitor to create plans and goals, practice freedom of decision, and to utilize rational reflection (Candy, 1991). Additional information and skills are necessary on the part of the self-directed museum visitor for “self-motivated, self-educational visiting is not the same as school-teaching” (Wright, 1989, p. 132).

SDL within the museum setting is highly dependent upon the self-directed traits of each learner and is consequently very personal in nature.

Each museum visitor’s personal context is unique; it incorporates a variety of experiences and knowledge, including varying degrees of experience in and knowledge of the content and design of the museum. The personal context also includes the visitor’s interest, motivations, and concerns. (Falk & Dierking, 1992, p. 2)

These personal contexts play an instrumental role in helping to forge the nature of what will be learned during the museum visit or experience and are the most valuable tools for SDL within the museum (Carr, 1991). Adults visit museums with personal expectations and desired

outcomes (Tan et al., 2008). When the visitor's expectations are met and personal contexts reflected; learning, esteem, and pleasure are increased (Chang, 2006).

The routine option available to adult museum visitors is the self-guided tour. Proponents of the self-guided tour make the case that this self-guided concept is most beneficial for the visitor forcing them to find their own direction (Carr, 1991). Without external direction, visitors will forge their own path re-devising the path as new experiences warrant (Bitgood, 2002; Carr, 1985). Viewed from a slightly different perspective, Carr states that learners become their own models. This idea of independent thinking inevitably results in greater self-awareness and self-direction (Carr, 1991). However, without additional tools or facilitation for learning, independent thinking becomes a necessity during the self-guided tour experience.

Visitor studies offer valuable insight into how SDL occurs within the museum. Adults become actively engaged in learning the moment an artifact or museum object attracts their interest (Bitgood, 2002; Dufresne-Tassé, 1995). When viewing the museum exhibition, adult visitors utilize personal values to contemplate new concepts which are in turn incorporated and used with their experiences (Falk & Dierking, 2000; Knox, 1981a; Rennie & Williams, 2006). Construct of ideas occurs when context and connotations expand the experiences of the self-directed learner (Carr, 1985; Eneau, 2008). For sustained personal growth learners must “recognize and overcome their prior misconceptions and misunderstandings” while visiting the exhibitions within the museum (Leinhardt & Knutson, 2004, p. 54). Through continued museum visits the self-directed learner can further develop their independent learning skills in regard to museum education thereby increasing their ‘museum literacy.’ When this is achieved the learner increases their appreciation and understanding of museum objects (Dufresne-Tassé).

A significant road block can exist for the individual self-directed learner when visiting a museum. The museum collection and the textual messages of the museum exhibition are often the only resources available to the self-directed learner at specific times during their visit. As a result, the self-directed learner in this atmosphere is self-dependent for both questions and answers (Bitgood, 2002; Carr, 1985). This poses a possible problem for the learner. Each question in which the learner is unable to answer is followed by a block in emotional and cognitive contention. If this continues; the number of questions, and hence the act of learning, will gradually decrease over the duration of the remainder of the museum visit (Dufresne-Tassé & Lefebvre, 1994).

A simple solution to avoiding this dilemma is to visit the museum with another learner. The majority of adults who visit museums do so with other adults or family (Bitgood, 2002; Falk & Dierking, 1992; 2000; Hein 1998; Hooper-Greenhill, 1991; Leinhardt & Knutson, 2004). The same tendency is true for self-directed learners, who will often embark on learning projects with social interaction or within a group setting (Brookfield, 1985a; Candy, 1991; Eneau, 2008). Jeffers (2003) claims that adult learning is better satisfied through a group visit of the exhibition. This may still be self-guided and self-directed, however, in this instance the situation becomes a social activity. Individuals will view and interpret items differently (Crew, 1996; Jeffers; Knox 1981) allowing for discussion of viewpoints and unspoken assumptions and ultimately a better understanding.

The most important task museum curators and educators can do is to construct their exhibitions with their intended audience in mind (Berry & Mayer, 1989; Hein, 1998; Jordanova, 1989; Krätler, 1995; Maroević, 1995; O'Neill, 2002; Screven, 1974; Vergo, 1989). Careful attention needs to be applied so that exhibits are created with proper educational content

(Screven). Self-directed visitors require a positive interaction in order to learn in museums. They need to connect with what they see and feel what they already understand and acknowledge (Hein, 1998). They are not aided by, or appreciate, superficial labels aimed toward over simplification (O'Neill). Exhibition space should be designed to accommodate social interaction within the museum (Falk & Dierking 1992, 2000; Shapiro & Seidman, 1996). Even individual visitors are likely to come into some form of social contact and interaction during their visit whether it is with other visitors or museum staff (Carr, 1985; Falk & Dierking, 1992). Once the museum has won over the autonomous learner there is no limit to the dimensions of learning and discovery that will soon unfold and will most likely continue over a lifetime.

CHAPTER 3

METHODOLOGY

Introduction

Five decades of research into self-directed learning (SDL) have made significant discoveries into the traits of self-directed learners, the effect of environment in adult learning, and the continuum in which SDL takes place. The fundamental essence that binds all of these SDL concepts is personal responsibility. Despite minimal focus on SDL within the museum literature, museums offer tremendous opportunities as resources for autonomous learning. Therefore the purpose of this study was twofold: first to explore the possibilities of utilizing the Personal Responsibility Orientation (PRO) model as a tool for understanding how SDL occurs within a museum environment and second to gain insight into SDL within a museum setting from the perspective of the learner. This chapter serves to discuss the paradigm and design of research most appropriate to the study, address key study questions, review the background of the researcher, explain participant selection, data collection and analysis, and finally justify verification of the study.

Research Paradigm

The paradigm of research selected for this study was qualitative. Qualitative research can be described as “a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world.” (Denzin & Lincoln, 2005, p. 3) There are several underlying assumptions to qualitative research. One is that “reality is constructed by individuals interacting with their social worlds” (Merriam, 1998, p. 6). Basic to the goal of the qualitative researcher is to comprehend this reality. The reality that is created by people is also based upon their experiences (Merriam).

Understanding of such meaning can only be obtained from being among people; that is people construct this world of meaning together (Qi Xuehong, 2002; Willis, 2007). Qualitative research is therefore “idiographic and emic,” investigating phenomena among usually small numbers of individuals in a search to discover relative and descriptive meaning (Morrow, 2005, p. 252).

A second assumption is that the researcher serves as the principal tool for collection and analysis of data. As the primary investigative instrument the human interviewer is considered flexible and capable of making appropriate decisions regarding the study and the necessary adjustments and sequential steps or directions that make each qualitative exploration truly unique (Lincoln & Guba, 1985; Lloyd-Jones, 2003). Therefore the knowledge and ability of the researcher to adequately perform this task is significant. The researcher is obliged to recognize individual limitations and bias and to gather and present the perspectives as conveyed and reflected by the study participants (Merriam, 1998; Qi Xuehong, 2002). Barriers will exist in any research in the ability of one person in comprehending another. However, qualitative researchers can overcome these limitations through the study and recognition of participant actions and revelations which will in turn lead to insight and understanding of relevant phenomenon (Seidman, 1998).

Both of these assumptions are significant to this study. The museum setting is a social context. The PRO Model is theoretically grounded within the factors of social context which are fundamental in allowing the learner to activate personal responsibility. Self-directed learners construct reality and conduct learning within the greater social context as described within the PRO Model. The researcher utilized skills developed over time and within the museum environment to conduct and guide the study with the ultimate goal of discovering insight and knowledge from the viewpoint of the participant.

Qualitative research is grounded in humanistic philosophy and “employs an inductive research strategy” (Merriam, 1998, p. 7). Humanistic ideals, such as those expressed within the PRO Model, are readily accepted and upheld in the qualitative paradigm. It is assumed that “people are subjects with free wills” and that there are “no regularities to people’s behavior;” with behavior being unpredictable” (Qi Xuehong, 2002, p. 48). Thereby a qualitative study allows for and reveals a sense of this subjectivity. Similarly, SDL is “rooted” in the qualitative paradigm (Merriam, 1989, p. 163). Much of the theory building research within SDL has been the result of qualitative studies which have enabled such conceptual exploration. The intent of this study was to build upon the knowledge and concepts offered through the PRO Model; that was exploring possibilities of the framework, not attempting to ‘test’ the model.

The use of a qualitative paradigm is important to the purpose of this study. The ultimate goal of this study was to gain further understanding of SDL within this environment from the perspective of the learner. The nature of this interaction is complex and required descriptive data in order to comprehend the participants’ experiences (Candy, 1991; Owen, 2002). Museum educators are continually seeking this type of data through the stories and information that is told by actual people (Sachatello, et al., 2002). In addition, the nonformal nature of museums (as opposed to formal institutions of learning) invites visitors of all educational backgrounds or credential, many of who may find a quantitative instrument unfamiliar or intimidating (Brockett & Hiemstra, 1991). Interestingly, whereas quantitative studies have been largely utilized in examining SDL within formal environments of education, qualitative studies have been demonstrated as being effective in understanding SDL within nonformal settings of learning (Stockdale, 2003).

Research Design

The research design selected for this study is basic-interpretive. It may also be referred to as a generic or basic qualitative study. The basic components of the design can be described as follows:

Data are collected through interviews, observations or document analysis. Findings are a mix of description and analysis – an analysis that uses concepts from the theoretical framework of the study. The analysis usually results in the identification of recurring patterns (in the form of categories, factors, variables, themes) that cut through the data or in the delineation of a process. In these studies the analysis does not extend to building a substantive theory as it does in grounded theory studies. (Merriam, 1998, p. 11)

Therefore the basic interpretive design focuses on common behaviors of participants through observations and asking questions (Willis, 2007). The general goal or purpose of this research type is the fundamental discovery of knowledge (Bogdan & Biklen, 1998; Caelli, Ray & Mill, 2003; Patton, 2002).

All qualitative research practices provide insight without any particular type or design being able to claim superiority or privilege as compared to another (Denzin & Lincoln, 2005). Within the basic-interpretive design the similarities which combine all categories of qualitative research are regarded as more significant than any differences between various research types (Holloway & Todres, 2003). Stated differently, the basic interpretive design is a straight-forward approach to research that comprises the basic components of all qualitative research. These components include “the goal of eliciting understanding and meaning, the researcher as primary instrument of data collection and analysis, the use of fieldwork, an inductive orientation to analysis and findings that are richly descriptive” (Merriam, 1998, p. 11). The design is an

effective tool for accomplishing necessary research yielding rich and rewarding data without any of the impressive titles that have been created by some qualitative researchers to describe specific activities (Wolcott).

In comparison to other types of qualitative research, scant literature is specifically dedicated to the basic interpretive design (Caelli, Ray & Mill, 2003). Instead reference is usually made to the shared assumptions and characteristics this design mirrors with the basics of the qualitative research paradigm (Merriam, 1998). The basic interpretive design contains the three methods of inquiry which form the foundation for qualitative research and which are fundamental to all field-oriented types of research. They include:

1. Experiencing- “with emphasis on sensory data, particularly watching and listening.”
2. Enquiring- “in which the researcher’s role becomes more intrusive than that of mere observer.”
3. Examining- “in which researcher makes use of materials prepared by others.” (Wolcott, 1992, p. 21)

These factors are important to the particular purpose of this study. A primary goal of this research project was to gain insight into SDL from the perspective of the learner. This required experiencing, mainly through listening, that which is deemed as important or relevant to the learner participant. Enquiry enabled the researcher to explore, discover, and clarify the participant’s experiences through an active role into the study and data collecting process. This study did not occur in a vacuum. The knowledge and conceptualizations contained and revealed within the literature enabled the examining process of SDL, museum education and in particular the PRO.

Key to this design is the assumption that the research is interpretive. Research takes place in naturalistic settings with the researcher interpreting the data in order to gain insight into the phenomena studied (Denzin & Lincoln, 2005). “If one wants to acquire an in-depth understanding of the essence of matters, one must go deep into life and conduct detailed observations and investigations” (Qi Xuehong, 2002, p. 47). The researcher’s views and principles guide the study (Denzin & Lincoln). Of course, as with all research, the researcher is limited to what can actually be heard or observed from the participants within the study (Hein, 1998).

The basic interpretive design was appropriate to this study for several reasons. First, the design allowed for the appropriate methods by which to collect data. A goal of the research was to gain insight into the perspectives and meanings of the participants in the study based upon their experiences within the museum environment. Crucial to the study was the collection of descriptive data which allowed the participants to express and describe themselves subjectively and in words of their own choosing. Second, the design allowed for the appropriate role of the researcher. As this study was an exploration into a particular framework, the researcher conducted the study for the pure purpose of adding further knowledge. The researcher’s role was strictly an academic one and required no further or special accommodation or action. Third, the design allowed for appropriate analysis technique. The analysis of the study included interjection of the PRO Model as a conceptual framework. This allowed for a foundation that guided interpretation of the data and the identity of relevant factors and recurring patterns with significance to the PRO and SDL. Finally, the basic interpretive design allowed for a standard of educational research by which the study was “cogently developed, competently produced,

coherent with respect to previous work, important, ethical, and comprehensive” (Eisenhart & Howe, 1992, p. 656).

Research Questions

The following questions served as an appropriate foundation for the study.

1. What role does the museum as an educational institution play in support of self-direction in adult learning?
2. Which barriers exist to self-direction inside the museum?
3. How do learners utilize their personal responsibility to activate learning within the museum?
4. How can the PRO Model serve as a tool for understanding and promoting SDL?
5. What are possible deficiencies or strengths of the PRO Model?

Background of researcher

Researchers are obliged to offer the reader a basic understanding in regard to relevant qualifications and professional identity (Caelli, Ray & Mill, 2003). My formal education has been within the humanities having received degrees in social science secondary education and history. I have practiced education within the formal setting as a public school teacher and adjunct college instructor and within the nonformal setting as a park ranger, curator, museum educator, interpretive consultant, and community lecturer. For thirteen years I have been directly involved in museum education in a professional capacity. In working with adults in the nonformal setting (mainly museum visitors and volunteers) I have developed an interest in the SDL experience.

SDL occurs on a continuum and is developed through lifelong experience. Having worked with numerous adult learners I have come to appreciate this continuum and the personal autonomy in which self-directed learners strive. Within museums there are no boundaries or

formal curriculum in which to measure learning as in the issuance of a diploma or credited degree. Instead they are by nature places which welcome and reward learning characteristics and activities associated with SDL.

As stated previously, my role as researcher was in the strictly academic sense of wishing to obtain knowledge for the purpose of furthering our understanding of SDL and the PRO Model within the museum setting. As a proponent of humanistic philosophy I remain resolute in the ability and spirit of the individual learner and am supportive of the qualitative research paradigm, particularly its embrace of the subjectivity of study participants. As a museum professional, I believe that we can do better in understanding and accommodating self-directed adult visitors and am supportive of the basic interpretive design as the most appropriate type of research for the purpose and setting of the study. Finally on a personal level, this academic journey has and will continue to reveal and provide aspects of teaching and learning in regard to my own self-directedness and how to best utilize my experiences and knowledge to assist and facilitate others in a helpful and positive manner.

Participant Selection

A purposeful sample of museum sites with minimal criterion for adult participants was utilized for this study. Justification for this type of sampling is based upon “the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned” (Merriam, 1998, p. 61). The immediate importance of selection began with appropriate-specific sites for the study as well as basic qualifications for adult participants.

Key to collecting the most descriptive and useful information for the study were that the selected settings allowed for an environment in which SDL was facilitated, or at the very least

unhindered, through the teaching-learning (TL) component of the PRO Model. This required participating museums to have at least one adult or family appropriate self-guided exhibition with a minimal expected visitation time of thirty minutes. Museums included both private and public institutions located within the northern Maryland and south-central Pennsylvania region; and although three were free to the public, one site did require an admission fee.

Cooperating institutions ranged in type from history, art, and natural history/ science and technology museums. All institutions are classified at a level of professionalism and credibility that is recognized as the standard of excellence within the museum community. A requirement for inclusion was that participating museums be accredited through the American Association of Museums (AAM) at the time of the study. The accreditation program:

1. Strengthens individual museums and the entire museum profession by promoting ethical and professional practices;
2. Recognizes excellence in individual museums and the museum community;
3. Serves as the field's primary vehicle for quality assurance and self-regulation.

(AAM, 2008)

Accreditation ensured certain basic visitor service amenities such as compliance with the Americans with Disabilities Act of 1990. A summary of accreditation qualifications is included in Appendix A.

Cooperating institutions granted permission to release their identity for the study. This has proven beneficial as their identity leads to a greater understanding of the research as well as providing further credibility to the study, particularly within the museum community, and encouragement for others to pursue or to consider SDL within a similar setting. Four museums were selected which yielded enough data for an information-rich and still manageable study.

These institutions included (in order of visitation for data collection) the State Museum of Pennsylvania (SMP), North Museum of Natural History and Science (NMNH), Baltimore Museum of Art (BMA), and Walters Art Museum (WAM). Refer to Table 3.1 for a brief overview of the participating museum sites.

Table 3.1: Participating Museums Site Information

<i>Museum</i>	<i>Participants</i>	<i>Gallery Observed</i>	<i>Gallery Contents</i>
SMP	six total in one pair, one group, & one solo (2, 1, 3)	Man and Machine	Development of transportation and power in Pennsylvania including tools, horse drawn vehicles, trains, automobiles, aviation, lighting, electrical turbines, steam engines, coal, and coke.
NMNH	one total (1)	Main Floor	Live animal room, Hall of the Cosmos, robot adventure, Natives of the Susquehanna, fluorescent minerals, and Dinosaur Hall.
BMA	six total in three pairs (2, 2, 2)	The Cone Collection	19 th and 20 th century ‘modern art’ collection of Claribel and Etta Cone featuring paintings, sculptures, and works by Matisse, Picasso, Pissarro, Courbet, and Degas.
WAM	three total in one solo & one pair (1, 2)	19 th Century Art	Neoclassicism, Romanticism, Exoticism, landscapes, the academic figure, the impressionist figure, the Grand Salon, and decorative arts.

Whereas the participating museums provided a significant contribution to the research, this was not a case study. Therefore the emphasis does not focus as much on the specific environment of each institution as it does on the realization that each institution served as the general museum environment in which self-direction in learning was being observed and explored. Hence, the experience of the single participant at the NMNH is as equal and significant as the experience of a single participant at the SMP in lieu of the consideration that five other participants were also included from that site. Also, despite being observed and engaged in conversation about a specific gallery or exhibition from each site, participants did

occasionally interject comments and thoughts concerning their experiences in adjoining and previous galleries from their day's visit.

Adult participants were selected from random visitors, aged twenty-five or older, and were observed within the exhibition during the selected day and time of study. As "the time visitors spend in an exhibition provides the single most useful, most widely recorded, easily obtained visitor behavior" (Hein, 1998, p. 108); participating visitors were only included if they spent, by their own free-will, a minimum of twenty minutes within the exhibition which was recorded simply "by noting beginning and ending time" (p. 108). This time allowance was determined in advance by both the researcher and participating museum educators as an adequate time deemed appropriate for comprehension of the selected galleries; adults who participated in the study spent anywhere between twenty and forty-nine minutes within the galleries, meaning that none were excluded from the study. Adults partaking in the study attended the museum by their own free will and were not part of a university or similar type assignment. In all, a range of one to six participants were identified and participated from each of the selected locations producing a total sample of sixteen adults which "reflects the average person, situation, or instance of the phenomenon of interest" (Merriam, 1998, p. 62).

Participants were engaged in the study on three separate levels: as solo participants (3); as participant pairs (5); and as a small group of three participants (1). This was to accommodate visitors, who rarely visit museums alone (For ex: Bitgood, 2002; Leinhardt & Knutson, 2004) and proved highly rewarding to the study as the initial interviews allowed for dialogue between the participants in addition to the researcher and provided additional time and prompts for individuals to formulate, comprehend and reflect upon their experience. Follow-up interviews

were conducted with all sixteen participants per an individual basis. Refer to Table 3.2 for a brief overview of the participants.

Table 3.2: Adult Participants Background Information

<i>Participant</i>	<i>Age</i>	<i>Gender</i>	<i>Ethnicity</i>	<i>Education</i>	<i>Occupation</i>	<i>Site</i>
Bailey	25-39	female	white	post-grad	dentist	SMP
Kirk	25-39	male	white	graduate*	law student	
Thomas	40-64	male	Indian National	graduate*	engineer	SMP
Nancy	40-64	female	white	under-grad	claims adjustor	SMP
Barbara	40-64	female	white	under-grad	invest manager	
Xavier	40-64	male	white	graduate	attorney	
Everett	65+	male	white	graduate	analyst (retired)	NMNH
Olivia	40-64	female	white	graduate	attorney	BMA
Edward	40-64	male	white	post-grad	attorney (retired)	
Kendra	25-39	female	white	under-grad*	film producer	BMA
Larry	40-64	male	African-American	under-grad	mortgage broker	
Wendy	40-64	female	white	under-grad	educator	BMA
Charles	40-64	male	white	graduate	minister	
Stephen	40-64	male	white	post-grad	publisher	WAM
Tracey	40-64	female	white	under-grad	educator	WAM
Carl	40-64	male	white	under-grad	computer tech	

* *Participant currently enrolled as a student in an additional program of higher education*

Informed consent was required of all participants (refer to Appendix B for a copy of the Informed Consent Form). Signs were posted within the study areas according to the policies of the participating institutions announcing and briefly explaining the study so that visitors were not surprised, suspicious, or alarmed during any stage of the data collecting process. The necessary steps were taken to conceal the identity of the participants including the use of fictitious names in the narrative of the study. All policies and procedures as implemented and imposed by the PSU Institutional Review Board were strictly adhered.

Data Collection Methods

The method or methods selected and employed for the purposes of collecting data is most effective when based upon the objective of producing the most relevant and effective information concerning the study (Eisenhart & Howe, 1992). It is for this reason that two

methods of basic interpretive research were utilized in this study. These methods included observations and semi-structured interviews. These two methods when used in combination for the same study provide complex and descriptive interactions from participants (Marshall & Rossman, 2006).

Observations

The use of observation has long been employed as a method by which to understand human behavior based upon the premise that such behavior is meaningful and reflective of the human experience (Adler & Adler, 1998; Marshall & Rossman, 2006). Successful applications of this method employ a systematic collection of data that is recorded in a consistent manner (Creswell, 2003; Hein, 1998). The type of observation used in this study was one in which the researcher adhered to the role of complete observer; the purpose of which was to record participant behavior as it occurred without the existence of an examiner (Adler & Adler; Creswell).

A limitation to observation includes the possibility of the observer being perceived by participants as being invasive (Creswell, 2003). In addition, the observation of complex or quick actions may be difficult to observe (Marshall & Rossman, 2006). Advantages of observation include placement of the researcher within the context or location of interest while requiring a collection and analysis of data (Willis, 2007), which may also allow for any unsuspected actions to be witnessed (Creswell). Furthermore it is a fundamentally simplistic and effective tool of collecting data within a museum environment (Hein, 1998).

Once adults granted their informed consent regarding participation in the study, these participants were observed within the preselected gallery of the participating museum. Outside of independent participants, Hein (1998) recommends observing small groups of individuals

consisting of two to five members as they often “tend to stay together and move through the galleries as a unit” (p. 105). The primary purpose of these initial observations was to gather natural data for use in conjunction with the ensuing semi-structured interviews. They were also utilized to record the amount of time participants devoted to the gallery and their subsequent engagement of the exhibition components as well as social interaction. A single page is all that is necessary for effective field collection (Creswell, 2003). Refer to Appendix C for an example of the observational inventory which was specifically devised and utilized for the purpose of this study.

Interviews

Concluding observation, participants were engaged in semi-structured interviews, which served as the primary method of data collection. As the interview was engaged following the participant experience it is referred to as a ‘post-visit’ interview (Hein, 1998). Initial interviews for this study took place between the researcher and participant in a person to person format. A second, follow-up interview was conducted with participants via telephone (with one European participant requesting to submit thoughts and discuss questions electronically) in order to clarify and expand upon elements of the initial interview. It is suitable to briefly examine the concepts underlying interviewing, the appropriateness of such technique particular to this study, culminating with a definition of the specific interview type; the semi-structured interview.

The use of interviewing is justifiably often the single method used in studies and is perhaps the most widespread method of data collection in qualitative research (Merriam, 1998). “At the root of in-depth interviewing is an interest in understanding the experience of other people and the meaning they make of that experience” (Seidman, 1998, p. 3). The use of interviewing is a powerful tool that provides insight into people’s behavior through the

communication of language. The interview is highly qualitative in nature eliciting response in the form of words as opposed to numbers (Hewitt-Taylor, 2001).

The basic premise or assumption underlying the interview as a form of research is that the manner in which people conduct their experience is affected by the meaning they actually make of their experience (Seidman, 1998). Through the use of interviewing, information can be obtained from adults as to how they think and feel relevant to their experiences (Hein, 1998). When conducted properly it is a further assumption that participants will usually answer and communicate honestly, thereby providing useful information (Hein). A limitation of interviewing is that the researcher is restricted to gathering information based upon what is actually stated by participants. Therefore in order to be effective, the process of interviewing requires that the researcher exercises thoughtful and becoming questioning skills in addition to an artful and courteous manner of listening. Participants are to be provided with a relaxed and equal environment on par with the researcher and afforded the opportunity to challenge the relevancy of a question if they feel appropriate (Knapik, 2006). If such an environment is not provided, the data collection runs the risk of having participants attempting to produce information that they perceive is desired on the part of the researcher and not necessarily reflective of their own view or experience (Watson, 2006).

Conducting an effective and beneficial interview requires skill on the part of the researcher (Willis, 2007). The meanings which are derived from this method are formed in part from the interaction between the researcher or interviewer and participant or interviewee (Seidman, 1998). In other words, both researcher and participant are active in the interview process (Watson, 2006). After conducting numerous interviews and reviewing the data the

researcher should begin to notice patterns and adequate saturation of provided information (Caelli, Ray & Mill, 2003; Seidman).

The use of interviewing is a highly appropriate and time honored method of data collection in museum visitor studies (Hein, 1998). Post-visit interviews are unobtrusive to the visitor experience. Instead the post-visit technique allows for participants to recall their experiences or to remember what they have observed within the museum exhibition (Hein). While interviews can occur immediately following an experience or sometime thereafter, this study engaged the initial post-visit interviews promptly at the conclusion of the site-specific learning event. Even when engaged in such timely fashion, participants may be hard-pressed to remember certain details or pieces of information relevant to their recent activity. The possibility of encountering this problem was reduced by using notes gained during the preceding observations. In addition to discussion concerning their current visit, participants also offered and were engaged in relevant conversation concerning previous visits and similar experiences. This discussion contributed significant insight into the visitor's greater learning experiences and provided an important element in regard to the specific components and concepts of the PRO Model.

Interviews can range from being highly structured and rigid formats known as formal interviews to open-ended and loosely structured forms of conversation known as unstructured interviews (Merriam, 1998). In between these two ends of the spectrum lies the semi-structured interview. In this type of interview,

either all of the questions are more flexibly worded, or the interview is a mix of more and less structured questions. Usually, specific information is desired from all the respondents, in which case there is a highly structured section to the interview. But the

largest part of the interview is guided by a list of questions or issues to be explored, and neither the exact wording nor the order of the questions is determined ahead of time (Merriam, p. 74)

A significant advantage of the semi-structured interview for this study was that it provided a structured base by which to begin and to guide the interviewing process thereby keeping the researcher on task while allowing the flexibility to engage more freely with the participant and to expand and inquire upon information presented by the participant which was perhaps unanticipated or justified further inquiry. Refer to Appendix D for examples of initial interview questions and Appendix E for examples of second or following interview questions.

Data Analysis

Data collected during the study was analyzed using the constant comparative method. Within this method of data analysis patterns were discovered through constant comparison of collected information (Glaser, 2002). The method provided for a practical and effective form of data analysis by which ideas and concepts are built through an inductive approach which makes it appropriate for all types of qualitative research (Merriam, 1998). In other words, the study does not have to be concerned with developing grounded theory in order to utilize this method of analysis.

The analysis of qualitative data is not necessarily linear in process (Merriam, 1998; Seidel, 1998). Within this study basic analysis occurred simultaneously with data collection. Ongoing analysis allowed the researcher to remain in touch with the data while also keeping a handle on the manageability of the sheer volume and scope of data collection. The more consistently involved the researcher engages in analysis of the data the more familiar the information will become and the more efficient will be the final analysis.

This was followed by the constant comparative analysis method. The information collected from participants was surveyed by the researcher for emerging themes, coded and then grouped around the appropriate research question (Hewitt-Taylor, 2001). Data was continually compared and identified into categories with the reality that some categories addressed more than one research question (Hewitt-Taylor; Patton 2002). Through the process continued comparison led to identification of new categorizations until saturation of these categories was achieved (Seidel, 1998). In this study data was initially compared for commonalities and themes regarding the museum learning environment, components regarding the PRO Model as a conceptual framework, and perspectives of SDL from the viewpoint of the adult learner.

Within the constant comparative method, which literally means continual and ongoing examination and comparison of the collected data, fundamental patterns emerge from a latent structural analysis of the data (Glaser, 2002). Therefore, while conducting the analysis it is important not to enter preconceived notions or to attempt to impress one particular incident over others (Glaser). Once the patterns have been established, the analysis must be written in clear, concise terminology and language which is consistent with those who will be reading the research (Eisenhart & Howe, 1992).

Verification

The ultimate objective within any research is to offer findings that contribute towards a greater understanding of the world. The study, however, must be acceptable through verification or the degree to which reality or truth is confirmed within the research process and presentation. For a sense of credibility, or aura of believability, to be properly demonstrated for any study to be accepted as substantial within the academic discourse whether the study is of qualitative or quantitative paradigm (Golafshani, 2003; Merriam, 1998). However, unlike quantitative studies,

where the emphasis is placed upon demonstrating validity, qualitative studies seek to demonstrate an element or degree of truth or trustworthiness through confirmability, credibility, dependability, and transferability (Lincoln & Guba, 1985). In this manner, “reliability and validity are conceptualized as trustworthiness, rigor and quality in qualitative paradigm” (Golafshani, p. 604). In this study, basic steps were taken to ensure trustworthiness. Attention was given to provide careful detail in the collection, analysis and interpretation of data. Specifically this study utilized a generic qualitative inquiry for collection and a method of constant comparative analysis. These methods offer a foundation for quality and provide a time-honored structure for investigating the data.

Confirmability

Confirmability provides for a measure in which research is, in as much as is possible, representative of the specific situation in regard to the study and not biased toward the beliefs of the researcher (Morrow, 2005). Of course a certain amount of bias will be present in any qualitative research endeavor by the very nature of the role of the researcher as the tool in gathering and analyzing data. However the objective is to limit such bias through a concentrated effort toward quality of study and an upfront recognition of the limitations and assumptions of the study as presented in the first chapter. Triangulation (discussed in greater detail in regard to dependability) was utilized to help insure data represented based upon factual reference (Cho & Trent, 2006). Another safeguard was the provision of an audit trail, the purpose of which was to allow for the reader, or another researcher, to understand how the data was analyzed and categorized for this particular study (Hewitt-Taylor, 2001; Lincoln & Guba, 1985).

Credibility

As mentioned previously, credibility is the aura of believability or degree to which research is accepted as being truthful. Specific to the basic-interpretive research design is demonstration or acceptance of credibility in four areas:

1. the theoretical positioning of the researcher;
2. the congruence between methodology and methods;
3. the strategies to establish rigor; and
4. the analytic lens through which the data are examined. (Caelli, Ray & Mill, 2003, p. 9)

The overall credibility of research is dependent upon three related components: rigorous and sound methods of fieldwork, qualification and conduct of the researcher, and an appreciation for qualitative inquiry (Patton, 2002). These components are important to understanding that credibility is in some degree in the eye of the beholder. For instance, it is the objective of qualitative research to gather data that is reflective of the worldview or knowledge as constructed through study participants.

“The concept of truth is an elusive one” (Lincoln & Guba, 1985, p. 14). Therefore, data is consequently the product of socially constructed ‘truth’ as seen through the view of the participants. Qualitative research is consistent with the belief in the diversity and uniqueness of each individual person. Recognizing this, so too may the data yield possible multiple dimensions and perspectives of participants therefore offering an array of possibilities and interpretations of ‘truth’ (Cho & Trent, 2006). To complicate matters further, ‘truth’ is determined within the context of each individual study, in this case taking into consideration acceptable or plausible views within a museum context (Morrow, 2005).

As the truth is generated from the participants within particular contextual settings it makes sense to utilize member checks as a method of adding credibility to the research study (Cho & Trent, 2006; Hewitt-Taylor, 2001). Member checks were employed as part of the process of verification for this study. Member checks may be described as a process by which “taking data and tentative interpretations back to the people from whom they were derived and asking them if the results are plausible” (Merriam, 1998, p. 204).

Dependability

In the quantitative paradigm, studies are assessed based upon their reliability or ability by which the findings of a study can be replicated. This presents a problem within the qualitative paradigm, as human behavior is not regarded as quiescent (Merriam, 1998). Therefore a more appropriate concept is dependability. Within dependability a qualitative research study should yield a process in which the resulting findings “should be explicit and repeatable as much as possible” (Morrow, 2005, p. 252). Basic justification for dependability may be found in the audit trail of this study as well as through the use of triangulation.

Triangulation can be described through the analogy of its use by sailors who are able to determine their location and circumnavigate the globe by examining the intersection of three points within the sky (Chenail, 1997). Within academic research triangulation may be described as “using multiple investigators, multiple sources of data or multiple methods to confirm the emerging findings” (Merriam, 1998, p. 204). Chenail makes the poetic point that just as sailors used triangulation to determine location based upon relation to other points, qualitative researchers locate phenomenon based upon relationships and reflective of sailors are also part of the final equation.

Transferability

As studies within the qualitative paradigm usually have smaller sample sizes, do not utilize statistical analysis, and are conducted in particular context, they cannot be regarded as generalizable to other settings or participant samples (Cho & Trent, 2006; Morrow, 2005). However, they will yield an element of transferability. Again, given the uniqueness of each study transferability is ultimately in the judgment of the reader. The reader is aided through dense descriptions of context and findings, and rich descriptive data. This study provides adequate information concerning the researcher and instrument of research, as well as “the research context, processes, participants, and researcher-participant relationships to enable the reader to decide how the findings may transfer” (Morrow, p. 252).

The employment of such methods as audit trails, member checks and triangulation can indeed aid toward providing verification for this study. However, they cannot justify poor qualitative research as substantive based on their reference alone (Cho & Trent, 2006). The quality of this study is determined through meaningful and concrete fieldwork by a competent and trustworthy researcher.

CHAPTER 4

FINDINGS

Introduction

The purpose of this study was twofold: first to explore the possibilities of utilizing the Personal Responsibility Orientation (PRO) Model as a tool for understanding how self-directed learning (SDL) occurs within a museum environment and second to gain insight into SDL within a museum setting from the perspective of the learner. In order to fully comprehend the significance of the findings revealed through the collected data it is first necessary to briefly revisit the philosophical and conceptual frameworks that guided the purpose of the study.

Grounded primarily in humanistic philosophy, data was gathered with the elementary supposition that participants were inherently honest, free to express their feelings, and in possession of competent self-awareness. Participants were viewed from the perspective of an integrated or total being, including intellectual, emotional, and physical dimensions.

Environmental and social factors were recognized as was the awareness of these factors by the participants. Therefore, themes and categories have been derived and supported through the direct observations and interviews of the participants as is consistent with the basic-interpretive qualitative research design of the study.

The conceptual framework of the study allowed for a basic outline by which to understand the SDL that was revealed through the data. The PRO Model defines self-direction in learning as “a combination of forces both within and outside the individual that stress the learner accepting ever-increasing responsibilities for decisions associated with the learning process” (Brockett & Hiemstra, 1991, p. 9). It furthermore presents a view of SDL as occurring on a continuum; that experiences and knowledge are transferable to various situations and that

learning may or may not occur in isolation (Hiemstra, 1994). Participants initiate learning through their personal responsibility and process thoughts and ideas via their individual learning characteristics. External factors also contribute to the learning situation through a teaching-learning transaction, which in this study was provided through the exhibition as a nonhuman or institutional facilitator. Finally, social and environmental contexts also influence learning within the conceptual framework. Learning occurs in an environment in which the learner is granted a certain element of freedom in the learning process but does not necessarily have control over this environment.

It is important to note that the findings of the study emerged naturally and were not framed or limited within the constructs of the PRO Model. The model merely allowed for an initial starting point for posing questions and subsequent observations. Once participants were engaged in discussion their interests, experiences, and perceptions provided the direction of conversation and established the foundation for the findings of the study. Consequently the findings were not limited to the actual days of observation and the specific galleries of the participating sites. Participants anxiously and willingly provided a substantial pallet of data that was reflective of their personal and lifelong experiences at numerous museums throughout the country and indeed the world.

Research focused on five basic areas which served as a foundation for the study. These areas included: (a) the role of the museum as an educational institution in support of self-direction in adult learning; (b) barriers which may exist to self-direction inside the museum; (c) the means by which learners utilize their personal responsibility to activate learning within the museum; (d) the practicalities of utilizing the PRO Model to serve as a tool for understanding and promoting SDL; and (e) possible deficiencies or strengths of the PRO Model. Greater

perception into these topics emerged during the study and can be found interwoven throughout the various categories of data findings.

Outline of Research Findings

The research findings are presented in seven themes which reveal insight into the participants and their self-directed learning experience. General themes include: a) personal reasons for learning; b) exhibit as educator; c) unquestioning approach; d) happening upon unexpected discoveries; e) making connections; f) learning in a social context; and g) outcome of visit. Themes are supported by sub categories which emerged from the data and are outlined below.

A: Personal reasons for learning

1. Enrichment
2. Entertainment
3. Shared experience
4. Environmental

B: Exhibit as educator

1. Accommodating learning
2. Barriers to learning
3. Integrating physical space
4. Utilizing interactive components

C: Unquestioning approach

1. Adhering to a linear path
2. Seeing it all
3. Critiquing only the familiar

D. Happening upon unexpected discoveries

1. An open agenda
2. “Learning to unlearn”

E. Making connections

1. Through previous experience
2. Through invoking emotion

F: Learning in a social context

1. Constructed and encountered
2. Group meaning making
3. Intruding upon engagement
4. Quiet and respectful etiquette

G: Outcome of museum visits

1. Remembering the obvious
2. Pursuing questions and discoveries
3. Visiting additional museums
4. Spreading the word

Personal reasons for learning

This section explores the various reasons in which adults visit museums. All of the adults observed and interviewed for this study were in attendance to the museum by their own free will and had distinct motives for visiting their particular site of choice. Their reasons were rather personal in nature in that they pertained specifically to the individual or in the case of those participants who visited with another adult or adults directly connected to that specific

relationship on that distinct day. Among the reasons participants demonstrated for learning included enrichment, entertainment, shared experience, and environmental.

Enrichment

A highly significant reason for attending a museum among the participants was for the purpose of enrichment. This was reflected foremost in individuals seeking to increase their general overall knowledge and for broadening their understanding of a selected subject or region. Enrichment was also revealed as the pursuit of a specific interest. In this latter case the endeavor was pursued with an aim toward sharpening individual mastery of the interest or toward gathering ideas in which to expand personal engagement and enjoyment within the interest very similar to one pursuing topics and ideas relevant toward a particular pastime or hobby.

An example of seeking enrichment to broaden general knowledge was demonstrated by Bailey and Kirk. Siblings, both originally hailed from Kentucky where they learned from an early age the enjoyment of visiting museums from their parents. “They like museums... that’s how we grew up, so I think we like museums,” Bailey explained. Bailey relocated to the Harrisburg area as a result of her work and began seeking appropriate local museums to visit with her two young children. “I moved here two years ago. So I’ve actually tried to take advantage of the area.” She discovered the State Museum of Pennsylvania (SMP), which is administered by the Pennsylvania Historical and Museum Commission and provides the public with an expansive view of Pennsylvania cultural, political, and natural history. In addition to its three floors of traditional museum exhibits and galleries the SMP also offered the “Curiosity Connection,” a family hands-on learning and play environment geared toward children five years of age and younger. Although she enjoyed visiting the museum with her children she was looking forward to the opportunity of touring the additional floors in the company of an adult.

Hence when her brother came to visit for the week, the two decided to visit the SMP. Bailey acknowledged that such a visit “requires a little bit of work or effort” however it is none-the-less important. As she elaborated:

Since I’m new to the area still, and we actually don’t have any friends or family in Pennsylvania, and I really don’t know that much about state history; I figured since I’m living here now, I might as well integrate myself into Pennsylvania culture.

Kirk concurred that visiting museums is important “just as a general knowledge for myself” and happily agreed to spend the day exploring the museum with his sister. As a member of the military he routinely sought out museums as a means in which to familiarize himself with his new unit and location. “I’ve always gone to the on post museum and learned the history of the division I am with.”

Thomas also desired to broaden his general knowledge and to learn more about Pennsylvania through visiting a museum. “I wanted to know about this region. I’m new to this region so it’s basically exploratory.” However, he is only presented with such an opportunity to visit the United States every five to ten years. As an engineer with a transportation firm in India he was sent to Harrisburg on business and decided during his weekend off of meetings that he “wanted to learn more about the area and what has been the history” by visiting the SMP as “the first thing which came to my mind was a museum.” He described his purpose as a “kind of widening of the horizon” for the sake of basic enrichment even though the museum contains subject areas in which he is less familiar. In his words:

So although, for example I’m not very keen and I’m not a very kind of experienced and trained person in terms of art and political science and so on and so forth. But I go have a look, so it is kind of in search of knowledge you can say.

Similar to Thomas was Stephen, visiting a new city, in this case Baltimore, while on a business trip away from his native France. Seeking to see “nothing in particular” he took time away from his busy schedule for the sake of enriching his experience and knowledge by visiting the Walters Art Museum (WAM). “I am here on a business trip and museums here close when we leave the office. So I said to myself I am at a hotel very close I must go to the Walters.” Substantially accumulated by William and Henry Walters and bequeathed to the City of Baltimore; the four-floor museum is internationally known for its collections of art ranging from pre-dynastic Egypt to 20th-century Europe. To Stephen, visiting a museum is “mandatory” whenever he is in a “new town.” Self-described as having “visited hundreds of museums” he commented that “Baltimore is a big, rich city; there are many museums to visit. I try to visit all the museums I can and do.”

Seeking enrichment in museums through their mutual enjoyment of art were Wendy and Charles. Indeed, this was not their first trip to the Baltimore Museum of Art (BMA). Both had begun visiting museums according to Wendy when they were “very young” and were quite “familiar” with the BMA. Charles grew up in Baltimore and had been introduced to both the BMA and WAM by his mother; Wendy had routinely visited history and art museums with her parents in her hometown of Williamsburg, Virginia. Following their marriage, Wendy’s interest in art “influenced” Charles, as she stated, so that the couple began to regularly attend such museums. The BMA houses over 90,000 works and is recognized for its collection of contemporary art. The couple “knew what was here” and both “really love impressionist paintings.” Charles reflected as to their reason for visiting as “a combination of something that we’re interested in and something that is unique that is represented there (referring to the BMA) that we might not find someplace else.”

An instance of participants visiting a museum for the purpose of gathering ideas and to learn more regarding a particular interest were Olivia and Edward. Included among the BMA galleries is a distinguished collection of Antioch mosaics, some of which Olivia and Edward wanted to examine. Having met at the University of Washington, where they discovered that they had a mutual interest in art, the couple was married and has been visiting museums on a regular basis ever since or as Olivia communicated “we travel a fair amount and where there are art museums or other museums of interest to us we generally try to go to them.” Although art museums remain their favorite, Olivia admits “we’ve gone to different types of museums” on a regular basis as well. This day they made the trip from their neighborhood in northern Philadelphia in pursuit of their mutual and specific interest in mosaics. Edward has made it his hobby to replicate murals in the couple’s home and was anxious for some new ideas. Olivia, an avid photographer, was pleased to assist Edward by photographing details of the mosaics or as her husband explains “this will fit in with her hobby and my interest in the mosaics.”

Entertainment

Another reason revealed by participants for undertaking learning within a museum was an aim toward entertainment. While the goal remained to participate and engage in learning within an educational institution, the objective was less specified toward seeking knowledge for knowledge sake and was instead centered upon seeking knowledge because it was fun and provided for an impetus toward social engagement. Interestingly, none of the solo participants revealed entertainment as a reason for pursuing learning.

For example, Nancy, Barbara, and Xavier often do things together socially. Barbara and Xavier are siblings, whose interest in museums “started in childhood” according to Barbara as she added “I think starting as kids it’s something that stays with you for your life.” While

Barbara lives in New York City and Xavier resides in San Antonio, they remain close friends with Nancy, who happens to live in Harrisburg. This particular day the three were in Harrisburg together and were looking for “something on a Saturday that was close by that would be interesting to all of us” said Nancy, “So we went and bought tickets to the planetarium show.” In addition to the show, they wanted to tour the rest of the museum prior to a relaxing lunch somewhere in town. Of the experience Xavier said “it’s all fun.” Apparently the three engage in this type of entertaining museum activity on a regular basis whenever, chimed in Barbara, “they’re in the mood to go” to a museum. When visiting each other or with friends and family outside of the trio, they will engage museums for entertainment purposes as Nancy stated “if there’s a specific exhibit that’s being shown” or, as elaborated by Barbara, for “something different, something we haven’t done in a while or we’ve been to a museum before and we like what we’ve seen.”

Similarly, Kendra made the trip from Charlotte, North Carolina to visit her friend Larry in Baltimore. Having not seen each other in several years, the two decided upon the perfect atmosphere for an entertaining afternoon in order to catch up with each other’s lives with a visit to the BMA, or as Larry described it: “something different to do in the city.” Larry had been introduced to museums in childhood through school trips and scouting excursions while Kendra was “exposed at a pretty young age” in her hometown of Corning, New York which she described as “very famous for its glass museum.” Although Larry had not been to the BMA previously, Kendra was happy with the choice remarking “he knows that I like art and he knows that museums are something that I love to go to.”

What better place than a museum to visit for one’s birthday? At least that is what Tracey thought when her husband Carl suggested the WAM among several places they could possibly

pursue for the day. “It’s Tracey’s birthday and we were just trying something different” said Carl. Now married, the two grew up in Philadelphia where they were both introduced to museums as children, in particular the Philadelphia Museum of Art. “I grew up in the city, so it was probably more convenient than anything else, remarked Tracey. She enjoyed museums so much that as an adult she served as a museum volunteer. Still living in Philadelphia they made the trip, their first visit to the WAM, with plans for dinner afterward at Baltimore’s Inner Harbor. This trip was somewhat different for they were visiting without their eleven year old daughter. As a result Sandy described the experience as “much more relaxed because I didn’t have to worry about her.” Their objective in visiting for the day was for “entertainment, see something different, maybe learn something” replied Carl.

Shared experience

Participants expressed a purpose for their museum visitation and learning endeavor as an opportunity to partake and share experiences with others. This shared experience occurred between the participant and the other adults with whom they were conducting the visit to the museum. Part of the reason for attending the museum becomes the mutual experience of the other person or persons within the participant’s group and the ensuing interaction and conversation relevant to the visit.

When asked how she decided whether or not to visit a particular museum Barbara quickly responded with “what the group wants.” Barbara tends to visit museums “when I’m having visitors if there’s a particular subject I’m interested in seeing” with the intention of gathering “a group of us together; and make an evening of it sort of thing.” She made it clear that the event takes on greater meaning and significance when it is experienced with others. As she explained: “we do it for the enjoyment of... each other’s company and conversation and it seems to be

something that you definitely come away feeling that you've gotten something out of." Often this is the impetus for travelling to a site in which the participant has yearned to visit but has been waiting to experience with another person. Kendra added insight into this reason:

I also find for even myself in Charlotte I'll tend to go to more museums when someone comes in from out of town. I won't take the time usually to go myself even though I would like to go but when someone comes in from out of town that's your impetus for saying oh my gosh I've been meaning to go there we should go there.

The sharing and social aspect of the museum experience also means that participants need to reach mutual agreement or compromise regarding a specific site. This occurs for Wendy and Charles, as she described, as when "one of the other of us or both of us are really interested in" a particular topic or museum. Tracey was simply appreciative of the shared experience. "I think that Carl and I both enjoyed the visit for probably different reasons. I enjoyed spending the time with my husband and walking through the museum at a very leisurely pace which we don't get to do often."

Environmental

A fourth reason for selecting museums as learning sites was related to the environment, specifically the contrast in temperatures. This reason offered or recognized by half of the sixteen participants. As the study was conducted during the warmer months and, with the exception of Bailey and Kirk, participants were found to be visiting on days which either met or exceeded the region's typical hot and humid days of summer. Museums offered an attractive and cool alternative to competing activities that usually take place outside. Usually the temperature provided the impetus for visiting, however did not represent the sole reason for attending the museum.

Everett, the only participant in the study aged over sixty-five, was visiting his daughter in Lancaster, Pennsylvania. He and his wife routinely made the trip from their home in western New York. Describing his background with museums as “well, I get to them all over the world so I guess probably - I enjoy museums” his particular interests lie in astronomy and the history of the Seneca Indian. Fortunately for him, his daughter’s residence was in walking distance of the North Museum of Natural History and Science (NMNH) of which he visited on a regular basis. The NMNH is located adjacent to the campus of Franklin and Marshall College. The institution contains exhibits and interactives related to the study of animals (including dinosaurs), astronomy, natural history, Susquehannock Indians, and at the time of the research study, robotics. Planning to take an initial walk around the college campus Everett decided to forgo the walk and visit the museum first “because it’s warm outside.” Dan and Olivia decided the day was perfect for pursuing mosaics at the BMA for as Dan explained:

We don’t have air conditioning at home and so when it’s a really hot day we usually try to find something to do inside and I like this particular museum because I guess it’s the atrium out there they have these incredible mosaics.

Wendy provided similar reasoning for her and Charles’ visit in the following way: “I love museums. It’s also cool. It’s hot outside!” Larry emphasized that when “its 97 degrees outside you want to come in a nice cool place.”

In reflection, various reasons were revealed by participants as to pursuing learning within the museum. There were participants who sought to increase their general knowledge and understanding through enrichment. Others were inclined toward entertainment where the aim remained toward learning however the emphasis was on fun. Still others perceived their visit as an opportunity by which they could engage and share the experience with other adults. Another

reason was related to the environment, particularly the oppressive heat, providing an impetus to venture into the cool temperature and comfortable atmosphere inside of the museum.

Exhibit as educator

This section explores the various means by which the exhibition fulfills the role as educator. In a traditional sense the term educator is linked with an actual person. However, in this study the environment was completely self-guided and therefore the exhibition served directly in that capacity. In essence the exhibit was utilized as a non-human facilitator for learning. The exhibition itself is situated in a larger space. Typically several exhibitions comprise a gallery and several galleries comprise a museum. The participants in this study revealed four facets of the exhibition in this role as educator: accommodating learning, barriers to learning, integrating physical space, and utilizing interactive components.

Accommodating learning

While experiences, interests, and expectations of learners varied, the exhibitions in the study revealed on numerous occasions an accommodation for the learning of participants. Exhibitions accomplished this in two ways: through the presentation of the exhibition objects and components and through making connections to the learner. In these instances the exhibition was viewed or perceived by the participants in a positive light providing for a satisfactory experience. This was usually reflected following an engagement with exhibition components that yielded the participant with gratifying answers while maintaining ample curiosity.

Key to exhibits accommodating learning from the perspective of participants was the inclusion and presentation of significant objects or artifacts. Objects represented “the identity of the museum” according to Stephen and were vital to the information being presented. Indeed “these are holy things that from which our culture and our identity are formed” explained

Charles and deserved “to be contemplated.” Participants wanted to know the provenance of objects (i.e. painted by Henri Matisse in 1934). This demonstrated provenance in turn added uniqueness to the learning experience such as was the case for Xavier when he exclaimed “I noticed it was Simon Cameron’s carriage!” He explained that “Simon Cameron was an interesting character and there’s a funny story about him” of which he proceeded to tell with much excitement to his sister and friend in front of the original carriage.

Also accommodating to participants’ learning was the exhibitions use of appropriate and effective text. “It was clear; you knew where to find it you didn’t have to search for it, it was well done” commented Tracey. Nancy remarked that exhibits:

“Relate the object to the time and the use of it by the people in that time; and that’s very effective from my perspective because it’s easier to visualize how this was part of someone’s present life, so you make an obvious correlation between that and perhaps how you would fit into that time period if you were there.”

This text needs to be flexible in that it is satisfying to the different pace of self-directed learners. Kirk had a tendency “to look at a lot of stuff really quick” while Everett preferred a more methodical approach. “Astronomy has always been difficult for me to grasp...they have a lot of information in there; little areas that you can follow along and it’s been easy to follow along here.” Ultimately the text encouraged participants to question and think beyond the exhibition. After reflecting upon the exhibit Kirk began to apply what he had learned into questions such as “I was like well I wonder if that’s where you get the term Sunday driver?” To Larry, a temporary exhibition at the BMA helped him to reach beyond his normal worldview and to see “the things in life that sometimes we overlook; that there is some artistic value in everything that’s around us.”

Exhibits were found to accommodate learning when participants identified relevant interests or made personal connections to the exhibition. For example, Nancy, Barbara, and Xavier had been reading and discussing Jane Austen's "Pride and Prejudice" prior to their visit to the SMP. They were delighted to find within the exhibition an example of a phaeton as well as other horse drawn vehicles. These components expanded their understanding of what they were reading or as Nancy described: "when we saw the actual vehicles in the museum; that of course triggered an association... when I read about them riding in the phaeton I will have a much stronger visual of that."

Thomas also greatly enjoyed the transportation components within the same exhibition, presenting his interest from a slightly different level of self-relevance. "The reason is quite personal because I'm myself working in the railway industry," he said. The exhibition accommodated his learning by providing artifacts and information which fulfilled gaps in his knowledge and comprehension of industrial history.

I was able, to some extent, to put my previous education in perspective. I had read about the industrial revolution in Europe and I am of course aware of what happened in India, but I was not aware of exactly what happened in the U.S. So to that extent I think it contributed a lot.

Barriers to learning

Instances occurred in which exhibits did not fully accommodate the learning desires or objectives of participants and consequently could be perceived as barriers to their learning. Again, the experiences, interests, and expectations of learners varied. However, in this scenario the exhibition component was viewed or supposed by the participant as not fulfilling a particular interest or curiosity. It needs to be noted that this only occurred in regard to specific points of

consequence particular to the participant or relevant to a minor component or label within an exhibition. No barriers were found to be duplicated between different sets of participants within the same museum site.

The most common example of exhibits as barriers to learning was connected to participants seeking greater information regarding specific objects. For instance Bailey commented that she read the text regarding objects which held “a particular interest” to her and because of her interest desired “a little bit more in depth about each.” As stated previously the expectations of visitors varied. Consider Nancy who told of how she will pass an object that “doesn’t have a description; then I’ll go find something that has more information attached to the actual exhibit” while Barbara interrupted and announced “And I do just the opposite.” Participants recognized that they may at times merely overlooked information. “If I didn’t see it somewhere I figured we might run into it as we were still going around,” remarked Wendy. On several occasions participants were observed to miss components as they toured museum galleries. Twice participants claimed difficulty or the inability to find object descriptions.

Of interest was how participants reacted to such barriers. Often they expressed the need to pursue questions independently or as follow-up as did Bailey, Kirk, and Charles. Depending upon the reason for their visit, others talked about simply needing to, as Barbara coined it, “move on.” In only one circumstance, in the case of Everett, was a participant actually observed engaging a staff member in pursuit of a question regarding the exhibition. Stephen anticipates such barriers whenever he visits a museum and offered a unique solution:

When I visit a museum I intend to come back. So first I take a walk. Sometimes I think I recognize painters maybe I’m wrong, so I just want to identify some I don’t know so I just go over names and then I think about it after and then I come back. There are too

much pictures to see, to see them really, I mean deeply. You must first select what you want to see.

True to his word, he revealed in later correspondence that he had returned to the WAM the following day.

Additional individual encountered instances or unique barriers to learning were suggested by participants. These included a lack of international perspective and the prohibition of being able to physically touch objects within the display. Thomas desired museum galleries to be more internationally inclusive covering in addition to the local historical events simultaneously “what was happening in China or India and Europe and UK and France and Germany... I would love to go to a museum which does it all.” Wendy wanted to be able to touch certain pieces of art: “I frankly don’t see why you shouldn’t be able to touch a metal sculpture... I don’t even think I realized what I was doing until the guard came up and said something.”

Integrating physical space

The presentation of the objects and related text within the exhibition also integrate physical space both within the exhibition and the greater museum. Exhibits shape and guide learning within and around this space. The utilization of such space can contribute and detract from the learner’s experience.

Participants were aware of physical space in so much as they were anticipating the visual environment of the museum to pleasantly contribute to their visiting experience. “It’s something that you do expect in a museum” commented Larry. Participants regarded the physical surroundings in close importance to the actual exhibition content. According to Edward:

You know when I walk into a museum; a lot of the museums have these beautiful grand staircases right when you walk in. So here I am, I'm going to be looking at beautiful art but part of the art I'm looking at is the building itself.

Stephen summarized that American museums for the most part stress “more the importance of the atmosphere, the pleasure of being in a museum” as opposed to his native French museums that are “more interested in specifics.”

Coupled with this expectation was a desire on behalf of participants for large open spaces within the museum galleries. “I like that there is a lot of room” said Wendy, “I like this space.” Larry echoed this sentiment with “I like open spaces.” When pressed for answers as to why the open space was appealing participants revealed that it served to better facilitate their viewing. Stephen felt the need for “space to rest my eyes and to move from one atmosphere to another one even if it's the same span of time” while Edward explained “I can focus on one thing and not have my attention drawn to six other things at the same time.”

Participants acknowledged that the expansive physical space of larger museums containing numerous galleries and exhibits coupled with the time that participants wanted to devote toward their visit could contribute to fatigue. For example, Bailey and Kirk spent the better part of their Saturday touring the SMP. They spent forty-nine minutes alone in “Man and Machine,” their final exhibition for their visit. Bailey stated “I was kind of getting tired at the end.” Despite his interest in automobiles Kirk reflected the same sentiment “my attention probably did wane there” and as a result “I think we zipped through the cars faster than we did any other area.” Olivia and Edward also discussed the role of fatigue with Edward acknowledging that “we don't necessarily go to every room every time because sometimes we

just get tired.” Xavier affixed a time allotment to his duration for visiting museums “I find I tire easily at museums in about three hours, four hours in a museum is about it for me.”

Utilizing interactive components

Interactive components presented participants with an additional level of experience by affording them the opportunity to interact outside of their normal visual engagement within the exhibition. As over half of the participants were engaged in galleries that did not contain interactive components (SMP and WAM) as opposed to those galleries which did (NMNH and BMA) data regarding their engagement was primarily recorded via observation. This data, although perhaps limited, warrants inclusion as it does provide insight regarding a possible means by which the exhibition fulfills the role as educator.

Everett attempted his hand at one of the interactive components before he concluded that although appealing “wasn’t that important so I didn’t go any further on it.” When asked about why he didn’t try any of the robot interactive components he responded “That doesn’t interest me particularly. I didn’t want to take the time to learn how it goes.” Wendy and Charles engaged briefly with one of the interactive components before moving on or as Wendy explained “I was debating about how much of it I wanted to see” because “you’re watching pictures of the pictures...you just should just go see the pictures; although it was interesting.” Olivia and Edward did not engage interactive components at all.

Kendra completely engaged interactive components in their entirety pulling each drawer; observing and discussing the contents with Larry. Although he watched Kendra engage in most of the interactive components, Larry only actually physically utilized the components once. Thomas was the only participant observed within a gallery not containing interactive components who suggested the inclusion of such components, specifically in the form of working models,

would be beneficial “to understand how a particular feature actually did work” within the machinery gallery. He desired interactive models as well as those merely provided for visual demonstration or display.

In reflection, participants revealed numerous insights concerning the role of the exhibit as educator. The exhibit was found to accommodate learning through effective presentation and textual support of objects and when participants were able to make connections to the exhibition components. Barriers to learning were most frequently associated with limited information provided in correlation relevant to specific objects. Physical space contributed toward learning through providing visual appeal and open spaces and detracted from learning when perceived as cluttered or when resulting in fatigue. Participants provided various reactions relating to interactive components including full engagement, lack of interest, or desire to include interactive models.

Unquestioning approach

This section explores how participants navigate the exhibition and their view of the exhibition as expert facilitator. Although situated within the environment of the exhibition the information presented here is not centered upon the role of the exhibit. Instead the data reveals description and insight into the participants as learners. Three discoveries emerged from participants in this regard: their adherence to a linear path, a desire to see everything, and their comfort in criticism of what they perceived to be familiar.

Adhering to a linear path

The data involving how participants navigated through the exhibition was initially gathered through the observation followed by inquiry during the initial on-site interviews as to why and how they proceeded in their particular self-selected fashion. A majority of participants

were found to physically navigate or travel a linear path through the exhibition, while pausing from one exhibition component to the next. Linear, as utilized here, is defined as following a consistent and straight-forward pattern with the intent of engaging each exhibition component in subsequent order.

A brief description of gallery design will provide for a basic context in which to better understand the physical paths of participants. Two types of general spaces were observed. The SMP and NMNH were situated in circular buildings. The Main Floor of the NMNH wrapped around an inner planetarium and can best be envisioned as an omega symbol with the possibility of the visitor beginning their self-guided tour on either side. Along the outer perimeter of the ‘omega’ pattern were exhibit areas and side rooms with rooms utilizing the same entrance and exit. The SMP utilized various floors encircling (like stacked tires or rings) a center, open atrium. Within the atrium was an approximately one and a half stories tall statue of William Penn, escalators, flags and an enormous mural depicting the history and progress of Pennsylvania. Visitors could depart the escalators and continue along part of the inner circle and into that floor of galleries or continue to the next escalator. “Man and Machine” occupied approximately one third of the second floor outer ‘ring.’ The galleries observed in the BMA and WAM consisted of a series of interconnecting rooms of various rectangular sizes. Some rooms within the BMA Cone Gallery had as many as four entrances and exits with each room in both museums at least having one. Despite medium to large open spaces (with perhaps the exception of the NMNH), various entries and exits, and exhibit components presented without the necessity of chronological or sequential order; participants routinely moved from component to component usually along a distinct perimeter or line of sequential direction.

Eight, or exactly half, of the participants were observed to be strictly linear in their approach without offering any deviation to path. Bailey and Kirk were observed to travel the duration of the exhibition in complete linear fashion. They expressed concern as to whether they had proceeded correctly through the gallery. “Which way are you supposed to go?” asked Bailey. They actually preferred more direction. “I mean it’s obvious that overall you’re going through, I mean it’s a time line” explained Bailey. She continued “they could put up arrows and it would be ok” and then added “I guess you can’t put up too many signs or arrows.” Thomas followed along the outer perimeter of the SMP gallery. His methodical concentration actually resulted in him missing components along the inner perimeter. Upon discovering this at the conclusion of his observation, he re-followed the exhibition along the inner perimeter. Everett basically followed the NMNH from panel to panel devoting much time to reading text and even moving an interactive table station out of his way at one point in order to view the contents of an exhibition case from his standard centered position. He bypassed two of the three side rooms. Leading Olivia through the BMA was Edward. The two viewed the entire exhibition gallery contents, although their pattern alternated from clockwise to counterclockwise in certain rooms. When asked if they followed a particular path during their visit they both answered in unison “clockwise!” Charles and Wendy coursed a linear path frequently referring to their guide book for location reference.

Although still predominantly adhering to linear paths, five participants offered minor deviations to their approach. Barbara followed a highly linear course, although taking a different turn along an exhibition wall from Xavier and Nancy which resulted in a moment of separation. Following Xavier almost step by step was Nancy, who paused on occasion as Xavier at times deviated from his pattern by a few yards to look at items of particular interest and then returned

to the same order. Kendra proceeded through the gallery in linear fashion, although she tended to select randomly different walls to begin in each room (as opposed to clockwise, opposite, right, etc). Larry would sometimes venture in a slightly different direction (engaging with the next painting on an opposite or nearby wall) only to return to the path and tempo set by Kendra. He also addressed his desire of receiving specific directives throughout the galleries recalling a previous exhibition on that day in which “I don’t know what I was supposed to do; it didn’t really direct me to do anything so I didn’t investigate it.”

Only three participants were observed who could be considered as adhering to patterns that were more closely associated with random, as opposed to linear, fashion. All three were visitors to the WAM. Tracey and Carl were observed walking through the gallery in somewhat random sequence and often followed a ‘zigzag’ pattern by walking to paintings on opposing walls rather than following them along a straight line on one wall. Instead of viewing pieces of art simultaneously the couple was often one or two objects apart from one another, with Tracey usually further along than Carl, although at times that also fluctuated. Stephen offered the most pronounced example of random progression. He moved through the gallery at a casual pace, not reading every label. Instead of spending a majority of time reading text, he was observed acutely viewing various specific objects, sometimes standing back or relocating his position to gain a different perspective or angle of view.

Seeing it all

All of the participants devoted at least a couple of hours to their visit. During this time, numerous participants expressed a need to observe everything within the museum or gallery. This they did regardless of like or dislike; interest or disinterest. Entrance fees were a relative non-factor as fifteen participants visited sites that did not require admission.

Everett was the only participant who was required to pay an admission for his visit. “Well first off when I come in I paid a fee to get in. So I like to review everything that’s there.” However, this sentiment was shared by others as well. For example, Olivia commented “we do generally try to look at everything” and later added “there was a museum that Edward really wanted to see...they had to be the dullest, ugliest, paintings I think I can ever remember seeing, and we looked at them all!” When Carl was questioned as to whether he would continue despite not caring for the exhibit at all, he responded “Oh yeah, yeah...you know you got to experience different things, otherwise you’re living in a little box.”

Thomas and Bailey contributed personality trait as a factor for finishing all of the exhibition components. Thomas said, “today I’m alone...I have time and I will finish everything because I think it’s more of a personality trait.” This was echoed by Bailey, “even if I was bored out of my mind I’d probably read just about everything and go through. That’s a personality trait probably.”

Participants generally revealed that the solo limiting factor to seeing everything concerned time. Most participants found themselves finished “after several hours,” according to Xavier, with Nancy stating “four hours is amazing.” Edward explained his duration of “a few hours... then have lunch in the museum here and then drift back home.” Kirk routinely found himself “there for four hours” when visiting museums.

Critiquing only the familiar

Participants rarely criticized or challenged the information which was presented to them via the exhibition. However, an area that participants freely challenged was one that has become familiar with criticism; various forms of modern art. They presented this criticism not from the perspective of museum presentation or accuracy, yet rather from the viewpoint of the artistic

merit of the works and objects themselves. Outside of this topic, the authority of the museum and exhibition remained relatively unchallenged and unquestioned.

Modern art was an area participants were familiar with criticizing. They did not hesitate to express their thoughts. For example, “I do not like modern art either and I think I have the tendency, maybe it’s my lack of understanding of it, that many people have of saying I can do that” stated Olivia. Edward added, “Modern art is something, I didn’t see the Rothko in here but I’ll use him as an example, I can’t understand what it is about Mark Rothko that makes people interested in that.” Acknowledging a sense of close-mindedness Wendy remarked

My son always gives me a hard time because I’m this way about music too. He like you need to try new things you need to listen and I do try but I don’t know I tend to think of things as being art or not art. I’m not as opened minded as I should be.

Disdain was made clear by Carl in “some of the stuff is painful to look at because its impressionist. I don’t need an impression of something I want to see what it looked like.”

Acknowledging this widespread criticism Kendra provided her insight into why this may be a common occurrence. She has observed in regard to more traditional or classical forms of art that “no one ever looks at a painting and says this isn’t art” yet in regard to modern art, “it’s inevitable that you’ll hear somebody say what, what is this?” The reason for this is because “our sensibilities have been trained to think that paintings and certain types of sculpture are artistic. It’s indoctrinated I think into us. It’s just sort of systematic.” From the perspective of learning she has sensed that “it’s hard for people to grapple with things that are not easily understood by the human eye and human emotion” and in frustration become “irritated” and surmise “it’s not artistic it’s just some crap that somebody put in here and now.” She concluded that as learners “we’ve been institutionalized into our understanding of what is artistic.”

In regard to other topics neither the authority of the museum or the appropriateness and value of contents were questioned. When engaged in their thoughts concerning criticism all of the responses provided by participants related to past or additional experiences as opposed to participating sites within the study. For instance, Charles, an ordained and practicing minister familiar with church history, remembered:

We were in a Museum of Methodist History in downtown New York at one of the original churches of Methodism and so there was some stuff in there that I kind of wondered about. It did not agree with some of my memory of some of the history so I went back and looked at some of my Methodist history books and did some Googling and that sort of thing to check out some of that history.

Although Charles questioned the content he did not express his concern with others or with the site. When Tracey, who has served as a museum volunteer and was therefore somewhat familiar with museum operations, was asked to consider how she might disagree with a certain view or bias presented within an exhibit she responded “I don’t know if I would think to question it... I don’t know. I mean, who would I question it with? Carl, a Civil War buff and frequent visitor of related sites remarked that “not being a real historian I don’t have any basis to question.” The strongest reaction voiced by a participant was to reduce visit time. “I often think that history museums are a little bit simplified” reflected Edward which “might shorten my experience there.”

In reflection, participants tended to adhere to a linear path as they moved through exhibitions. They also developed the habit of viewing an exhibition in its entirety, a practice that some identified as a personality trait. Participants considered modern art a familiar topic for

criticism, in so far as it was socially acceptable to do this. They were unquestioning of other subjects or matters relevant to the museum content or exhibition.

Happening upon unexpected discoveries

This section explores the experiences that are encountered and unveiled by visitors as they venture through the museum. Despite initial reasons for visiting, participants are often unaware of what galleries and experience options they may select or which objects they may encounter within the museum. For repeat visitors, exhibitions may have changed or the visit will allow for a different perspective as opposed to occurrences of the past. As visitors venture into their museum learning experience they do so with an open agenda and with the ultimate goal of ‘learning to unlearn.’

An open agenda

Whereas adults will visit museums for various reasons, the manner in which they plan out their time and objectives within the museum is best described as an open agenda. When visiting for the purpose of viewing a special or temporary exhibition or to gather ideas relevant to a specific interest or hobby they will schedule to accomplish these activities. However, they are often left with, even anticipate, ample time to explore additional galleries or to engage in various other museum options. Many of the participants in this study spoke of happening upon objects, components, or exhibits during their visit which were the result of a casual and unplanned walk through of the museum galleries and holdings.

In explaining a typical agenda for visiting the museum Wendy related the extent of the itinerary for her and Charles once they were inside the BMA. She said:

We're not spending the whole day there so we usually doing that as part of something else so we tend to go through and pick and choose the things that sound interesting and I said we definitely needed to go see the things that were only here until August 10th.

While making their way to see the mosaics Olivia and Edward first happened upon and entered the Cone Gallery. Edward explained "well, we walked up the stairs and there it was," in referring to why they entered the unplanned gallery. In another example, Barbara, Nancy, and Xavier had visited with the idea of attending the celestial show. After exiting from the third floor location of the SMP Planetarium the trio embarked on a self-guided tour of the galleries which Barbara exclaimed as "just wonderful to look at" and of which Xavier summarized as "just kind of a fun walk through." Barbara explained that they had ventured into the "Man and Machine" gallery when Xavier had suggested "let's go to the next floor" without any idea of what they were about to see, "so none of us knew what was in here."

Other participants, who had entered the museums without any specific items or exhibits to experience, also spoke of their open agenda. Carl discussed visiting without any specific objectives:

We really don't have any objectives when we come to a museum we just want to see different things and learn a little, experience different stuff. So if we come out of here with one or two amazing things that we saw then that's something that we didn't see three hours ago.

Everett did not enter with an itinerary or with any specificity at all, or as he explained "I wasn't looking for anything really particular today I was just wanted to come in and see" while Larry mentioned casually exploring "looking for something different basically in the next room. If there was something that caught my eye, then that's the room that I'm going to." Tracey, in

describing how she and her husband had actually entered the *Nineteenth Century Art Gallery* said that Carl merely said “let’s do that.” She further freely admitted that “it wouldn’t have been my choice of things to do while we were here but it was not a bad experience to be here...And then I do enjoy it.”

Learning to unlearn

As institutions of learning, museums are places in which participants can engage and interact with unique objects and pieces arranged in thought provoking displays. The appeal of the object or the original and an opportunity to come into visual contact with it allows for participants to expand their learning outside of viewing a replica or examining a photograph within a book or on an electronic screen. However, their visit is more about experiencing new or expanded concepts, it is also about the need to unlearn previous thoughts, ideas, or biases, which upon their experience can be unmasked by new exposure and new thought if the opportunity is recognized and enabled from within the participant. In brief, they can learn to unlearn.

Participants discussed that museums by their very nature allow for experiences that provide exposure or introduction to various culture and heritage. For example, Charles reflected upon the BMA Pre-Colombian exhibition of which he stated provided him with “just an awareness that there was so much heritage. There was something very, very rich here before Anglo - before western people got here and it’s a good reminder it’s not just about us.” Museums have always held objects and curiosities containing information of different or past civilizations. As Carl explained “the Muslim exhibit downstairs...pretty interesting,” these exhibitions can expose visitors to a wider perspective when current events paint a different and inaccurate picture. For Carl, the exhibit:

Just brought a different culture to light and saw a different perspective to something that sort of got a bad tone to it these days you know it's really not the culture it's just people... So it was really interesting to see how they kind of expressed their feelings in their art.

Everett spoke of the advantage to visit museums regarding local history for the benefit of being exposed to the unique, regional or situational aspect of knowledge regarding the topic. "The local lore is probably the first thing I'm interested in and then the history of the local area," he said.

In addition to heritage and cultural exposure, participants commented upon the museum experience as being one in which they learned to unlearn by seeing through a new lens or with fresh, unrestrained ability. "Well of course the displays many times are geared specifically for a certain angle to look at things; and I try to put myself in that situation," remarked Everett. The perception of simply being in such a situation presents a certain element or attainment of freedom in itself that is unavailable elsewhere. As depicted by Thomas:

You have natural constraints on yourself, you can't go back in time and you can't go forward in time and you can't travel with freedom... When I go to a certain place like a museum what I see there is I'm freely traveling across time and continents and I'm looking at things which I cannot otherwise. I have a freedom to go to places that I cannot otherwise.

A part of what makes learning in the museum interesting and exciting, according to Kendra, was "to be able to walk into a gallery and see things that are different forms of beauty or different ways of looking." In another illustration, "So in some sense one of the things that going to an art museum does is to look again through the artist's eyes" declared Charles, "and the artist's eyes

are clearly not like my eyes so that helps me to remember, to see in a different kind of way.”

Larry came to the museum prepared for such experiences and stated that “your own education about the world and about different times in history will equip you to then take on that lens to put on the medieval lens or the eighteenth century lens and say ok I understand.”

However, prior to obtaining some new knowledge, learning to unlearn is first about seeing in a different light or perspective. It is as much seeing or attempting to understand ourselves as it is someone or something else. In an electronic message as a follow-up to his visit Stephen addressed this concept in greater detail and specifically to modern art:

The ‘purpose’ of Modern Art - since it has been freed from accuracy by photography - is to make familiar objects and figures unfamiliar, is to make us see anew things we are so used to we don’t see them anymore. They are lost in the surroundings. That is exactly what I call "TO UNLEARN.”

Unlearning, or seeing in a new dimension is both difficult and rewarding. “For me the challenge is always to see something in a new way. What I enjoy is... intellectually to be able to say I haven’t thought of it that way, I haven’t looked at it that way before,” stated Charles.

Inevitably for these participants, learning in the museum is as much about unlearning and seeing or appreciating in a new light. Charles attempted to relate this concept to his experience as a minister.

“I take scripture passages that have been preached about for two thousand years and the classic example...clergy always dread Christmas and Easter because what do you do new? You know people are going to come and they want to hear the same story and we joke about you know they come to see if the baby is still in the manger or see if the tomb is still empty but there’s a challenge, to kind of ok -what’s a fresh perspective? What’s a

different way of looking at this or thinking about this then what we've heard before? So that agenda fascinates me, I kind of love doing that.

Adding an appreciation for seeing what may have been viewed differently in a dissimilar time or culture Larry added: "Because you look back, maybe not today...because by today's standards sad to say maybe it wasn't beautiful but the artist found some beauty in drawing...to reveal something, to show something." Stephen equated the need to disconnect:

After all, that's also what visiting museums is about; to disconnect with the practical, to waste time in front of mysterious 'windows,' to refrain from comparing those curious orange apples with the apples you ate yesterday, also to connect with your memories and forgotten feelings, to see things you previously ignored, to see things where you didn't know there was anything to see.

Having found her museum experience as a means by which to "reflect upon ourselves and have a moment of thought about how we've gotten to where we are...I think it's a chance to reflect on your own image of beauty and your own way of seeing the world," stated Kendra. At some point, Stephen notes, "we learn again when we come to a museum. We spend time, we are idling in the museum, we are dreaming, we are maybe conversing with old things with new things. In French we say we're killing time."

In reflection, participants happened upon numerous unexpected discoveries. These discoveries proved a common occurrence in the participants' experiences and added to their learning. An open agenda only accommodated the likelihood of such continued experiences. The extent of learning varied among participants with the most engaged and perceptive learners revealing a process by which occurred learning to unlearn.

Making connections

This section explores the assorted means by which participants make connections to the exhibition and the various pieces of information encountered within the museum. These connections come from within and are quite personal to the participant. Individuals can make completely different connections to an exhibition component and some no connections at all. However, the data revealed that making connections occurred through previous experiences and invoking emotion.

Through previous experiences

Participants frequently discussed their prior experiences in connecting with their current museum engagement. Often participants would cite an example from another museum visit or similar past event in order to explain their response to a particular question or discussion point. As previously covered it was often their past experiences, commonly expressed in the form of interests, which had brought them into the museum to begin with. Therefore, they relied on these experiences as their library of knowledge and regularly referred to them as they embarked upon their present museum journey.

For example, Kirk has an interest in military history, particularly that of the Civil War. While he was visiting the SMP with his sister Bailey, he happened upon several large sized oil paintings depicting the Battle of Gettysburg by Frederick Rothermel. He very much enjoyed the paintings and made comparisons to other works he previously observed at the Virginia Military Institute (VMI) concerning the Battle of New Market. In his words:

“It’s similar to other oil paintings that I’ve seen of similar battle scenes. Having gone to VMI there’s the one of “The Field of Lost Shoes” where the cadets charging across the field there, and it reminds me of that, you know, because they use the same similar color

styles for cannon ball explosions, the red and yellow, and the battle cries and the flags waving on a charge. I visually see that and then I fall back to the VMI one as well because I've seen that one so much more.”

Kirk explained that these types of comparisons based on previous experiences is how he formulates connections by “selecting bits and pieces from one museum I've gone to in the past and another into the museum I'm visiting at that time and just building upon general knowledge of the subject.”

In another instance, Thomas spoke of utilizing personal experience in filling in gaps or for lack of information. He explained that although these past museum experiences are not as sharp as he might desire “I don't remember facts, you can't remember dates and so on and so forth” that they still provide for a foundation for making connections in that “you have vague ideas.” In this way he believed that one can come close, in his case of making time connections between exhibit components in the SMP with components he has seen in India. “You know its plus or minus ten to twenty years you're talking about.” He explained further: “So it's that kind of association that comes to one's mind and that is what I was trying to do and I kind of correlate and what I knew earlier with what I was looking at.” Thomas also commented that continued “exposure, as I travel a little bit more, I go to a new place every year” results in making such connections based on previous experiences as “I find that kind of it's happening naturally that I'm trying to... explore more and more... widely in terms of what happened here and so on and so forth. “

Other participants spoke of a personal connection that help them to connect initially and then is bolstered by continued experiences. Consider Nancy, who stated: “The history that interests me is something that I can relate to where I live now; and see what went on here and

how people lived in the same area one hundred or two hundred years ago.” During her follow-up interview she stated that she had since visited museums in the Mediterranean. She discussed that she was able to make connections to such early culture in a relatively distant geography based upon her understanding of past peoples within a local context such as what she had seen in the exhibits within the SMP. In that regard, she connected with the ancient society that formulated Pompeii by having “the sense that these are people living everyday lives, accomplishing the same basic things that we all have to accomplish.”

The process of acquiring these experiences is on-going and occurs over the duration of a lifetime. Larry talked about his on-going experience:

“I guess for me it’s knowing about history and knowing about the time and that itself has been an education that you acquired over your lifetime. If you know something about that period then when you see something from that period you can then put the pieces together and say ok.”

Sometimes, participants encounter information that sparks a curiosity by which is followed by several years before being fulfilled. In explaining her first time viewing works by Monet and Degas, Tracey commented “I look at them and I go that’s what it looks like. This is this name that I’ve heard all these years I can actually now put an experience” with the artists. Stephen connects places he has been to with artwork in which these places are then presented. “I live in France, I live in Paris, I go to Normandy [*lists several other French locations*] and I say, oh I recognize this!” He has further acquired enough experience to make connections with places being depicted “even if they are invented” by the artist from basic components and features of the location re-assembled to achieve desired effect.

Through invoking emotion

Participants also revealed that they connected to the museum exhibition or components through an invocation of emotion. In referring to emotion in this instance, it is to be understood that some connection was made that triggered a noticeably inner feeling or introversive response on behalf of the participant. Participants often relied on these emotional connections as means by which to further explore particular components or objects or to simply move on in search for other elements that might elicit such a desired inner connection or response. The adjectives and words used to explain the emotional responses to their experiences do not give full justification to how greatly some participants were moved by such sensational and at times even passionate connections. Unfortunately the facial gestures and body language which was used by certain participants to accentuate their feelings was not recorded by the audio device utilized during the interviews.

A common form of emotional connection that occurred was one in which participants found themselves in awe or amazement of the art or objects in which they encountered. Nancy spoke of the overall excitement she felt within the “Man and Machine” gallery and her initial attraction which “was these wonderful authentic representations of the past.” Despite several visits, Everett is still in awe of the exhibition containing animal specimens of taxidermy depicting survival inside of the NMNH. He stated:

I was especially interested in the display as I come in the door. Each time I come in I've always been amazed at how they did those animals. The ox and musk ox and the wolves it's just amazing! It's a great exhibit right of the bat, to me, I mean I'm really interested in it.

Edward, who described himself as having no background in art at all, explained that he developed an intense interest because “I find it so amazing when I look at them.” He claimed to be impressed and affected particularly by a Monet painting which he described as “a bright swirling water scene in the front, then it got very cloudy and murky in the background and that was something!” Wendy iterated that the Van Gogh was so “remarkable” that she had trouble containing her urge in wanting to touch the painting. “I’ve always thought that if I could get a hold of a Van Gogh painting I would love to just touch it, because it’s obviously got ridges and he put the paint on so thick and all that!” Very impressed, Tracey described: “The Degas in there was breathtaking and I stared at it for awhile. I felt something!” Olivia extended her emotional excitement into a very personal connection of closeness to the work of Monet. “I’m still fascinated by seeing Monet’s...we went to Monet’s garden last year.” In describing her experience of coming across a work by Monet within the BMA she exclaimed “that’s one of mine now!”

Participants regularly spoke of a need to be drawn to or to connect emotionally with the contents of the exhibition. “Something in my gut which says - something that draws you to whatever it is,” stated Kendra. Often, the reason for connection was difficult for the participants to identify specifically. Kendra commented:

It speaks to whatever interests me, whatever it makes me feel...Like the shoes, the Picasso shoes, I hadn’t seen that before but I just, I was really drawn to it. Why? I don’t know. It’s like something inside you that’s drawn to someone. You don’t really know.

Similarly, Olivia said that some pieces stand out above others and those are the ones that present a unique connection. She remarked: “There are a number of them in there that just don’t really do much for me but that one just made me feel like sitting down at the table.” Kendra echoed

this sentiment: “It speaks to me more. It’s what I relate to; it’s what I find attractive.” In regard to other objects and components she said “I mean, I think that’s interesting but I won’t spend as much time there pondering it” that is if “it doesn’t say anything to me that provokes a reaction in me, a strong reaction.” Stephen spoke of the objects, indeed the greater museum experience, as kindling and energizing personal emotions.

I am not sure they are teaching me something. I mean a painting for me is kind of curious artifact which questions you, not teaching you something, which questions you.

What this is stimulating in me? What kind of emotions or memories? I don’t know and I think you can find out through your whole life it’s renewed continually.

This “inner inspiration” as Stephen referred to it, adds to the uniqueness of the museum learning experience. It also stimulates learners into further curiosity and action as explained by Kendra: “The paintings that I’m drawn to...I will educate myself about that particular person and that painting based on that response internally.”

On occasion participants expressed an indication of darker or negative emotion. Larry remembered a temporary gallery within the BMA which contained one room comprising of depictions of violence as “disturbing.” Upon reflection he commented that it was both challenging and disturbing and as a result “because I was so disturbed by the motif of this particular artist I didn’t quite even investigate why.” Tracey talked about the despair she felt in viewing a particular painting within the WAM. “I could feel her pain. The picture was something; she was blind, she recently lost her husband...And I could just feel when I looked at her, I felt sadness.”

Also worthy of inclusion is that a few participants mentioned that they had connected to their museum experience through imagination. Through imagination they created a mental

image or depiction of how the artifacts may be incorporated into a credible, at least to the participant, scene. Nancy said:

The covered wagon, the Conestoga wagon I thought was just riveting because you can envision people putting all their belongings in this and actually traveling in it and just looking at the craftsmanship and the dimensions of it and the work involved in producing something like that.

This process helped them to better engage the components and to add a sense of excitement to what they were seeing. “For example, these two are reading together “Pride and Prejudice;” I’ve read it fifteen times before and to be able to picture the Bennett family in a phaeton, which is what their family owned,” replied Barbara.

In reflection, participants connected to their museum experience through personal experiences and invoking emotion. The realizations and encounters that they gained in their observed visit during this study will also become part of their on-going reservoir of experiences for future visits to additional museums and learning endeavors. The role of emotion was revealed by participants and pertained to general feelings that they encountered across various museum sites. However, the examples cited by participants were more common to engagement with artistic pieces or works.

Learning in a social context

This section explores the role of social context in the learning of participants, which can be described as a larger communal situation consisting of various social interactions and dimensions. Participants, upon entering the museum, became a part of this greater collective environment. Data revealed by participants provides insight into four areas concerning social context: how social context was constructed and encountered, group meaning making, social

context intruding upon engagement, and participant descriptions of proper museum social behavior in the form of quiet and respectful etiquette.

Constructed and encountered

Social context was constructed and encountered by participants. It was constructed by participants in their selection of with whom to visit and to the best of their ability, the manner of social setting they hoped to contend. It was encountered by participants in the type of social setting they came across during their museum venture and the random people they met during the ensuing experience.

Thirteen of the participants in this study toured the museum with another person or persons. In this way participants were constructing their immediate social context prior to entering the museum. For example, Kirk was attending the SMP “to help and visit and spend time with my sister, and so whatever she wants to do, I’m very accommodating for it.” Bailey, obviously touched by the remark stated “He’s a great brother.” Kendra and Larry hoped to engage in some social catching up while visiting the BMA. She explained:

This is the first time we’ve seen each other in a long time and we have had a lot of conversations about something going on in my life...So it was a lively animated conversation about outside things; but were related.

The remaining participants who did not attend individually established an initial social environment with the anticipation of engaging with friends, siblings, or spouses during their museum experience.

Participants, with one exception, indicated that is unusual for them to visit a museum alone and only do so in extraordinary cases. “I’m not sure that any of us go to museums by ourselves. I’ll - occasionally I will...but not that often. Usually it’s something I do that is

social,” said Xavier. Larry commented that when visiting museums “when I go I usually go with someone else obviously.” He recalled planning the trip to BMA, “Kendra was in town; I was like hey lets go to the museum... it was good for that reason because I probably wouldn’t go by myself.” During his follow-up telephone interview he spoke of visiting another museum, this time with his sister. “I went with my sister, my sister was in town so once again I told her the same thing; I said probably if you weren’t here I probably wouldn’t just come to the museum myself.” Couples often visited together, or as Olivia clearly stated “We don’t really do much of anything like that apart from each other.” Barbara preferred visiting in larger groups remarking “Not less than three...sometimes bigger groups than that.”

In exception to the other fifteen participants, Stephen actually preferred to visit museums without the company of others. He instead preferred to visit alone. Stephen explained:

You came here to see paintings, to see statues and to see artifacts; things which don’t speak. It’s for the eyes to see, it’s for the legs to walk to get good distance to look at, so you’re inside, you’re not outside, you’re not looking around to see if there is someone to pick or to talk to.

Stephen felt that “when you’re in a museum you’re inside yourself.”

A few participants mentioned that they generally prefer to visit museums when the possibility is greatest of encountering the fewest people. “We try to generally get to a museum when it first opens figuring that there can’t be too many people in there at that time, because the quieter it is the easier it is to think” remarked Edward. Barbara was excited by the prospect of being inside the museum at moments of least visitation. She commented:

There’s so much around you and you’re in a room, in vast long galleries with one other person and it really becomes your own. I think that’s what it is. You’re just totally free

to do what you want, for as long as you want, where you want, when you want. You just feel like you're in - it's a private thing.

Stephen explained that if the galleries were highly populated or the museum was busy that he "wouldn't go." In explaining why, he said "too much people; and...families explaining to the children. It's difficult, in that case I think I'd come back at another moment." In describing his second trip to Pennsylvania that summer, Kirk elaborated how he and his father changed their initial plans to visit the Museum and Visitor Center at Gettysburg National Battlefield Park "to avoid the crowd and everything else" and chose instead a less-visited museum site.

In regard to seeking interaction with other adults Everett responded "No, I didn't come with that idea today."

Regardless of whether participants came to the museum individually or attended with other individuals of their choosing, everyone encountered some form of social context during their visit. This constructed social context was relatively low as the galleries were not particularly crowded during the observation days for the study. On the high end of other visitor population were thirteen additional adults visiting the Cone Gallery during Wendy and Charles' mid-afternoon observation; while only one additional adult was visiting "Man and Machine" during Thomas's morning observation. Somewhat ironically, Thomas was the only participant in the study who was observed to be engaged by an unfamiliar visitor.

The study revealed that participants rarely interacted with unfamiliar visitors. During the observation period none of the participants were observed to engage outside adult visitors, although a visitor did engage Thomas; and Everett engaged a member of the museum staff. When asked why they did not converse with other visitors, the following examples of participant responses were typical. "I'd be afraid of intruding on their experience, plus we're kind of shy,"

explained Edward. Olivia added “We’re not terribly forward.” Kendra offered “There are moments when I spend time absorbing on my own and I think if I do come to a museum by myself I do not seek out interaction.” “Not usually, not unless somebody else asks a question or something,” remarked Wendy. When asked why she and her brother had not interacted with another couple who were also looking at the same exhibition component, Bailey replied, “Well, I didn’t engage because they seemed like they were doing their own thing.”

Participants also mentioned purposefully avoiding others during their tour. Everett said “I know there were some kids working on some puzzle or something in there in the early exhibit on the Indian but I didn’t pay any attention to it. I just went around them” and in doing so he skipped a component of the gallery in order to avoid contact. Stephen remarked, “When I see someone walking in the same path I try to change it, because otherwise we will be in competition for every picture.” Edward also mentioned re-chartering his course, “like when the big group was in there we would have definitely avoided that room until they were gone if we were heading in the same direction.”

Participants were often surprised to even learn that other visitors were within the galleries. Carl responded that he was “not at all” aware of the presence of other people. “I don’t think I really notice other people unless they’re in some way bothersome...if people are not obtrusive in anyway I don’t even notice them,” commented Olivia. Some participants were aware of additional visitors yet not really cognizant of their presence. For example, “Nobody got in my way and I noticed people but I didn’t notice them except for the fact that they were moving,” quipped Barbara. Wendy was “aware that there were people around but not thinking much of it.” Stephen was quite surprised as to the actual number of people in the gallery. “I

didn't even notice there was so much people there. One couple, one young woman and maybe a man by himself that's all I saw."

Group meaning making

Participants described circumstances of group meaning making which were made possible through the social context of their visit. They perceived these social occurrences as having contributed positively to their overall experience. In these situations the social context allowed for constructive and mutual interaction between participants. This interaction occurred overwhelmingly between participants who visited the museum together, who often were unaware of unfamiliar visitors being present in the galleries. Instances also occurred where interaction took place between participants and unfamiliar visitors or staff.

Participants who visited the museum with others were observed quietly discussing their experiences with each other. For example, "If I'm with a group of people that I have a connection with I like to know what their experience is," remarked Nancy. Barbara agreed commenting: "I really like to hear how other people react and you learn things that way... it's much more meaningful and its fun!" Also, Larry spoke of wanting to know of Kendra's reaction concerning various objects and components within the exhibition. "I'll say here Kendra take a look at it, what do you see?" The two will then engage in dialogue.

Museums were viewed as places of social interaction and mutual meaning making in general. For instance, visiting with another person, Larry explained, provides for the opportunity to "talk about things that we saw in the museum and just to talk in general." Kirk was a great help to Bailey in explaining and discussing portions of the exhibition pertaining to the coal industry. As she stated, "Yeah we were talking about that. Like if I had to say, I mean my knowledge of the principles of engineering, manufacturing probably not very good. That's not

my area of expertise.” Kendra explained her process of making meaning almost required another person. “I am a very, I would say I’m a holistic learner. I like to read, look at it, speak about it, think about it.” She continued:

I want him, if he didn’t get a chance, to come back. Or something will jog my thought process, maybe it isn’t about the painting or maybe it’s about our friend Evelyn or whatever it was we were talking about, and I’ll say oh you know with regard to this painting remember? Or I’ll want to share something maybe unrelated but tripped by the painting.

Kendra summarized that she had strong feelings for “a need to connect and also to say, hey I want to share with you” whenever she visits a museum. “My perception is if you have others around you who are appreciating the exhibit, who are ready to discuss a few things with you, then the process is much, more richer,” remarked Thomas.

Some interaction did occur between participants and unfamiliar adults. Thomas was approached by another visitor who offered some comments concerning aviation. Thomas enjoyed the interaction and applied the information to the remainder of his gallery visit. In his own words: “Oh, it was a good comment because what...he said in fact he was also talking about technology flow...Then I was kind of looking for this connection.” Kendra and Larry described a particularly helpful exchange with two volunteers at the BMA. “They really took time to tell us about the museum, what their favorite parts of the museum were,” Larry said. “I don’t know if you would find that amount of helpfulness in larger cities and in larger museums. I’ve never experienced that.” Everett acknowledged “I like to talk to people and you learn so much from other people.” As an individual visitor to the NMNH Everett did seek out brief interaction with

museum staff “I know I asked...if she knew where those come from,” however, only to satisfy a quick curiosity concerning an exhibition component.

Intruding upon engagement

Social context was also depicted by participants to have the potential of a negative or intrusive outcome. Participants described three situations in which they perceived the social context as intrusive to their learning experience or museum visit. One scenario occurred when participants found themselves overwhelmed by a large number of visitors or population within the museum. On other occasions the social context contained a distractive individual or individuals who intruded upon or disturbed the participant. The third situation consisted of a virtually depleted social context or one which was nonexistent of any population. In this latter instance the individual participant became the only component within the social context of the museum and was therefore devoid of any social interaction. Any of these situations could consequently result in a negative experience from the perspective of participants.

The social context was deemed intrusive by participants in situations of larger crowds. As the galleries participants were observed in during the dates of the study were not near maximum capacity participants often reflected upon previous experiences as examples. Kendra spoke of a museum visit in another city in which it was “just wall to wall people.” This hindered her experience and was different than her visit to the BMA on the day of the study. As she explained:

You couldn't go at your own pace you had to go at the pace that the crowd was dictating. And so when you come to a museum that is so leisurely in its layout and in its exhibits you just feel like you have time to meander and wonder and experience it at your own pace.

Larry agreed. In such situations “usually when you look at a painting there are three to four people on the side of you looking over your shoulder so you do have to go at a quick pace.” Therefore, “you do have to move with the crowd,” he said. Xavier voiced his displeasure with large crowds “we’ve walked into museums when it was such a mob scene” that “it was so crowded that you were just kind of moving through and its overwhelming there’s just so much in there but you’re just you’re shuffled through like cattle!” The result of such a social setting is that “the people interfered with the experience,” recalled Nancy. She continued “you couldn’t really sit and ponder and observe the different exhibits the way you would if no one was pushing you or trying to get space to look at it forcing you to move along.” The problem of dictated pace was viewed negatively by Thomas who mentioned “of course sometimes the big crowd, if it is not willing to move on it can cause a problem...that’s the negative side of it.”

The social context was also deemed intrusive by participants in situations of a distractive individual or individuals. Olivia and Edward encountered a few individuals who they found distractive during their visit to the BMA. “I don’t know if you noticed but they were kind of talkative,” said Edward to Olivia. She noticed, replying,

The one down stairs, which is part of the reasons we quickly went through the gallery and didn’t pay much attention to the one gallery, is because the people were being very obnoxious...carrying on a conversation in a normal voice. I kind of prefer museums to be a little bit more quiet so you can concentrate.

Wendy mentioned a couple of occasions when individuals had passed in front of her in a previous gallery. “We’ve been particularly grumpy about people getting in the way,” she said. Nancy found “the less distraction you have from the outside the more you’re able to focus on the reason that you came there” replying:

That's why it's always, I mean nicer to not be sharing. I don't want necessarily someone else's experience [*outside of her immediate group*]... I don't need to know what the general public's is. I don't have any interest in what those people down there think about the exhibit.

In describing a particular individual Larry said "one woman twirling her sun glasses around... and she was just going like this [*gesturing with his hands*] like what is this...it distracted me." When asked by Kendra "were you just irritated that she didn't appreciate things the way she should have?" Larry responded "Maybe that was it. At least she didn't appear to appreciate it."

The social context was deemed intrusive by a few participants in situations of virtually depleted or nonexistent of any population. In these situations intrusive may be better understood in its less common definition as depriving participants of an opportunity for further engagement. Bailey and Kirk sought to engage others into a discussion concerning some exhibition components. "Well if there was somebody here I think we would have, I think we would have asked them. I would have asked them yeah, definitely," she said. "Readily available, nearby, we might have asked a question or two, yeah," echoed Kirk. Thomas was disappointed in the sparse number of visitors on the day of his visit to the SMP. "I found that in some galleries there was absolutely no one," he stated. His perspective of desiring more people was in contrast to that of most of the other participants in the study, of which he seemingly acknowledged as perhaps a cultural difference. Continuing, he explained:

I found that again it's too static for me. See maybe it's cultural so I don't know. I'm used to a little more noise, see they're too many people in India. So I'm used to a high level of motion and this is too static.

For Thomas, the greater presence and the accompanying noise of people interacting and moving about the gallery “would definitely make it more interesting to be here.”

Quiet and respectful etiquette

Data retrieved during the study revealed insight into the social etiquette expectation on behalf of visitors to the museum. Each participant formulated their own definition of social etiquette for how adults are to act when they are within a museum. These definitions established the parameters as to participants’ perception of a positive or conducive social context or preferred learning environment. Three elements were commonly revealed in their descriptions: quiet tone, sense of space, and respect. Olivia briefly summarized all of these components by stating her expectations of others as being “quiet, respectful, don’t walk in front of people!”

Prominent among participant response to proper social etiquette was the need for a quiet atmosphere conducive to inner contemplation. Others were not required to be silent; rather they were expected to conduct themselves in muted tones. For example, as Kendra described:

I think that the proper etiquette is to...discuss in a hushed tone because people are thinking and they’re observing and they’re wanting to have - I feel like museums are somewhat of a Zen experience in the sense that you go there to be alone in some ways, even if you’re in a group, with the art, and if you do discuss it among yourselves at the time you don’t discuss it at normal vocal levels.

Barbara expressed the need for a “kind of quiet talking, no posturing, nobody wants to be standing next to somebody who’s giving a lecture to his companion. I don’t mind hearing something interesting, but I don’t like to hear people kind of holding court.” Visitors, according to Carl, should be “cognizant...that they aren’t overly verbal so that people can focus and pay attention to what they’re doing.” The reduced level of sound was perceived as necessary in “a

setting that calls for the ability for other people to quietly contemplate things,” remarked Olivia. “If it’s something that should be quiet well you should be quiet, but most museums aren’t quite that strict,” added Everett. When this sound level was breached it became intrusive, or as Edward commented, “If they’re standing there having a loud conversation or yelling at each other across the room my attention is distracted from what I’m looking at.” He continued,

If they’re going to talk they should talk in kind of a low voice loud enough so their colleagues or whoever they’re with can hear them but not so that somebody across the room can hear every word their saying.

The use of cell phones was commonly referred to as a pet peeve by participants. For instance, Xavier exclaimed, “Ill mannered nowadays...because no matter where they are they tend to be yelling into a cell phone...I don’t want that in church, I don’t want it in a museum, I don’t want it in a theatre!”

Another participant response to proper social etiquette was the observance or sense of personal space. “If I’m standing five feet from a painting and somebody walks and stands three feet from the same painting then I’m not able to see anything,” noted Edward. “I’ve gone to the various things and somebody, they will stand and be in the way of a display and not even recognize you,” stated Everett. Visitors should be, as Larry described:

Just kind of aware of others around you and just a sense of space and a sense of, I’m preferring to look at a particular piece, how long you spend in front of the piece and just to be conscious of people around you.

Charles added “Yeah, as long as people observe decent museum etiquette and that is to not block the way or keep moving.” Participants found this disruptive and a nuisance, or as Wendy fumed

“the thing that bothers me more is people who block you’re view a lot like they stand in front and make lots of comments and stuff and don’t move back and out of the way.”

The word respectful was habitually used by study participants to describe the proper etiquette toward other visitors as well as a general form of reverence in regard to the greater purpose of the museum and the significance of the objects within. When asked to describe what she meant by respectful Nancy replied “understanding that other people also want to look at the things so that you have to basically share the experience with other people.” Bailey expressed her opinion that all visitors should be “respectful, definitely don’t touch, definitely very respectful.” This idea of not touching was repeated by Kendra. “Proper etiquette is to move about the museum in a respectful manner to not be touching things and...do not disturb someone else’s viewing and discussion.” Charles provided his expectation of visitors to show a greater sense of respect for what he believed is signified in general by a museum.

There’s something to me that’s sacred about that space and so people need to be, need to shade on the side of reverence. That is to say people need to be quiet, people need to be respectful, you don’t make a lot of noise, you don’t make a lot of movement in those places. I’m in awe of those kinds of places and it breaks my awe when people are somehow less then reverential.

The data revealed that participants also were cognizant of their own obligation to meet this proper social etiquette. Barbara seemed somewhat concerned if she might not have met her own expectations of the etiquette standards stating, “Maybe we were noisier than we should have been but we seemed to be the only ones there that day...but if we were I apologize.” This concern also seemed to be held by Kendra who somewhat hesitantly said “Ok, I don’t know if Larry and I were properly behaved.” Edward expressed that “people are there to enjoy their

experience and so you shouldn't intrude, or you should intrude as little as possible, on their experience; and it's easily done without ruining your own." This was also reflected by other participants, for example, "I try to be courteous in that respect," answered Everett, as well as "considerate of the other people that are there." Tracey spoke of simply mirroring the behavior of others within the museum.

I lack etiquette in a lot of areas so for me the etiquette is whatever is kind of happening around me...I mean if everybody was kind of being joking and jovial and talking as they were walking through exhibits I would probably do it also.

Her description stood in contrast to the others in that it was not preconceived and was flexible to the actual environment.

Participants were also observed to generally keep their voices low and non-disruptive of the surrounding atmosphere. For instance, although Kendra and Larry spoke with what may be considered normal-tone or at least a higher conversation volume when compared to Bailey and Kirk, it was consistent to the gallery they were visiting and was not observed to be out of the ordinary. Another example was Carl who engaged in normal-tone conversation with Tracey, which was typical of most of the male participants and was seemingly in-place within the atmosphere of the gallery. On the other end of the spectrum were Olivia and Edward who engaged in speaking only in a whisper. None of the participants were observed to step in front of other visitors or to show any levels of disrespect as was previously described.

In reflection, the social context played a significant role in the experience of participants in the study. Participants constructed their own social context as well as encountered social context. They generally tended to avoid times of large visitation, rarely visited alone, and quite often avoided others during their tour. The social context allowed for group meaning making.

Interaction did occasionally occur between participants and unfamiliar adults, although most were seemingly unaware of other visitors within the galleries unless they were bothersome. Social context had the potential to intrude upon the participants' experience when they deemed it as overwhelming in number of visitors, were distracted by an individual or individuals, or in the case of the social context being virtually depleted of population. Participants defined the proper social etiquette of visiting the museum as one of quiet tone, sense of space, and respect. Participants were cognizant of their own social actions and were observed to be within the parameters of their definition of etiquette.

Outcome of museum visits

This section explores the outcome or aftermath of the visit from the perspectives and post-visit actions of participants. A majority of the findings for this section emerged from data collected during the follow-up telephone interviews with each participant, or in the case of Stephen, follow-up electronic correspondence. While actual times varied between participants, the average amount of time that lapsed between the initial visit and the follow-up interview was about eight weeks duration. Through these conversations participants revealed insight into how they remembered obvious or unique experiences, pursued questions or discoveries encountered during their engagement, visited other museums or similar institutions, and discussed or mentioned their initial visit to others.

Of special note regarding this section is that several participants initially did not recognize or acknowledge any reflection or thoughts concerning their experience, only to discuss them in detail a few minutes later. For example, when asked about which exhibits she had thought about, Barbara stated "You know I really don't know that I can say that I have." Later in the interview she discussed her thoughts concerning the exhibits. Larry answered "no, actually,"

in regard to inquiry into discussion with Kendra following his visit only to state less than four minutes later when re-asked “we did talk about the museum and you know how we’d like to come back maybe at another time,” along with several other details included in their discussion. Tracey indicated during the start of the telephone interview that “until I got your email I hadn’t really thought about it much at all but then I started thinking about the exhibit.”

Remembering the obvious

Most participants indicated that they had reflected upon their museum visit during the weeks following the experience. They spoke of remembering facets of their visit which had peaked interest, later became relevant in another situation, or which were unusual. These topics reflected the various discussion points and perspectives that participants had interjected during the initial interview.

Several participants re-detailed highlights of their visit which had sparked an interest. Thomas recalled four specific features within the exhibition. “ One was of course the earlier steel production process number one, number two the automobiles - the cars, number three... the railway system and number four the aviation, early aviation machine.” He continued by discussing features of the exhibition that left an impression and had added to his overall knowledge of his interest in transportation.

It actually demonstrated how early there was the station and the rail trains. There were two features in the cars; one was the suspension using the leaf springs... there was also a mechanism that made it easier for the car to take a turn.

Similarly, Kirk reiterated the portion of the exhibition that had talked about Sunday driving as well “the steel production in regards to the use of coke.” Wendy reminisced about the Cone sisters and their incredible collection of art that she experienced inside the BMA. “I just loved

that part, the idea of you know all of the art they had there in the house...that still stands out in my mind possibly more than anything else.” The phaeton and other carriages were still prominent in the minds of Nancy and Barbara. Nancy said that the “vehicles from the time period that we were reading about in “Pride and Prejudice” still stood out in her mind while Barbara stated “it was just interesting seeing some of the carriages referred to in the books and I’m just kind of interested in general in how people lived and how they got around.” Stephen reflected specifically upon his encounter with some art work that had a trans-Atlantic connection.

I am glad I had the opportunity to discover paintings by the rather forgotten Léon Bonnat, for instance, at the Walters. I knew the name – as I told you, there is a Léon Bonnat Street in Paris, in the 16th arrondissement where I live, but I didn’t even know he was a painter.

I have learnt something about a small part of my everyday life!

He also spoke of comparing his experience at the WAM to other museums he had previously visited. “I couldn’t help thinking of my visit to the Getty Museum in Malibu thirty-five years ago and to the Hammer Foundation three years ago, they are in the same family.” He continued by stating that all three shared “testimonies of immense wealth and dedication to the Common Good,” although he pointed out “less of that in the Hammer’s case, who was obviously interested in tax deductions.”

Other participants reflected upon a profound, perhaps moving, appreciation for what they had experienced. “That Degas still really sticks out in my mind,” recalled Tracey. She continued:

I thought about why I liked it...and why artwork is so, to me at least art is emotional it has to grab me and stick with me in order for me to remember it,...but it was an

emotional thing when I saw it, it just hit me so I think that's what makes me remember that specific piece, the original piece.

Also reflecting this comprehension and gratitude, Charles commented, "I've learned to appreciate things without having to own them. I'm very thankful that I can go to a museum and I can appreciate a Monet without having to own it."

Recollections gathered from the museum visit became relevant to participants in understanding additional experiences. For instance, Kirk recalled some weeks later while he was driving over a particular bridge that he was able to reflect upon its architectural design and construction due to what he had encountered while touring the SMP. "It's just strange things that pop into your mind at times you kind of recall when you've seen something similar," he said. Bailey discussed how her visit continued to help her in better understanding her new home state of Pennsylvania.

The museum, it's been helpful for me because I'll get little bits and pieces of information and it kind of sometimes helps me put it together in an overall picture because I'll be reading something and then I'll be like oh I heard somebody mention that so then it kind of clicks...like I didn't know the state song or the state bird or the state animal or the motto or anything or even what the flag looked like until I moved up here.

Summarizing why she continues to find her experience to be helpful, she added, "The museum sometimes helps me make connections."

Participants also tended to remember unusual circumstances or situations. For example, Kendra reflected upon the temporary exhibition within the BMA where she and Larry had observed pieces of art reflecting scenes of violence. "Larry and I had spoken about it quite a bit after we left the museum and he was quite taken with one of the things, so I have perhaps

thought of that more than anything else,” she said. Several participants contemplated upon the unique experience of being engaged in a research study. “It was kind of unique to have that experience... I’ve never had it happen before. I’ve been in museums all over the world but I don’t know that I ever ran into somebody that was doing a study,” remarked Everett. He found the experience to be personally insightful in pondering how he actually does “look at things” when visiting a museum. Wendy spoke of how the study caused her to remember her initial interests in museums as beginning in childhood and as a result she was talking to her mother “and just saying to her how much I appreciated that.”

Pursuing questions and discoveries

The initial museum visit resulted in participants expressing questions or items of curiosity which were kindled or discovered during their experience. In the course of the initial interview participants often posed questions or ideas along with the personal intent to pursue these topics following the museum outing. These topics were revisited in the follow-up telephone interviews. The data revealed a mix of outcomes with some participants having pursued or pondered questions while others had not.

While inside the BMA Charles mentioned his fascination with the Cone Gallery, in particular the contributions of Claribel and Etta Cone, “who are going to buy stunning amounts of art and its interesting, so what’s the context of their lives?” Upon the second interview he revisited the topic:

I did some research about the Cone sisters... because I really wanted to know more about them and in particular you know where did their money come from? How did they get the money to do this and what was their background? So I went on-line and looked up some history about them and that was really interesting.

Edward had visited the BMA with the intent of observing the various mosaics. He said “in follow-up to our discussion where I had mentioned the mosaics in that museum we didn’t get to see in Malta I went back and pulled up the pictures that I remember seeing.” Pursuing his interest in Native Americans, Everett spoke of conducting “more reading on the Susquehannock Indians” that he had observed within the galleries of the NMNH. Describing his pursuit as on-going Thomas elaborated continued research into technology similar to what he had viewed within the SMP as “something that is close to my heart, technology progression, why does it take place, how does it take place, these kinds of questions; and I’ll keep coming back.” Stephen actually did come back to pursue discoveries at the WAM. “The day after we met, I came back to the Walters to spend more time with the painters.”

Similarly, Bailey and Kirk had expressed their desire to learn more about a few items within “Man and Machine.” In May Bailey had said that she had “an interest in the spinning wheel and the flax wheel so I might head out to Border’s and look for something” while Kirk had stated “we have a lot of books and history books at home. And then... I may Google this just for my general knowledge.” The two were particularly interested in the flax wheel because there was a similar piece in possession of their family. Bailey revealed in August that she had found the “flax wheel actually came from an antique store, it was an anniversary gift for my grandmother...we did have a discussion about it.” Kirk had investigated some other questions that sparked an interest during his visit. “It might have been a week later. I had come home by then and I was messing around on the computer and I was like oh, let me check that out,” he said.

Numerous participants did not pursue questions or discoveries. Kendra remarked, “Pursue any discoveries or questions? No, I have to be honest... no probably not. But now that

you say that, I should.” She continued by explaining “that would be because I’m working twelve hour days. Yeah, no I really haven’t. I can’t lie!” Wendy was less certain, “I don’t recall particularly, I think I may have said something that I was interested in but knowing how much I’ve been coming and going I probably didn’t follow up on it.” Commenting in regard to specific questions, “No, I know I wrote some stuff down but I haven’t actually looked into it any further but I know I wrote it down somewhere,” remarked Larry. Olivia presented an unusual circumstance in which she had intended to utilize the various photographs she had taken of the mosaics to post and discuss with others. Over the telephone she responded, “Well I can tell you that a lot of them are out of focus because not being able to use flash.” As a result she became frustrated and did not actively pursue anything further stating “I think part of the difference between the experience Edward and I have is that since I still work and I’m kind of swamped I really haven’t spent a lot of time thinking about stuff like that.”

Visiting additional museums

Participants demonstrated a tendency to visit additional museums or related cultural institutions following their initial visit during the study. Eleven participants indicated that they had visited at least one other museum, historical site, or artistic garden while only two stated that they had not. The data from three participants simply did not reveal one way or another whether they had visited any additional museums. The nature of these visits varied. Some participants visited additional museums without any connection to their previous experience with the study site. These outings were more reflective of social endeavors or general enjoyment of going to museums. Others attended additional institutions in continued pursuit of interests and expressed connections they were able to make as a result of the initial experience with the study site.

Participants revealed that they had frequented an assortment of museums following the initial interview without any connective purpose to the previous study site location or in pursuit of any on-going interest. These participants found continued visits to be worthwhile and enjoyable. Kendra explained the necessity of such continued museum visits.

Whenever I come to a museum I say to myself how little I know about art and how much I should - number one, spend more time in art's company and two, know more about the artists that I like and the artists that have influenced the art of our own day and how little time I spend on those things. So every time I leave a museum I think to myself - I really got to be more involved in the art world. I have to go to more museums.

Everett ventured into the Roger Tory Peterson Institute of Natural History which is located in his home state of New York. "When my daughter was home last week we visited there... It's the first time I've been there in a couple years... they change displays pretty regularly and this one this time was specifically on his life." Larry and his sister visited the Reginald F. Lewis Museum of Maryland African American History and Culture in Baltimore. Following their daytrip to the BMA, "We've been to a number of gardens or at least two or three gardens since then," remarked Olivia. Meanwhile, Nancy and Xavier travelled to the Mediterranean and Rome where they visited, among other sites, the Vatican Museums. Barbara provided names of about half a dozen museums, including the Massachusetts Museum of Contemporary Art, which she had visited in the eight weeks following her trip to the SMP. She concluded the list with "and in New York City, let's see, I've been... I went to one last weekend - oh I know, I went to the Jewish Museum on Fifth Avenue and Ninety-Second Street last week with my sister who was visiting."

Additional participants spoke of museums that they had visited containing connections to their experiences in the initial study museum sites. “I went to the Franklin Institute in Philadelphia with my children and they have, not exactly the same stuff, but they did have some things that talk about the history of Pennsylvanians and the transportation in Pennsylvania,” said Bailey. She then proceeded to talk about several of the items that she and Kirk had seen in the SMP and related those to what she later viewed at the Franklin. While travelling to Pennsylvania to see Bailey, Kirk took some time and visited the National Civil War Museum in Harrisburg with his father. “I relate one museum visit to another one,” he said. He remembered his visit to the SMP and “thought back to the oil paintings” then “talked to dad about... this huge Rothermel panoramic painting there and smaller, three smaller paintings off the back side, depicting the battle!” Recalling “the thing that I went to go see most of all which were those old mosaics” Edward was able to reflect upon his impression of the BMA mosaics with a trip to Washington, D.C. He stated:

It was last Wednesday I was down at the Library of Congress in Washington looking at the mosaics there and so I was kind of in my mind comparing what I was looking at on Wednesday with what I had seen down in Baltimore.

Now back in India, Thomas took his family to visit the National Science Center in New Delhi. Inside, he “found that there were hundreds and hundreds of people.” He explained to his wife and children what he had seen in the SMP and made comparisons as they walked through the exhibitions.

Spreading the word

At least half of the participants revealed that they had discussed their museum experience with other people. Conversation ranged from recommending the site as a worthwhile visit to an

ambiguous mentioning of relevant thoughts or activities. The following are examples of how participants were spreading the word as an outcome of their experience.

Bailey explained that “definitely I have talked about the State Museum to other people” telling them “they have lots of interesting things down there and I think you guys would have a good time.” Continuing to acclimate herself to her new surroundings her visit afforded her with a topic for discussion. “We made some new friends at the pool and I said to the parents, if you’ve not been to the State Museum you should go!” Bailey and Kirk also relayed their visit to their parents, as they said they would. Thomas also spread the word about the SMP. He commented:

I met a few friends when I was coming back in New York and back in India and I shared with them that I had seen this museum and it was tremendously informative and useful and I told them about my impression of the place.

Everett received a visit from his son, who had also experienced the NMNH a few years earlier, and “I told him about visiting the museum.” Charles made reference to his visit to the BMA in a sermon to his congregation in which he said, “I was specifically thinking about the Monet’s and the other paintings, you know at the BMA.” Discussing her visit to the WAM, “we talked to friends and family about our trip and we did mention that we did this,” explained Tracey. “I don’t know if we specifically talked about anything within the museum but we recommended that people visit the museum, when we were there it was definitely worth going to,” she said.

In reflection, participants revealed various perspectives and actions as outcome to their visit. They remembered and reflected upon the obvious; including those facets of their visit that had originally garnered their interest, became relevant in an ensuing situation, or which were perceived as unique or unordinary. Some participants pursued questions and discoveries they

had experienced during their initial visit while other participants did not. Those who did pursue inquiries utilized several resources including the internet, books, photographs, continued discussion, and additional museum visits to satisfy their post-visit curiosity. A majority of participants followed their study experience with visits to other museums or similar cultural institutions. Several outlined relationships between the initial study site visits with tours of subsequent museums. At least half of the participants engaged in the study spoke of spreading the word to others concerning their museum visit.

CHAPTER 5

DISCUSSION AND IMPLICATIONS OF FINDINGS

Introduction

The purpose of this study was twofold: first to explore the possibilities of utilizing the Personal Responsibility Orientation (PRO) Model as a tool for understanding how self-directed learning (SDL) occurs within a museum environment and second to gain insight into SDL within a museum setting from the perspective of the learner. Research was predicated upon five fundamental questions or topics that served as an underpinning for the study. These areas included: (a) the role of the museum as an educational institution in support of self-direction in adult learning; (b) barriers which may exist to self-direction inside the museum; (c) the means by which learners utilize their personal responsibility to activate learning within the museum; (d) the practicalities of utilizing the PRO Model to serve as a tool for understanding and promoting SDL; and (e) possible deficiencies or strengths of the PRO Model.

The study provides significant perspective into several aspects of SDL. These insights will be covered through a review of the highlights of the major findings and their connection to the existing literature. A discussion and criticism will ensue of the PRO Model, which served as the conceptual framework of the study. The fundamental questions or topics that guided the study will also be addressed. Finally, implications for practice and areas for future research will be ascertained.

Discussion of findings

The study revealed numerous categories of findings. For the purpose of simplicity and accommodation of clarity they have been incorporated into five areas of broad discussion. These categories include the highly educated and richly experienced independent learner, the non-

human facilitator of the museum exhibition or gallery, SDL from the perspective of the learner inside of the museum environment, the social context in learning within museums, and the merits of SDL as opposed to free choice learning.

Highly educated and richly experienced learners

The participants for this study were selected from random visitors, aged twenty-five or older, for observation within the exhibition during the selected day and time of study. The background of these participants represents important revelations about two classifications of learners; as self-directed learners and museum visitors. As a collective population, albeit only sixteen, they provide pronounced characteristics in regard to education, ethnicity, and museum background.

The first striking characteristic of this sample of random sixteen adults is their high level of education as a collective group. All sixteen had successfully completed at the very minimum a four-year college program. Eight of the participants had earned under graduate degrees, five graduate degrees and three had completed post graduate degree programs! Meanwhile, three participants were currently enrolled in additional programs of education; two graduate students and one post graduate student. Although they were not queried in regard to financial income, all sixteen held or were retired from white collar positions of employment. The only exception being Kirk, who was enrolled fulltime as a law student. Occupations included three attorneys, two educators, one publisher, one minister, and one dentist only to name half.

Another pronounced characteristic of the participants was that a solid majority were of white ethnic background. Only two participants classified themselves as being of another ethnicity. Thomas identified himself as an Indian National and Larry indicated that he was an African-American. However, both were highly familiar with predominant western culture.

Thomas was fluent in English, and as a professional engineer had routine contacts with western enterprise. He was visiting the museum as a reprieve from professional meetings in the Harrisburg area. Larry had described of visiting international museums through his global travels and was at that time visiting with his close friend, who was white.

The participants were therefore reflective of traditional white-middle class samples in SDL studies (Brockett & Hiemstra, 1991; Brookfield, 1985b, 1986; Candy, 1991; Houle, 1961), with the notable exception of gender. For this study the balance of gender was rather neutral with nine male and seven female participants. The majority of participants fell within the 40-65years of age bracket. However, three participants identified themselves as being within the 25-39years of age bracket. Only one participant was over the age of sixty-five. These age brackets coupled with their well-educated background mirror the typical adult museum visitor population (Chang, 2006).

The diverse museum background of all of the participants was also impressive. None of these participants had walked into a museum for the first time. A strong number were repeat visitors to the very institutions in which they were observed and even had trouble remembering how many times they had been there before. It was a part of their routine to visit museums whenever and wherever they travelled and could be said to be in possession of 'museum literacy' as described in the literature (Stapp, 1984). In these ways they exhibited personality characteristics that were persistent to learning over time similar to those proposed by Oddi (1986).

Significantly, participants had been socialized into a positive acceptance of museums. A solid majority of participants had been introduced to museums as children. They were socialized by their parents and others to feel comfortable in visiting such institutions while also learning to

value and respect the important and elevated role in which museums play in traditional western society. Furthermore, they were taught as to the expected behavior and proper demeanor in visiting museums and reinforced these actions into the enduring years of life. As adults, they continued to have supportive family, spouses, or friends who shared the same positive image of museums and with whom they could count on to visit a new exhibit or to explore the galleries of an unfamiliar institution. Consequently, participants entered museums with a preconceived image reaffirming the cultural importance of attending such institutions while reinforcing this view with each subsequent visit.

Most importantly, in regard to this study, these participants were self-directed learners. Although greater discussion of participants and SDL is ensued later within this chapter, their reasons for visiting museums labeled them as autonomous learners. These reasons were as varied as the learners themselves, thereby reflecting Houle's (1961) research of self-directed learners holding various views for the purposes behind learning. They were in attendance the day of the study observation by their own free will. They assumed the motivation, planning, and responsibility to initiate the visit and to see it through resembling tenets of SDL within the literature (Caffarella, 1993; Guglielmino, 1977; Knowles, 1975; Peters, 1989; Tough, 1968). They found the endeavor worthwhile and enjoyable (see: Houle). They either visited individually or with other self-directed adults. Some travelled short distances for the experience while others made it a part of their itinerary while travelling from halfway around the globe.

Their reasons for visiting museums were typical of the traits traditionally associated with self-directed learners (Candy, 1991; Eneau, 2008; Knowles, 1975; 1984), as well as those connected with adult museum visitors (Bitgood, 2002; Falk & Dierking, 2000; Rennie & Williams, 2006; Sachatello-Sawyer et al., 2002; Sandell, 2007; Tan et al., 2008). They desired to

increase general knowledge or to obtain a greater understanding of a particular area. They viewed visitation to museums as “mandatory” and regularly pursued new, “exploratory” or continued experiences. They sought out experiences of learning because they viewed them as entertaining. Fun in learning was just as appropriate for these participants as it has long been considered for children (see: Danis & Tremblay, 1987; Tan et al., 2008). When asked why visiting museums was fun one participant responded “Why wouldn’t it be fun?” They visited with the intention of social engagement, with the hope of sharing and learning new perspectives with a special adult of whom they considered close or special.

The only anomaly as a reason for pursuing learning in regard to SDL was the environmental factor of the outside temperature and humidity. However, these adults were familiar with the museum as an inviting and cool (temperature that is) environment in which to visit. Countless other people were enduring the same type of environmental conditions, and despite free admission, did not pour into the museums for an afternoon of refreshing learning.

In deliberation upon this random sample, the population for this study is reflective of the typical white middle-class, well-educated population long associated with SDL. While the findings remain significant to their contribution in furthering our understanding of SDL, the population sample does little to expand our understanding of SDL outside of this traditional group. Indeed the population may seemingly add to the stereotypical criticism of humanism and SDL as being biased toward white middle-class adults (Brockett & Hiemstra, 1991; Brookfield, 1986; Candy, 1991).

The non-human facilitator

This study revealed that the principle educational component or factor for participants during their experience was the museum, usually through the exhibition. While learners were

free to contemplate and select which exhibitions to tour, which components to engage, and the direction by which to navigate their path; the exhibitions provided a basic curriculum and body of knowledge for the learning experience as is well explored within the museum and exhibition literature (for ex: Bitgood, 2002; Falk & Dierking, 2000; Leinhardt & Knutson, 2004; Rennie & Williams, 2006; Sutton, 2007). In a sense, the exhibition fulfilled the capacity of non-human facilitator; unique from the often encountered human facilitator in adult education. Patterns developed in the data even in consideration of the broad differences in topics covered by the participating museum sites. Findings provide insight into the various aspects of the non-human facilitator including the impact of the museum collection, organization and physical space, barriers to learning, and the neutral role of interactive exhibition components.

The impact of the museum collection

The museum and its exhibitions as non-human facilitator were accepted by these self-directed learners as a credible and expert source. Similar to how one may accept a formal human instructor based upon credited degrees, these institutions also carried credentials in the form of the American Association of Museums accreditation, among others. Whether the learners were aware, or even concerned, with such credentials was not necessarily relevant. The institutions based upon their reputation in conjunction with their presentation of objects and art provided enough evidence to be regarded as reliable and believable non-human facilitators of knowledge. They were regarded as venerable institutions of culture and knowledge.

Therefore, an important factor concerning the credibility of the museum as non-human facilitator was the content of its museum collection. The learners expressed on multiple occasions the importance of being able to view objects and artifacts, similar to the study findings of Sachatello et al. (2002), which were distinctly “authentic.” The provenance of these objects

was of consequence to the learners and they often desired to learn more information regarding pieces that sparked specific curiosities or in which they felt they had a personal interest or connection as is postulated within the museum literature (Hooper-Greenhill, 1991; Maroević, 1995; Smith, 1989). Provenance provided credibility and it was observed on two levels; the acceptance of objects as being real and authentic coupled with the excitement in discovering a celebratory association.

Provenance, in the case of authenticity, was the knowledge that these objects were indeed from the time period and were connected in some manner regionally. This proved to be sufficient for the learners. This form of broad historic provenance was observed primarily in the State Museum of Pennsylvania (SMP). The participants there were satisfied and excited by the experience of viewing and contemplating numerous pieces from the past, which held significance due to this basic provenance. Reflecting upon the objects provoked a heightened sense of excitement when individuals were able to identify them with a specific interest. The phaeton resembling one depicted in Jane Austen's "Pride and Prejudice" or the flax wheel similar to a family heirloom present excellent examples.

Provenance was also revealed through a celebratory connection to the object or art. This extraordinary connection elevated the status of the artifact in the view of the learner. The carriage observed by Xavier became much more unique and celebrated when he discovered it had belonged to Simon Cameron. The idea that the art being observed was actually the work of Degas or Monet provided special moments for the learners as they walked through the Baltimore Museum of Art (BMA).

In addition to provenance, the textual and sequential presentation of the objects was significant, adding research to this discussion within the museum literature (Hooper-Greenhill,

1991; Maroević, 1995). The location and substance of the text was particularly of consequence, echoing sentiments expressed by Bitgood (2002). Learners needed be able to find what they were looking for as well as comprehend it. The text was required to be flexible. It had to be brief enough for learners to read it, while more importantly in depth enough for the learners to feel satisfied in the ensuing description as also revealed by Tan et al. (2008).

Organization and physical space

The galleries that were utilized in this study were largely based upon didactic expository design. They used various forms of sequential organization while employing written labels (Hein, 1998; Jordanova, 1989). This appealed to the learners in the study. The perception on behalf of participants that this layout was successful adds strength to the aesthetic view held by certain art museums that visual exposure to objects alone is adequate in facilitating learning (O'Neill, 2002; Vergo, 1989). It also garners support for the major emphasis of museum education to be based upon object interpretation and exhibition development as is standard practice for a majority of institutions (Burcaw, 1983; Hein; Hooper-Greenhill, 1991; Kräutler, 1995; Maroević, 1995; Smith, 1989; Vergo).

The physical space of the gallery also contributed toward the effectiveness of the non-human facilitator. Several of the learners anticipated the space and commented on how the visual appeal and arrangement enhances their learning experience. Learners wanted to find a pleasant “atmosphere,” and expected it. They also appreciated areas of open space. This open space allowed free movement on the part of learners to observe and engage with the exhibition components from various angles. It also encouraged and accommodated discussion and interaction among the learners thereby meeting expectations postulated within the museum literature (Falk & Dierking 1992, 2000; Shapiro & Seidman, 1996). Physical space effortlessly

became an integrated part of the gallery presentation when it was viewed as contributing to the experience.

When the elements of credibility, provenance, meaningful textual presentation, and successful integration of physical space came together the non-human facilitator or museum exhibition was viewed as accommodating learning. Learners were observed to read and interact with textual labels and each other. They relayed stories to one another regarding the objects, pointed out pieces of interest, asked questions and engaged in relevant conversation. In subsequent interviews they contemplated what they had seen during their tour and expressed satisfaction with the experience.

Barriers to learning

However, the non-human facilitator or museum exhibition also presented barriers to the learning process. Self-directed learners described minor roadblocks during various experiences. The most common barriers were related to exhibition text. Learners described a lack of adequate textual description in which they were unable to find an explanation concerning the specific piece or topic they wished to pursue. Learners also described textual descriptions which were too general in narrative and were void of the specific detail they were actively seeking. These textual discoveries mirror similar findings within the museum literature by which simplified labels were generally unappreciated (O'Neill, 2002; Leinhardt & Knutson, 2004). The reaction of learners in these situations varied and is discussed in the section concerning SDL inside of the museum experience.

Another potential barrier to learning included the physical space of the museum. Physical space that learners perceived as overwhelming or containing of too many objects in close proximity was viewed as a negative. Participants complained that such layout resulted in

eye fatigue or difficulty in viewing. Fatigue was experienced in the larger museums where learners began to wane due to the amount of time they had spent within the galleries and upon their feet. Learners provided an average time of about three hours endurance within any museum. A further interesting factor concerning physical space is that when it was found to be intrusive, learners' sense of its presence was heightened.

Additional perceived barriers to learning included somewhat impractical and unrealistic anticipations on behalf of participants; expectations that the exhibits did not or could not meet. Virtually unfeasible for the sake of artifact preservation was fulfilling Wendy's wish of allowing visitors to physically touch the art of their choice. The idea of an all inclusive museum posed by Thomas that covered all geographic regions and topics would be a tremendous undertaking. However, his observation of exclusion of eastern advances in technology may lend credence to the argument that museums largely remain reflective of white European values (Hooper-Greenhill, 1991; O'Neill, 2002).

The neutral role of interactive exhibition components

One area which did not reflect any tremendous impact on the learning experience was the use of interactive exhibition components. Realizing that only two of the participating sites, the North Museum of Natural History and Science (NMNH), and the BMA actually utilized interactive components within the galleries selected for the study, discussion still ensued from participants as to the overall effectiveness of such components. The larger number of learners in this study did not seemingly hold interactive components in any high degree of contributing to their learning experience. Not that they didn't enjoy some of the components in which they engaged, rather they felt the overall attraction and reason for their visit was to experience the

actual objects and artistic works. Only one participant, Thomas, readily brought up the inclusion of such components as an important process toward augmenting their learning.

These limited findings in regard to interactive components actually contradict the prevailing literature in both adult and museum education. The argument for interactive exhibitions as opposed to static displays (Allen, 1981; Hiemstra, 1981) did not present wide appeal among the participants of this study. Further suggestions of over 70% of adults desire interactive programming (Sachatello-Sawyer et al., 2002) and 65% of the visitors in a specific study making the interactive component the first priority of their visit (Tunncliffe & Laterveerde-Beer, 2002) were not reflected by the majority of these learners.

In regard to SDL this discovery reveals learners that feel comfortable in their own approach to the material and context within the museum. Interaction was not limited to the exhibition as it also occurred among learners who had visited the museum with other individuals. However, the exhibition remained the basic and supportive factor in guiding educational activity and was emphatically embraced by these learners as a successful means by which to facilitate their learning experience.

SDL and the museum

The participants in this study demonstrated characteristics and fundamental aspects of learning attributed to self-directed learners. Although the SDL took place inside of the museum environment, the emphasis in the following discussion is geared toward the learner and their subsequent actions. Indicative of the self-directed learner in a museum several insights emerged: the unquestioning adherence by which learners chartered a linear course; learner actions in critiquing the museum; the role of unplanned discovery; personal connections made by learners; and actions for follow-up.

Linear Process

A common observation of the study was the manner by which the participants toured the galleries. The majority of learners followed a linear, or consistent and straight-forward pattern of touring with the intent of engaging each exhibition component in subsequent order. This type of linear touring has been found to be common for adult museum visitors (Bitgood, 2002). It also mirrors initial linear perspectives to SDL that focused on specific and often sequential steps in completing a learning activity or project (Houle, 1961; Knowles, 1975; Tough, 1968). An analogy for the majority of these learners is that they approached the gallery as if reading a book from start to finish. They began on page one and desired to see it through until the last page. Other existing metaphors that have been used to describe visitors' paths in museum tracking studies that applies to these participants includes "culture-vultures" or those who frequently attend as couples, are familiar with museums and tend to tour institutions methodically (Bicknell & Mann, 1993 as cited in Hein, 1998, p. 104) and "ants," visitors who systematically move from one object to another (Vernon & Lavasseur, 1989 as cited in Hein, p. 105).

In contrast to museum tracking studies (Bitgood, 2002; Hein, 1998), a few participants expressed discomfort in that they may have missed something or if they had followed correctly the pattern in which the exhibit was designed for them to follow. These feelings were expressed in light of galleries with numerous entrances and exits and exhibition components which were capable of various progressions in their viewing. Several participants spoke of finishing the galleries in any museum regardless of whether they enjoyed them or not or as one learner explained, staying to read everything even if they were "bored out of my mind," demonstrating their persistence to self-discipline and in completing the learning endeavor (Candy, 1991).

There were a few learners who provided deviations to the above linear course of progress. These participants occasionally travelled in zigzag patterns, proceeded at a quicker pace, chose to skip objects, or tended to select different directions when entering new exhibition rooms as opposed to always beginning, for example, counterclockwise. These types of paths in which learners provided a random, hence non-linear, pattern of touring the galleries are also commonly observed inside of museums (Hein, 1998).

The differences in how these learners approached galleries begin to reveal the complexity of SDL within the museum. Participants exhibited tendencies and qualities associated with that of field independent learners (Brookfield, 1986), such as ability to analyze, demonstrated independence in learning, and firm inner-direction or resolve. However, in conjunction with these characteristics, each learner has also developed a specific learning style, with the majority selecting a manner which is highly linear in approach, thereby reflecting two types of self-directed learners as suggested by Bonham (1989). Therefore, the implications in regard to SDL make a strong case for Bonham's Self-directed Orientation toward Learning (SDOL). Within the SDOL are described two distinctly different learners; one who favors linear thinking consisting of details and plans while the other thinks of learning holistically and is capable of receiving information in sporadic intervals. Either comfort level would result in frustration for the other learner, yet both styles are self-directed.

Critiquing the Museum

However, regardless of path or learning style, all of the participants found the exhibitions to be visually appealing. They expressed high degrees of satisfaction regarding the effectiveness of exhibitions and the overall ability to accommodate their interests. Furthermore, they

continually provided positive feedback concerning the galleries and the content as provided by the museums during their visitation.

In spite of this, there was one area in which they felt comfortable in providing criticism, that of modern art. This was somewhat surprising given the reverence in which these learners held the museums and the objects contained within the galleries. Perhaps these learners have been socialized into believing that it is acceptable to criticize art that is less familiar, as opposed to those pieces now regarded as classics, which as Kendra explained, society has taught everyone to revere. An explanation closer to SDL may be that these participants find such abstract expressions more challenging to understand or difficult to comprehend thereby revealing the level of their own autonomy in relation to the topic as described by Candy (1991). Exhibition of external bias toward this type of art, in order to mask what learners may perceive as their own inadequacies in intellectuality, is deemed socially acceptable behavior therefore indirectly lending credence to arguments of SDL being biased or based upon political, institutional, and cultural concepts (Brookfield, 1993; Collins, 1991; Owen, 2002).

Despite such criticism of modern art, never did any of the participants challenge or question the factual viewpoint or presentation of the selected museums. During the follow up interview several participants were queried as to their past experiences with other museums in calling into question the legitimacy or bias of a particular exhibit closely related to an area of personal interest or expertise. Although answers included further investigation and reducing the duration of visit, none of the learners provided an instance or situation by which they actually approached the museum in person, letter, or otherwise to actually address the matter. A few participants cited their own amateurism, as compared to the professionalism of the museum staff, or lack of ability to address such issues.

Two possible explanations surface for discussion. One contingency for the lack of redress was the introverted nature of these learners. On numerous occasions individuals described themselves as “shy” or not “terribly forward.” It would go against their personal nature to further pursue such a matter.

Another explanation for this phenomenon may be the very personal nature by which these self-directed learners approach their learning. For instance, if they acknowledged or questioned the legitimacy of the exhibit to their own satisfaction for what reason do they need to take further action for the purpose of clarification for learners who may follow? This is a concept which has often been linked in criticism of SDL in conjunction with humanism (Brockett, 1994). Within SDL, humanism provides the fiber by which to accept and validate the responsibility for learning that is understood and practiced by these learners. Throughout the study these learners revealed a private almost closed approach to learning in which events and activities revolved in virtual entirety around their individual preferences and intimate circle of engagement.

Unplanned discovery

An integral part of the SDL experience within the museum was the discovery of previously unseen exhibitions and objects. Most participants attended with the idea of encountering “something different” and planned to spend the majority of their time wandering through the galleries. Those who visited with specific concrete objectives, such as Olivia and Edward in regard to the mosaics, made time for accomplishing the goal; similar to Tough’s (1968) study participants. However, these participants too allowed ample time for additional activity and discovery within the museum.

Therefore, the majority of participants' time was spent exploring all of the galleries or those exhibitions that presented possible interest. Learners spoke of discovering artifacts and works in adjacent galleries or the idea of seeing a few interesting "things." They were making unplanned discoveries. For example, Xavier saying to Barbara and Nancy "let's go to the next floor" with none of the three participants knowing what was within or what they were about to see inside the galleries. This coming across unexpected objects and presentations was an appreciated and enjoyed aspect of the experience and has been reflected in additional museum studies (Dufresne-Tassé & Lefebvre, 1994; Sandell, 2007).

In this way, participants were embarking upon their museum experience with an open-ended agenda. This is unlike other environments of SDL, such as human resource development, healthcare, distance learning, and information technology, where learners may be heavily involved in planning agendas, learning activities, and desired outcomes. Within the museum environment, self-direction is largely influenced by the learner's curiosity for experiencing the context and content of the galleries. Whereas the actual learning and associated meanings reside with the learner; the galleries and the discoveries they contain within, provide for the nonformal educational agenda.

Coupled with this concept of unplanned discovery is the notion of "learning to unlearn." Coined from Stephen during his initial interview inside the Walters Art Museum (WAM), "learning to unlearn" provides a rich metaphor for the process that self-directed museum learners undertake to achieve the maximum benefit from their experience. In other words, for participants to truly gain from their experience, they must seek to continuously learn through a different lens or viewpoint. Participants spoke of doing exactly this; of learning "different ways of looking" or "to look again," of coming to think about ideas and to understand them in a

“different kind of way.” This type of experience is reflected in the very basic premise behind visiting museums in the first place (Leinhardt & Knutson, 2004). However, “learning to unlearn” involves more than just seeing anew, it also requires learning how to discard previous interpretations and underdeveloped concepts; or as participants explained reflecting upon one’s “own way of seeing the world” or engaging “to disconnect with the practical.”

“Learning to unlearn” is a nebulous concept and occurs over the course of a lifetime. It is indicative of the more advanced stages of self-direction by which adults have mastered the ability to learn on their own (see Knowles, 1975) and are in greater control of their own learning (see Brockett & Hiemstra, 1991; Candy, 1991). “Learning to unlearn” can open countless doors to various experiences inside of the museum granting the learner cognitive and inner freedom to transcend different perspectives through time and place while making an infinite array of previously unplanned discoveries.

Personal connections

Participants discussed making connections with exhibition components. The ability of an adult to find some personal connection or meaning is generally regarded as a learning moment within the museum experience (Chang, 2006; Dufresne-Tassé, 1995; Falk & Dierking, 2000). This study revealed that learners commonly made connections based upon previous experiences, through invoking emotion, and through shared interaction with other visitors in a group experience. It also exposed participant reactions to situations when they were unable to access adequate associations for fulfilling their curiosity or understanding.

Past experiences were often used to produce personal correlations for learning. These connections varied by individual and situation as mirrored in the literature (Brockett & Hiemstra, 1991; Candy, 1991; Hein, 1998; Smith, 1989). Participants revealed and discussed an array of

relevant past experiences, many of which had occurred in similar places of learning such as another art museum or historic battlefield. They also referred to past occurrences and encounters, unrelated to place, by which they gained relevant knowledge or had utilized similar cognizance. They used these past impressions to augment and further their understanding of the information presently encountered within the museum as postulated within the literature (Candy; Falk & Dierking, 1992; Knowles, 1975; 1984). It also became obvious that the information and experiences that participants were processing during the current museum visit would also be utilized for similar purposes sometime in the future therefore similar to a lifelong process of SDL (see: Houle, 1992). The experiences of each self-directed learner could be envisioned as pieces stored in a box somewhere within their inner self waiting for the moment by which they may be used to fill some piece of the greater life puzzle or during life's lighter moments, simply as a response for a game or discussion of trivia.

Learners also discussed emotion as a way of making personal connections. In this way associations were made through introversive response or inner feeling such as Tracey's experience concerning a portrait: "I could feel her pain... when I looked at her, I felt sadness." Such feelings were understandably more difficult for participants to verbally describe, yet they provided a powerful inner connection for the learner. Recent research has found emotional connections to be common among adult museum visitors (Sandell, 2007; Tan et al., 2008). Within adult education focus has intensified on the role of emotions within learning (see: Dirks, 2008), however, largely this research is predicated upon instructor – student learning situations (for ex: Taylor, 2008) as opposed to the emotional stimulus provoked through encountering an object within an artificial display such as in a museum. Many participants revealed their veneration and amazement as consanguinity to the objects and artifacts. Others simply felt an

indescribable inner emotional correlation to specific pieces. The discussed emotions ranged from wonder and love to painful and disturbing while contributing to a diversified, unique, and exciting learning experience within the museum.

Participants also made personal connections via group meaning making. This interaction and learning occurred predominantly among participants who had visited the museum with another person or persons. For example, Barbara described the affect of group meaning making with her brother and friend by stating, "I really like to hear how other people react and you learn things that way... it's much more meaningful." Learners actively engaged one another through conversation regarding the exhibition components as well as additional topics of general and social interest. They also demonstrated passive actions by which they occasionally watched engagement by individuals within their group. For instance, Larry intently watching Kendra utilizing interactive components within the BMA; providing an example of self-direction occurring through the observation of others' actions as opposed to actions of their own (Tennant, 2006). This group communication and interaction can ultimately allow for enhanced viewpoints and an improved comprehension of the experience as is postulated within the literature (Crew, 1996; Jeffers, 2003; Knox 1981).

Learners also described times when they were unable to make connections. This usually occurred as a result of a lack of information within an exhibition. When this was encountered, participants initially relied on their past experiences in an attempt to compensate for any gaps, thereby mirroring processes described by Knowles (1984). If this action proved unsuccessful some learners sought outside help when it was available, for example Everett turning to a staff member for further information. Inevitably, if no connections could be made participants resolved to "move on." This decision to move on reflected findings in other museum learning

studies (see: Dufresne-Tassé & Lefebyre, 1994; Tan et al., 2008). However, some participants chose to continue pursuit of connections in the days and weeks following their museum visit.

Actions for follow-up

The post-visit actions of these learners closely resembles findings of typical museum studies (Falk & Dierking, 2000) by which learners display basic reflection, pursue questions and discoveries through other museum visits, books, and the internet, as well as general discussion, recommendation, and spreading the word to friends, co-workers, and family. Study participants described reflecting upon specific events and connections encountered during their visit which had since become relevant in other situations, were peculiar, or had initially appealed to their interest. Bailey discovered more information concerning the flax wheel while Everett continued to read about the Susquehannock Indians. Indeed a majority of the participants took subsequent action by engaging in their self-posed topics during the initial interview following their museum outing.

Surprisingly, however, several participants took no action regarding pursuit or follow up of questions raised during their initial museum visit. Two possibilities may account for this lack of action. For some, life simply got in the way. There were examples of hectic schedules, as matter for illustration, Kendra actually moved in between interviews; frustration, such as Olivia's disappointing photographic results; or hopes of pursuing information in the future, for instance, Larry making a list of topics for future pursuit.

Another plausible explanation is the nature of SDL within the museum. As previously discussed participants often set out with broad or open-ended agendas. These learners were more in quest of a general knowledge experience as opposed to a specific search for information. In brief, self-direction within museums is about exposure to experience. To support this

argument, eleven of thirteen participants (three provided no suggestion) indicated visiting other museums, some multiple visitations, after participating in the study. Included among these continuing visitors were all of the participants who had indicated taking no action in regard to specific follow-up! It becomes clear that the pursuit of museums is a way of life for these adults. Visiting museums becomes a lifelong process by which they attempt to achieve their own personal potential similar to the lifelong pursuit of learning as described by Caffarella (1993).

Social context in learning within museums

Social context may be understood from various viewpoints such as socialization, cultural norms and diversity, political concepts, and hegemony, among others. This study is concerned with understanding social context within the museum environment and its relationship to SDL. Discussion exams a definition of social context, the role of social context, social context and proper etiquette, and introduces the concept of The Museum Social Context Continuum.

Defining social context

Social context within the museum environment was found to pertain of two distinct yet interrelating elements: socialization and social interaction. Participants were continuing to frequent museums after a lifetime of positive socialization including their perceptions toward these institutions, the value they hold within society, and proper actions while visiting. The extent of the social interaction of participants, which is largely concerned with the role that other visitors play in affecting individual learners and their ensuing museum experiences, was also affected and influenced through their previous socialization. Therefore, as a result of this study social context may be defined as the socialized attitudes and actions of learners within the museum environment, including the consequent social interaction which takes place within the museum.

Defining social context raises questions regarding learner control in SDL. A critical viewpoint may argue that too much emphasis is placed upon learner control while learners are instead merely reinforcing their previously conceived notions and boundaries regarding SDL (Brookfield, 2005b). However, when analyzed through a humanistic lens learners are capable of making choices within their socialized environment (Elias & Merriam, 1980). Therefore, it is recognized that although these participants have been assimilated through past influence and socialization they are still capable of constructing or contributing to their immediate social context as postulated by Brockett & Hiemstra (1991).

The role of social context

Social context within the actual museum can be viewed as being both constructed and encountered by individual learners. Learners constructed social context in decisions regarding with whom to visit. For instance, thirteen of sixteen study participants visited with another person or persons thereby constructing an intimate and personal social context for the duration of the experience. Learners also attempted to construct social context by selecting where and when to visit. For example, choosing morning hours often yielded galleries with fewer visitors or attending during the summer or on a weekend avoided encountering large groups of school children. Study participants also encountered social context within the museum. This pertained to the overall audience in attendance as well as chance encounters with visitors as participants worked their way through the galleries and exhibitions.

Study participants, with the exception of Stephen, indicated that they preferred to visit museums with other learners and that they rarely frequented such institutions alone. This finding is consistent with the literature in SDL (Candy, 1991; Houle, 1992; Pearson, 1999) and museum education (Bitgood, 2002; Falk & Dierking, 1992; Hein 1998; Hooper-Greenhill, 1991;

Leinhardt & Knutson, 2004; Sandell, 2007). Other than Thomas, participants preferred to visit museums during times of minimal attendance and appreciated a relatively “private” and almost exclusive atmosphere of interaction among those with whom they attended.

Furthermore, the social manner by which these self-directed learners approached exhibition content and display mirrors what has been well-researched within museums (see: Bitgood, 2002; Crew, 1996; Falk & Dierking, 2000; Jeffers, 2003; Leinhardt & Knutson, 2004; Rennie & Williams, 2006). Rather than individual assessment, adult visitors have been documented to develop an understanding by interaction within the group, usually with people whom they know and are comfortable with in conversation. The ensuing process of self-directed learners discussing ideas and forging new ones through social interaction is also constant with the SDL literature (see: Brookfield, 1985a; Eneau, 2008; Garrison, 1997; Knox, 1981).

All of these findings and the actions of the study participants indicate that the consociation between self-directed learners was predominant. Although exceptions occurred, most notably the actions of Stephen, the implication for SDL is that learning in museums is a highly social experience. While the social settings within SDL have traditionally been ignored (see: Brookfield, 1984) these learners purposefully planned and pursued activities that were very social in nature. They respected each other’s opinions and based their value of knowledge on the reactions they received from others as described by Candy (1991). For instance, Charles valuing art as “influenced” by Wendy or the desire of Bailey and Kirk to recount their SMP visit to their parents in order to receive social reinforcement and approval. Within the social context each learner still internally processed and made meanings and connections that remained unique to that individual as postulated by Brookfield (1985b) thereby retaining their individuality and ultimate independence in learning.

However, a dichotomy becomes apparent as to what exactly this social experience is to entail. While learners demonstrated a flurry of social interaction with those adults with whom they were familiar, participants were generally detached from engaging in interaction with others outside of their constructed group. Learners would even deviate from the course of their own path in order to intentionally avoid unfamiliar visitors. Only one participant, Thomas, was actually observed to have interaction with an unfamiliar visitor. Other learners engaged, if only briefly, with museum staff or volunteers. Consequentially, there was very little social interaction for the three individual study participants, who visited the museum on their own.

While participants acknowledged that they can “learn so much from other people,” they admittedly kept social interaction within their familiar group. The inference to SDL was that these learners preferred “personal” social experiences within the museum. They commonly expressed that other, unfamiliar visitors “didn’t appreciate things” in the same way and that an enjoyment of the visit was that it was “nicer to not be sharing” with those outside of their group.

Adding to the complexity of the situation in regard to SDL the above generalities did not pertain to all of the participants. As previously mentioned Stephen preferred no social interaction at all and desired to visit alone. Thomas enjoyed museums when the visiting population was greater in number and produced “a little more noise.” Everett took pleasure in interaction with unfamiliar visitors at certain times as opposed to others. All of this reminds us that SDL is an individual and personal experience with expectations and outcomes varying among individuals and within various situations of learning.

Social context and proper etiquette

Another factor that informs our understanding of social contact is that it was also found on occasion to be intrusive to learner experiences. Participants described past experiences by

which museums were over-teeming in population. In these situations they were forced to “move with the crowd” and described “overwhelming” population situations in which their learning was diminished. This type of overcrowded presence was observed by Leinhardt & Knutson (2004) to produce similar effect in their study. Other situations involved a disruptive or “obnoxious” individual or individuals who distracted learners through their conversation or physical actions. For instance, speaking too loudly or walking in front of the learner’s view. Interestingly, a few participants described an equally unsatisfactory experience in which they could not find any other visitors in which to interact or to possibly pursue questions, a situation that was completely void of social context.

In an effort to combat intrusive social context, maintain proper social etiquette, and to provide for a perceived appropriate environment of learning, museum learners have accepted an unofficial code of social conduct. Assimilated and influenced through socialized expectations, the code was virtually identical among the various participants and established clear boundaries for the museum social context. Foremost on the etiquette list included a quiet tone or demeanor, observing a sense of space and not blocking the view of exhibitions, and respect for other visitors as well as for the sanctity of the museum.

These codes can be understood as the “domain-specific” (Candy, 1991, p. 303) characteristics of nonformal museum SDL. These skills, along with museum literacy (Stapp, 1984) are acquired through informal transactions among visitors who frequent museums; similar to information exchange among self-directed learners in informal settings as described by Brookfield (1984). Despite the very personal and individual experience of learners within the museum, the manner in which they are to conduct themselves has been very socially formed and

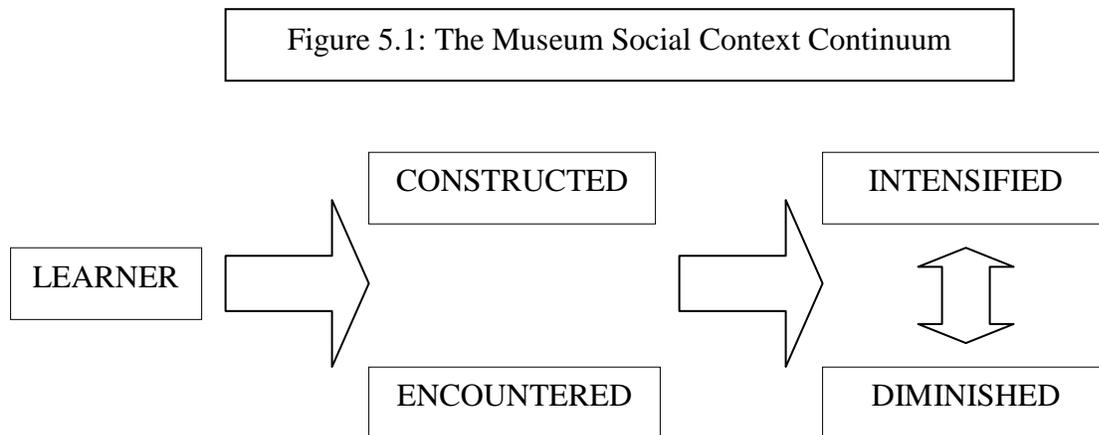
indoctrinated. Therefore, museum settings come with implicit standards or expectations for behavior that both help to facilitate and possibly inhibit learning.

Furthermore, these codes can be interpreted as a method by which self-direction is controlled by an elite group of learners. For the learners in this study a portion of their museum experience was about control. They desired to control the social context by constructing a social setting in which they felt most beneficial. They controlled interaction by avoiding others or by revising their pathway. They adhered to and promoted clear rules of etiquette in order to control and maintain the social atmosphere within the museum. In a capsule these notions and actions of control reflect the best and worst of SDL. While they posit taught reins of learning in the hands of the learner they also impose the learner's views and expectations upon other visitors who may not share the same values. They are also very much reflective of traditional white Anglican social norms and expectations regarding learning behavior and add weight to arguments in which museums are predominantly mirrors of white society.

The Museum Social Context Continuum

All of these discoveries regarding social interaction and its effect on SDL suggest that social context within the museum exists upon a continuum which can be illustrated in a simple diagram referred to as the Museum Social Context Continuum or MSCC (refer to figure 5.1 on page 248). As depicted within the MSCC the learner travels to the museum by constructing their own social context. This includes decisions regarding with whom and when to visit. As they enter into the institution they encounter an existing social context within the museum and its galleries. This encountered context can change and vary throughout the duration of their stay within the museum. Both constructed and encountered components form the overall social

context of the museum experience; the balance of which results in a social environment that will range on a continuum between intensified and diminished social populations and interaction.



The MSCC will have different implications for different self-directed learners. An overwhelming or intensified social context can be found to be intrusive to learning on one end of the spectrum while a diminished context can be found just as obstructive to learning on the other end. Naturally, this continuum is dependent upon the specific situation and the preferences of the learner. For example, Thomas might find a situation with diminished social context more obstructive than Stephen, while Bailey might find an intensified social context less intrusive than Barbara. While in general, the self-directed museum visitors that participated in this study might seemingly prefer a social context somewhere closer to the middle of the spectrum.

The MSCC allows for further reinforcement that SDL in museums remains a unique, diverse, and personal experience based on individual preferences and changing situations. It diagrams possibilities in museums for two concepts as described within the SDL literature. One, that self-directed learners possess power to influence their social environment creating their own

sense of experience (Brookfield, 1984) and two, that “the nature of learning inherently places learners into relationship with other” (Candy, 1991, p. 311).

SDL versus free choice

As a result of this study, an integral relationship between SDL and museums becomes evident. While not every self-directed learner will frequent museums and not every museum experience is self-directed, there is a strong enough connection to warrant greater consideration in regard to combination of theory, concepts, and empirical investigations. SDL provides the necessary elements to construct such an appropriate and academic bridge that can be of benefit to practitioners of adult education, curators, and museum educators. While this study illuminates actions of self-directed learners within a nonformal museum learning environment a great flexibility and advantage of SDL is that can also be utilized to understand similar learning within formal situations of learning (Brockett & Hiemstra, 1991; Grow, 1991). As museums are places of both formal and nonformal learning; SDL can be of valuable implication. Additionally, SDL has survived almost a half century of inquiry allowing for an abundance of scholarly examination, interpretation, and application.

However, numerous museums have been attempting to explain SDL through free choice. The recent trend of museums in investigating free choice learning has enhanced empirical approaches to the understanding of adult learners (for ex: Bamberger & Tal, 2007; Rennie & Williams, 2006). However, free choice does not provide the necessary universal tooling as does SDL between formal and nonformal applications. The nature of free choice in regard to whether learning is theoretically free and the various implications that such concepts and terminology carry from a critical perspective of adult education present further complications concerning this ideology. It is also quite interesting that such a key principle regarding adult learning such as

free choice is not found within foundational texts of adult education literature (for ex: Merriam et al., 2007; Wilson & Hayes, 2000) and has consequently escaped the rigorous scrutiny routinely associated with the field.

From the perspective of this study, adult museum visitors revealed numerous instances that can be interpreted as far more inclusive to SDL, when such learning is compared to free choice (Banz, 2008). Participants commonly approached the learning endeavor as a whole instead of a fraction of selected parts, for example, Stephen's desire to see the entirety of the museum collection. They revealed evidences of SDL as occurring on a continuum. They exercised humanistic notions such as personal responsibility to plan, commence, and complete experiences, for instance Bailey's objective to learn more about her new home state. They provided a distinct code of conduct by which to carry out learning that could be applied to both formal as well as nonformal situations of autonomous learning. While free choice has much to offer to our understanding of incidental learning and various nonformal educational pursuits by adults, SDL offers a broader foundation by which to comprehend adult pursuit of independent erudition.

Revisiting the PRO model as a viable conceptual framework

A significant intent of this study was to explore the possibilities of utilizing the PRO Model as a model for understanding how SDL occurs within a museum environment. As described in chapters one and two, the PRO Model is based on the learner's personal responsibility to activate the learning process. According to the model, learners utilize personal responsibility through characteristics of the teaching-learning transaction and their own personal learning characteristics to achieve self-direction in learning within the social context. For a graphic depiction of the model refer to Figure 1.1 on page 11.

Personal responsibility and humanism

At the heart of the PRO Model lies the concept of personal responsibility. All learning is centered upon the individual who maintains responsibility and exercises control for learning (Hiemstra, 1982). In addition to control the learner also assumes full accountability for their actions (Hiemstra, 1994) and to act in a way of assistance for others (Brockett & Hiemstra, 1991; Brockett, 1994; Merriam & Brockett, 1997). Accordingly in order to support these suppositions, the PRO Model is grounded primarily in humanistic philosophy. It is humanism which provides the basis for justification concerning personal responsibility. To approach this model from a philosophical perspective other than humanism will not fairly account for the rationalization made concerning personal responsibility and the other humanistic tenets within it (Hiemstra & Brockett, 1994).

As revealed by the study personal responsibility and accountability were firmly in the control of learners within museum scenarios of SDL. Within the museum, the learner decided with whom to interact, which galleries and exhibition components to observe, and for the final evaluation of what they had learned. On numerous occasions learners demonstrated their personal responsibility relevant to the importance of pursuing knowledge, broadening their perspective, and investigating their curiosities. They followed through with plans to attend the museum and were committed to completing exhibition galleries. Several learners accepted post-visit responsibility for their learning by taking action to acquire additional information in regard to follow-up questions and ideas that were raised during the museum experience. All of the participants were dedicated to attending and exploring museums as part of an on-going and lifelong effort into learning. Consequently, this study provides further evidence toward the

importance of personal responsibility in SDL and the concept as depicted by Brocket and Hiemstra (1991) can be viewed as a fundamental strength of the PRO Model.

However, while adequately demonstrating personal responsibility, even when considered through a humanistic lens, participants simultaneously raised questions concerning accountability within the study. The chief concern with accountability in regard to personal responsibility was that participants did not present any prevailing attitudes or actions to do anything that was beneficial to those outside of their familiar groups unless it had some consequential personal benefit of return or added to their control, for example adherence to an unofficial code of social conduct. However, even this action could be considered as infringing on those learners who did not fit the same mold of learning as dictated by the code. Furthermore, participants did not pursue biases beyond a personal satisfaction and did not question the institution in any manner, thereby lending weight to the argument of self-direction as a possible political concept (Brookfield, 1993). While humanistic elements of the model clearly allow for a process by which the learner is ultimately responsible for activating learning, it is less specific in regard to the actions that the learner is to engage for the beneficial improvement on behalf of the learning for others outside of their personal sphere of intimate influence. Therefore, a possible weakness of the model lies in the humanistic supposition that individuals can be depended upon to assume accountability on behalf of helping others while this study suggests otherwise.

Process and Personal Orientation

The PRO Model comprises two major learning components of self-direction both of which are linked through personal responsibility. The process orientation or the teaching-learning (TL) dimension includes factors of learning which are external to the learner. An example of the TL dimension within this study is the museum exhibition. The personal

orientation or the learner characteristic (LC) dimension of self-direction involves factors of learning which are internal to the learner such as intrinsic motivation. Instances of both the TL and LC dimensions were encountered during the study.

TL Dimension

Within the museum, the TL dimension of the PRO Model is largely fulfilled by the exhibition in the role of non-human facilitator. Key to understanding the TL dimension in the museum setting is that for the self-directed learner the museum gallery or exhibition may be the only contact and interaction available for learning outside of the inner self. In addition, the exhibition cannot answer specific questions or respond in a personal manner akin to the capability of the traditional human facilitator in the process orientation of self-direction in other situational settings of SDL.

Brockett and Hiemstra suggest numerous variables in learning in which “control is shared between learner and facilitator (1991, pp. 117-118) as a part of the TL dimension. Among variables concerning learning activities, variety of resources, and tempo for learning, the TL dimension was well represented by the non-human facilitator. The TL dimension presented learners with a basic curriculum for learning, a suggested outline or path in which they could follow or customize, and numerous resources consisting of objects, artifacts and presentation with accompanying textual support. The TL dimension allowed learners to determine their own pace and to decide which elements of learning to pursue, revisit, skip, or simply disregard. The TL dimension was not mettlesome and did not hinder self-direction. Learners were not presented with possibilities of conflict concerning interference from the exhibition as can occur from human facilitators as depicted in the Staged Self-Directed Learning Model (SSDL) of Grow (1991).

On the other hand, in regard to variables identifying the needs of learners, meeting expectation of outcomes, and providing methods of learning evaluation, the TL dimension was at best incompletely fulfilled by the non-human facilitator. The exhibition, outside of serving as a learning repository, was limited in its capability of intercession with learners as traditionally understood from the actions of human facilitators. The TL dimension was restricted in its measures of validating learner accomplishment or success and could even risk the potential of providing wrongful messages if misinterpreted by learners (for ex: Sandell, 2007).

Despite this, the TL dimension is not an either-or concept concerning SDL within museums. It clearly existed within the study and played an integral role or component as depicted within the model in the SDL of participants. However, the TL dimension presents a significant challenge to the PRO Model in regard to its conceptualization of facilitation of SDL. Brockett and Hiemstra (1991) advocate facilitating SDL; or that the teaching-learning process can encourage further self-direction through supportive feedback and appropriate interaction from the facilitator on behalf of the learner. The non-human facilitator as the TL dimension in museums is simply unsuited for this task as conceptualized by the model. However, the non-human facilitator does appeal to this group of learners and consequently fosters their SDL interests as is supported by their continued visits to museums.

LC Dimension

Within the museum, the LC dimension of the PRO Model is evident in the internal actions of learners. In the study the LC dimension was revealed by learners who practiced personality traits normally associated with autonomous learning. They were motivated toward learning and viewed such action as responsible and meaningful. Through their routine and on-going museum learning engagements they had banked numerous internal cognizant resources.

They were skilled in 'museum literacy' (Stapp, 1984) and had assembled an array of strategies for internal processing of information and meaning making. They used rational thinking (Brockett & Hiemstra, 1991). They were able to make personal connections based upon past experiences and inner emotions.

Development of a strong LC dimension in self-direction proved helpful to learning within the self-guided museum environment. As previously discussed, these learners demonstrated qualities associated with field independent learners (Brookfield, 1986), for example the ability to analyze a broad topic such as the history of transportation over several museum locations and blocks of time. Participants also routinely practiced a consistent learning style from site to site and time again, as described by Bonham (1989), such as choosing a linear or random approach to navigating exhibitions. They also utilized particular personality traits, for instance the exercise of a number of participants in always completing a thorough tour of the gallery regardless of how uninteresting they may perceive it to be.

As conceptualized within the PRO Model the LC dimension is separate from, while also simultaneously linked to the TL dimension in learning. Within the model Brockett & Hiemstra (1991) advocate that learners can strengthen their LC dimension to learning through facilitation and assistance from the TL dimension. However, as previously introduced, in a setting such as the museum environment, the TL dimension is limited in facilitating skills to enhance the LC dimension in the same manner as a human facilitator acting in the TL dimension might accomplish. This seemingly indicates that learners are on their own in strengthening skills and concepts relevant to the LC dimension. However, this study also revealed self-directed learners in strong control of the LC dimension. Therefore, this suggests a weakness in the conceptualization of the PRO Model in regard to the relationship of the TL dimension in

facilitating skills necessary for the LC dimension in non-formal settings where a human presence is absent from the TL dimension such as is the case in museum settings of SDL.

Social Context

Within the PRO Model learning is recognized as occurring within a greater social context. As stated by Brockett and Hiemstra: “We share the view that both the individual and the social dimension are important and one cannot exist without the other” (1991, p. 131). However, the social context of the PRO model is the least developed and has consequently come under criticism (see: Flannery, 1993).

Whereas personal responsibility, TL dimension, and LC dimension are clearly defined and relationally depicted, the social context remains vague and largely undefined within the PRO Model. The model provides awareness of a greater social “arena in which the activity of self-direction is played out” (Brockett & Hiemstra, 1991, p. 33). However, its ambiguities do little to serve as a conceptual framework for understanding specifically how these activities affect SDL. As a result the researcher is in the position of attempting to piece together a clear definition of a nebulous concept that may have multiple interpretations.

The findings of this study indicate that the social context is highly significant to SDL within the museum setting, which can be defined from the viewpoint of participant socialization and their social interaction within the physical museum environment. The pre-socialized nature of participants suggests that in a large sense the social context of the PRO Model is somewhat predetermined similar to a learner’s personal responsibility and LC dimension. Social context within the museum also revolves around the affect of other visitors on the individual’s museum learning experience. This may be very different than the social context experienced in other

settings of SDL where activities, concerns, and dimensions will play out specific to another atmosphere of learning.

Social dimensions were paramount to the learning experiences of the greater majority of learners within this study. They largely pursued SDL within a social setting that provided and supported important motivations toward learning, allowed for group meaning making, and resulted in a socially bonding experience. The social context interceded in filling significant gaps left unfilled by the TL dimension by providing learners with a means of validating their learning and for social feedback concerning outcome of the experience. Through the social context learners were able to facilitate skills and characteristics by interaction with other learners thereby strengthening each other's LC dimension.

One means by which learners controlled museum learning was through the establishment and practice of an unofficial code of social conduct. This code was conveyed to other learners as the guideline for proper social behavior within the museum. Learners were actively shaping the social environment to best accommodate their own LC dimension of self-direction; thereby providing actions more closely representing views pertaining to organizing environment by Hiemstra (1994) as opposed to Spear & Mocker (1984).

As illustrated in the MSCC, the social context in museum self-direction is a complex phenomenon. As previously discussed, learners constructed and encountered social context inside an environment of learning which ranged along a continuum of intensified and diminished social interaction. Varying situations and individual learner preferences determined which range of the spectrum was most supportive of their experience. Further complexities within the social context involve the introverted nature of these learners outside of their familiar group and their option of visiting individually as opposed to with others.

Therefore, the discoveries made within this study suggest a far more prominent and integrated social context than depicted within the PRO Model. While the graphic depiction of the model may remain the same, the social context is better understood within museum settings of self-direction as being on equal footing with the TL and LC dimensions. In this way, the learner utilizes personal responsibility in connection with all three dimensions, the TL, LC, and now SC for social context, of which can be viewed as distinctly separate while simultaneously linked within the PRO Model.

Summary answers to initial research questions

Five fundamental questions served to guide the research of this qualitative study. Readdressing these questions serves to highlight various insights and perspectives ascertained from the sixteen participants in regard to SDL, the PRO Model, and learning in museums.

1. What kind of role does the museum as an educational institution play in support of self-direction in adult learning

Primarily museums fulfill the role of non-human facilitator or learning resource. They oblige self-directed learners through effective sequential and textual presentation of authentic objects and artifacts that allow for personal connections. Such presentation needs to be widely accommodating; concise enough for visitors to read while also providing adequate depth in ensuing description. Physical space is to enhance learning by supplying visual appeal and pleasant atmosphere while providing for a place of social interaction and group meaning making for learners. When these components of credibility, provenance, meaningful textual presentation, and successful integration of physical space are harmoniously joined, and the ultimate responsibility of learning is left to the discretion of the learner, the museum exhibition can be viewed as supporting self-direction in adult learning.

2. Which barriers exist to self-direction inside the museum?

Fundamental barriers to self-direction and autonomous learning inside the museum include issues related to exhibition text, physical space, and social context. Lack of textual description and simplified or general labels without specific text concerning objects of interest to learners can result in learning barriers. Physical space that is overwhelming or laden with numerous objects in close proximity runs the risk of causing viewing difficulties and eye fatigue. Extended duration in larger facilities inevitably may produce physical tiredness. Social context may prove exclusionary to learners who do not assimilate or, perhaps for cultural reasons, are unfamiliar with the social etiquette of museum learning; while an overwhelming social interaction in which large numbers of visitors populate galleries may generate barriers to SDL inside the museum.

3. How do learners utilize their personal responsibility to activate learning within the museum?

Self-directed learners take it upon themselves to be responsible for their own learning. This includes identifying appropriate resources and activities such as museums to address motivations and personal reasons for learning. The initial responsible step is completed upon entering the museum. Once inside, autonomous adults continue to employ personal responsibility in pursuing learning objectives, often allowing for an open agenda of learning, being open to new discoveries, and attempting various levels of learning to unlearn. Adults who visit museums usually frequent such cultural institutions as part of their personal responsibility throughout their lifetime with many having been introduced to the practice during childhood. They have developed a positive connotation of museums and have become knowledgeable in what to expect and how to learn once inside.

4. How can the PRO Model serve as a tool for understanding and promoting SDL?

The PRO Model can be used as a conceptual framework in which to better understand the various processes and elements which occur during SDL within the museum. Humanistic notions of personal responsibility allow for legitimization and control of learning from the perspective of the self-directed learner. Learning occurs within two dimensions that are simultaneously separated and conjoined representing external from internal factors within the learning process. The entire process acknowledges learning within a greater social context. Basic understanding of this framework can lead to greater understanding and appreciation of SDL while providing a practical outline by which to construct qualitative inquiry for future studies of, and relevant exhibitions accommodating SDL within museums.

5. What are possible deficiencies or strengths of the PRO Model?

Deficiencies regarding the PRO Model include an underdeveloped and ambiguous conceptualization of social context and to a lesser extent, a reliance on learners to uphold humanistic virtues to act in a way beneficial for others in addition to oneself. Strengths of the PRO Model include the overarching concept and role of personal responsibility, the interaction and distinction regarding the TL and LC dimensions, and the potential the model presents as a conceptual framework for furthering comprehension of SDL.

Implications for practice

The results of this study suggest several implications for practice. As the study was conducted within the museum environment most of the implications involve expanding possibilities in accommodating SDL within museum education. Implications include understanding the background of these self-directed learners, accommodating SDL within the

museum, the complexity of self-directed learners and the social aspects and significance of learning within museums.

The general commonalities regarding the background of learners provide useful information for museum educators. Participant age and education presented no new surprises when compared to adult populations from previous museum studies (for ex: Chang, 2006) and these participants reflected numerous similarities within the museum literature indicating various arbitrary reasons for visiting museums in the first place (for ex: Sachatello-Sawyer et al., 2002). Therefore, it makes sense that museums need to remain open to a variety of perspectives for attracting self-directed learners. Furthermore, these participants were consistent repeat visitors and made frequenting museums part of their on-going adult habit of learning and socialization. They returned to previous institutions to enjoy again something spectacular while also looking for something new to discover. Therefore, there is a need for museums to maintain core aspects of collection presentation while also displaying new angles and topics of exhibition within the galleries.

An additional interesting aspect of the background of these participants was their initial orientation to museums. Most had been familiarized with museums as children and had fond memories of past experiences and an accustomed appreciation for museums in general. This presents museum educators with a duality of purpose in school-aged and family programming; that of promoting educational activities and objectives while also recruiting tomorrow's adult visitors from within today's children.

Participants held museums in high regard and desired to experience artifacts and objects that were distinctly "authentic." Reflective of the literature, these learners did not care for simplified labels (O'Neill, 2002; Leinhardt & Knutson, 2004). They appreciated and looked for

the provenance of objects and found extra excitement in those which had a celebratory correlation. Therefore, the greater information included by curators in connection to the objects, the better potential of enhancing the curiosity and learning of these visitors about the objects (for ex: Maroević, 1995). This gives cause to consider if exhibitions are being consistently designed on a proper academic level in regard to adult visitation, which presents significant challenges to museum curators and educators in catering to multiple audiences in addition to adults. However, demonstrating similarities to the findings of Tan et al. (2008), the fact remains that these participants only found fault in text containing too little information as opposed to too much.

In contrast to typical museum studies, these learners spent greater amounts of time within the galleries and generally attempted to view every object. Any minor missing element, such as a non-existent label or darkened corner has the possibility of affecting their experience and suggests to curators a constant impeccable maintenance for galleries. This also elevates expectations for museums in creating effective and integrated physical space (for ex: Sutton, 2007) designed for minimizing optical and physical fatigue for self-directed visitors.

A major implication for practice is the recognition of the complexity of self-directed learners by museum educators. Self-directed learners are not generic; some individuals will have need of more guidance and support from the museum while others will require less. The two basic differing styles of self-directed learners as offered by Bonham (1989) present challenges for museum educators and curators to design exhibits that can be approached from a linear or random perspective with the end result producing satisfaction for both styles of learning.

The methods by which self-directed learners made associations and meaning during their museum experience deserves the continued attention of museum educators. The strong affect of

emotional connections to objects and artifacts allows museum curators and educators a unique, although delicate, avenue for appealing to learning through these inner feelings of adults (for ex: Sandell, 2007; Tan et al., 2008). The use of personal experience, coupled with the vast resume of multiple museums and gallery visits by these learners, invites opportunities for museums to consider broadening their conversation with other institutions of cultural learning such as libraries, parks, and zoos (for ex: Taylor, Parrish & Banz; In press).

A particular challenge to exhibition designers and museum staff is the creation and effective implementation of diversified perspectives to assist visitors in “learning to unlearn.” Nowhere is this need more evident than in regard to the abstract or modern art. It was also in this subject of the abstract that we could clearly see the complexity of participants and their assorted degrees of ability “to unlearn” and to “see anew” revealing various stages of their self-direction as described by Knowles (1975).

Another factor presenting implication for practice is the social significance of learning for these self-directed learners. Study findings replicated those in the literature concerning the desire of most adults to visit with another person or persons (for ex: Sandell, 2007). Given the nature of the museum experience and the interdependence these adults have on one another for constructing meaning and validating learning this is an important part of understanding self-direction within the museum. It is also a factor that separates our understanding of SDL within this setting as opposed to other settings of adult education where self-direction may be less social. Museum curators need to continue to accommodate such interaction through open-spaces and exhibition galleries that are friendly to social interaction.

The desire of participants to construct social context and the various effects of encountered social context upon the museum experience as depicted within the MSCC present

implications for museum educators. Heavily populated galleries may be beneficial for museum admission income; however, they may have adverse affects on learning, which lies at the heart of the museum mission. In order to better accommodate these self-directed learners museum educators may consider earlier morning hours or possible extensions of evening hours where population may be lighter. Another idea may be to incorporate members-only days in which lower visitation and a “private” atmosphere may appeal to these learners.

Finally, as discovered in the study, these learners continued to exercise an element of personal control. They were highly particular about maintaining social etiquette. Through their introverted nature they rarely engaged in interaction outside of their familiar group. Therefore museum curators and educators must be careful not to intervene too much with the expected outcomes of the personal nature of the self-directed learner experience within museums.

Implications for further research

As a result of this qualitative inquiry, numerous concepts and possibilities for future research can be identified. Four topics present specific challenges. These areas include humanistic foundations of personal responsibility, learner action in addressing exhibition or museum presentation, connection between education level and personal responsibility, and empirical investigation into additional SDL models within the museum environment.

The humanistic connotations in regard to personal responsibility and its relevant affect on these museum oriented self-directed learners is a subject worthy of further scholarly pursuit. What role do humanistic conceptualizations and virtues play in learners feeling responsible for the pursuit of learning? As the majority of these learners began visiting museums as children at which time they were introduced to the notion of responsibility as a humanistic inherent ‘good,’ how do their lifetime interpretations of responsibility compare with those self-directed learners

who have dissimilar childhood experiences? The study revealed participants who were in high control of Stapp's (1984) museum literacy. Further evidence showed participants who had a strong network of supportive family and friends. How does personal responsibility emanate from within and how is it affected when socialized and supported as a cultural good as in the above examples?

Further investigation concerning self-directed learners and their action or inaction in addressing the factual presentation or bias of exhibits is warranted. Of particular interest are topics that are closely related to areas of learner expertise or personal curiosity. It is highly surprising given the background experience and knowledge of participants that greater efforts to question exhibitions were not encountered. How do self-directed learners address, challenge, or question inconsistencies or partiality in museum presentation? What is the process that these learners undertake to reflect and analyze such situations? How might these actions differ when reflected from a perspective of 'Critical SDL' as presented by Hammond and Collins (1991)?

The correlation between education and personal responsibility requires further research. Similar to Kohns (2006) and Newell (1995), study participants reflected high levels of formal education while simultaneously revealing high levels of personal responsibility. How does the educational attainment of learners affect perceptions of personal responsibility? Investigation is required into self-directed learners with backgrounds of more general educational achievement. How do learners with lesser levels of education exercise personal responsibility within the museum setting? Perhaps selecting sites within a larger tourist venue that attract greater diversity in audiences will provide a more inclusive population sample in which to conduct this research.

Also in need of further inquiry is the role of social context or environment in SDL. This study revealed learners who prefer an atmosphere conducive to personal reflection and basic social interaction. What role does this social interaction play in the learner's self-direction? How have self-directed learners come to associate learning within a museum environment as positively reinforced by social interaction? What role does culture contribute in regard to the occurrence of social context within a continuum as depicted by the MSCC? How important is social compatibility in autonomous learning? What affect does attempting to construct one's own social context prevent greater social awareness on the part of the learner? Other possibilities for investigation may include comparison studies with population samples of pre-selected visitors attending galleries individually followed by their attendance with one or two additional adults.

While the PRO Model provided an overall effective conceptual framework for the study, additional models of SDL are deserving of empirical investigation within a museum environment. The Educational Transaction Model (Garrison & Baynton, 1987) presents intriguing possibilities as it combines three controlling dimensions of freedom without external influence; proficiency or academic abilities to achieve goals; and support in the form of human and nonhuman resources. Further inquiry into different types of self-directed learners based upon learning style as proposed by Bonham (1989) may also provide valuable insight into the comfort level and function of certain styles of SDL within the museum environment.

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Appendix A: Characteristics of an Accreditable Museum

Approved by the American Association of Museums Accreditation Commission
December 3, 2004 (Effective January 1, 2005)

Public Trust & Accountability

- The museum is a good steward of its resources held in the public trust.
- The museum identifies the communities it serves, and makes appropriate decisions in how it serves them.
- Regardless of its self-identified communities, the museum strives to be a good neighbor in its geographic area.
- The museum strives to be inclusive and offers opportunities for diverse participation.
- The museum asserts its public service role and places education at the center of that role.
- The museum demonstrates a commitment to providing the public with physical and intellectual access to the museum and its resources.
- The museum is committed to public accountability and is transparent in its mission and its operations.
- The museum complies with local, state, and federal laws, codes, and regulations applicable to its facilities, operations, and administration.

Mission & Planning

- The museum has a clear understanding of its mission and communicates why it exists and who benefits as a result of its efforts.
- All aspects of the museum's operations are integrated and focused on meeting its mission.
- The museum's governing authority and staff think and act strategically to acquire, develop, and allocate resources to advance the mission of the museum.
- The museum engages in ongoing and reflective institutional planning that includes involvement of its audiences and community.
- The museum establishes measures of success and uses them to evaluate and adjust its activities.

Leadership & Organizational Structure

- The governance, staff, and volunteer structures and processes effectively advance the museum's mission.
- The governing authority, staff, and volunteers have a clear and shared understanding of their roles and responsibilities.
- The governing authority, staff, and volunteers legally, ethically, and effectively carry out their responsibilities.
- The composition, qualifications, and diversity of the museum's leadership, staff, and volunteers enable it to carry out the museum's mission and goals.
- There is a clear and formal division of responsibilities between the governing authority and any group that supports the museum, whether separately incorporated or operating within the museum or its parent organization.

Appendix A: Characteristics of an Accreditable Museum (continued)

Collections Stewardship

- The museum owns, exhibits, or uses collections that are appropriate to its mission.
- The museum legally, ethically, and effectively manages, documents, cares for, and uses the collections.
- The museum's collections-related research is conducted according to appropriate scholarly standards.
- The museum strategically plans for the use and development of its collections.
- Guided by its mission, the museum provides public access to its collections while ensuring their preservation.

Education & Interpretation

- The museum clearly states its overall educational goals, philosophy, and messages, and demonstrates that its activities are in alignment with them.
- The museum understands the characteristics and needs of its existing and potential audiences and uses this understanding to inform its interpretation.
- The museum's interpretive content is based on appropriate research.
- Museums conducting primary research do so according to scholarly standards.
- The museum uses techniques, technologies, and methods appropriate to its educational goals, content, audiences, and resources.
- The museum presents accurate and appropriate content for each of its audiences.
- The museum demonstrates consistent high quality in its interpretive activities.
- The museum assesses the effectiveness of its interpretive activities and uses those results to plan and improve its activities.

Financial Stability

- The museum legally, ethically, and responsibly acquires, manages, and allocates its financial resources in a way that advances its mission.
- The museum operates in a fiscally responsible manner that promotes its long-term sustainability.

Facilities & Risk Management

- The museum allocates its space and uses its facilities to meet the needs of the collections, audience, and staff.
- The museum has appropriate measures to ensure the safety and security of people, its collections and/or objects, and the facilities it owns or uses.
- The museum has an effective program for the care and long-term maintenance of its facilities.
- The museum is clean and well-maintained, and provides for the visitors' needs.
- The museum takes appropriate measures to protect itself against potential risk and loss.

Accessible: www.aam-us.org/museumresources/accred/upload/Characteristics.

Appendix B: Informed Consent Form

IRB# 27990

Informed Consent Form for Social Science Research
The Pennsylvania State University

Title of Project: **Exploring the Personal Responsibility Orientation Model:
Self-directed learning within museum education.**

Principal Investigator: Richard Banz, Doctoral Student of Adult Education

Advisor: Dr. Edward Taylor, Associate Professor of Adult Education
School of Behavioral Sciences and Education
W331 Olmsted Building
777 W. Harrisburg Pike
Middletown, PA 17057-4898
717-948-6364 or ewt1@psu.edu

1. **Purpose of the Study:** The purpose of this research is to explore and further understand how self-directed learning occurs within a museum environment from the perspective of the adult learner or visitor.
2. **Procedures to be followed:** You will be observed during your exhibition visit. Following this, you will be asked to discuss and comment on questions and topics relevant to your learning experience. Your conversation will be audio recorded for data collection purposes.
3. **Duration/Time:** A total of two interviews will take place, one on-site inside the museum today and a second, to be scheduled in the future, to either take place in the same site or via telephone. Each interview will last between thirty and sixty minutes.
4. **Statement of Confidentiality:** Your participation in this research is confidential. The data will be stored and secured within the researcher's computer in a locked and password protected file. Once information is collected, the data will not be associated with possibly revealing personal identifiers. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.
5. **Right to Ask Questions:** Please contact Richard Banz (Principal Investigator and Doctoral Student of Adult Education at Penn State University with questions about this study. Please contact Dr. Edward Taylor (Student's advisor) at 717-948-6364 with concerns about this study.
6. **Payment for participation:** Participants will receive a \$25 gift certificate to Barnes and Noble (or equivalent) following the completion of the study and two interviews.
7. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive from the participating museum or otherwise.
8. **Other:** During the study audio recordings will be transcribed from audio format into electronic text by the principle investigator in coded form using pseudonym names. At the conclusion of the study, all

audio recordings will be destroyed. The list linking the code to participants' identity will be password protected and kept separate from the electronic text transcription. Five years following the completion of the study the list will be destroyed. The research records will then be stored indefinitely with the identifiers removed. Only the principle investigator will have access to the data; however if an issue would arise with this study, it is possible that the Penn State Office for Research Protections may access the data.

Data collected from the study in its transcribed form utilizing pseudonym names may be used for future research projects in the areas of adult education, museum education, and/or self-directed learning. This research may result in additional articles, publications, conference proceedings, and other future educational applications.

You must be 25 years of age or older to consent to take part in this research study. Please read the following statements and check those in which you feel comfortable.

A. Please check one:

I **give** my permission to be AUDIO taped.

I **do not give** my permission to be AUDIO taped.

B. Please check one:

I **give** permission for my recordings to be archived in electronic text format in coded form for use in future research projects in the areas of adult education, museum education, and/or self-directed learning.

I **do not give** permission for my recordings to be archived in electronic text format in coded form for future research projects. I understand the audio recordings will be destroyed following the conclusion of the study (no later than December 2009).

C. Please check one:

I **give** permission for my recordings to be archived for use in the following way: possible future research projects in the areas of adult education, museum education, and/or self-directed learning.

I **do not give** permission for my recordings to be archived in electronic text format in coded form for use in the following way: possible future research projects in the area of adult education, museum education, and/or self-directed learning. I understand the recordings will be destroyed following the conclusion of the study (no later than December 2009).

D. Please check one:

I **give** my permission for portions of this interview to be directly quoted via the utilization of a pseudonym name in publications/presentations.

I **do not give** my permission for portions of this interview to be directly quoted via the utilization of a pseudonym name in publications/presentations.

If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this form for your records.

Participant Signature

Date

Person Obtaining Consent

Date

Appendix C: Site Permission Letter

[Letter placed on Institution Stationary]

Month/ Day, 2008

Pennsylvania State University-Harrisburg
777 West Harrisburg Pike
Middletown, Pennsylvania 17057

This document serves as a letter of agreement for Richard Banz to serve as the principal investigator in conducting a dissertation study concerning self-directed learning on the premises of the [Name of Institution]. Mr. Banz will receive allowance to engage willing adult visitors who meet the qualifications of the study and who wish to participate through informed consent. He is granted permission to utilize an audio device during the ensuing semi-structured interviews. The [Name of Institution] will release its institutional identity for the purposes of the study.

Mr. Banz will apprise and coordinate with our staff as to the scheduling and logistics of administering the study. It is also our understanding that he will adhere to the policies of our institution as well as those set forth by the Pennsylvania State University Institutional Review Board in regard to research and the use of human participants.

The [Name of Institution] is proud of its continued role in supporting academic and educational research. If you have any questions regarding this agreement please contact us.

Sincerely,

[Authorized Name and Signature]

Appendix D: Observational Inventory

Participant Number: _____

Date: _____

Time spent within exhibition

Time Entered: _____

Time Departed: _____

Time Reentered: _____

Time Re-departed: _____

Social context of visit

Participant visiting exhibition alone: _____

Participant visiting with other adult(s): _____

Number of additional adults in visit: _____

Total number of visitors in exhibition: _____

Observed Actions (Check appropriate column each time action is observed)

Engages with text label																				
Engages interactive components																				
Skips exhibition components																				
Revisits exhibition components																				
Observes other visitors (outside of group)																				
Engages other visitors (outside of group)																				
Engages museum staff																				
Engaged by other visitors (outside of group)																				
Engaged by museum staff																				
Experiences wait or delay																				
Repeats actions																				

Special Notes:

Appendix E: Initial Interview Questions

Describe the types of experiences that you have had in the past with other museums.
What brought you to the museum today?

How do you go about deciding whether or not to visit a particular museum?

When you decide to visit a museum, what do you think about?

What exhibits were you attracted to? Can you explain how?

Which exhibits did you have little interest? Can you explain why?

What exhibits presented a challenge? Can you explain how?

Please describe a particular aspect of the exhibition that impressed or affected you today.
How did the exhibition or museum encourage or helped you maintain your interest?

What are some ways in which the exhibition or museum did not assist with your learning or did not turn out to be helpful to your visit?

How did you react or attempt to overcome these situations?

How did others contribute to or detract from your experience?

What was your perception of the surrounding physical and social environment as you toured the exhibition?

How do you intend to pursue any discoveries or questions resulting from your visit today?

Appendix F: Second Interview Questions

Primary questions

Which exhibits have you thought about since your previous visit? Can you explain why?

What are some ways or examples in which your past visit has contributed to your continued learning or interest?

What elements or components from your previous visit have you shared or discussed with others? Can you explain how?

How have you pursued any discoveries or questions resulting from your previous museum visit?

Please describe your perception of the proper etiquette for an adult visiting a museum.

Representative additional and clarification questions

You talked about discussing your museum visit in the office; can you clarify your occupation?

In regard to visiting museums you replied “I do, well not as often as I should;” what do you mean by this statement?

During the interview you stated that “When everybody is at my house if they are in the mood to go to a museum;” what is this mood?

How did you continue to discuss the flax wheel?

During the interview you mentioned that having recently moved to the area that you wished to integrate yourself into the culture. How have you utilized museums toward this purpose?

During the interview you said that you and your brother could have gone to a movie but came to a museum first. Why did you visit the museum instead?

Regarding the other museums, exhibitions or similar experiences you have visited since our conversation in June; please describe how you engaged other adult visitors during these experiences?

During the interview you mentioned that when visiting an area you seek out the ‘local lore.’ How do museums help you to do that?

How has your visit contributed toward topics to investigate on the internet?

How have you called into question the legitimacy or bias of a particular exhibit?

Appendix F: Second Interview Questions (continued)

During the interview you said you “like to take little snapshots that you pick up and kind of retain through the years.” Please describe some of those snap shots.

During the interview you talked about looking into the relationship of the Penn Family via the internet; please comment on that.

During the interview you mentioned the need to be able to relate to the people or objects in the exhibition; how do museums help you to do that?

How has your visit contributed toward the reading of “Pride and Prejudice?” Can you describe any further discussion of the phaeton?

You discussed utilizing the internet as means to pursue additional questions, how did that add to your museum experience?

During the interview you mentioned that you were going to photograph a few mosaics of particular interest for use in home projects, how have you pursued that?

During the interview you mentioned that visiting museums is “a freedom in itself.” Please elaborate on this statement.

During the interview you said that you wanted to learn more about the region and the first thought that came to your mind was a museum; why a museum?

During our interview you mentioned that the challenge for you is to always see something in a new way; please elaborate on what you mean by that.

How have you continued to investigate into learning about the barouche?

You mentioned that you always want to touch the art; can you talk a little bit more about why you feel that way toward the art?

During the interview you stated visiting a museum as “usually something I do that is social;” why is this?

VITA

Richard Nicholas Banz, Jr.

Richard has been interested in museums and history since childhood. He has practiced education within the formal setting as a public school teacher and adjunct college instructor and within the nonformal setting as a park ranger, curator, museum educator, interpretive consultant, and community lecturer. He has designed numerous museum exhibitions and has written several interpretive plans and educational programs for museums. He has also organized various activities for Holocaust Remembrance. His formal education has been within the humanities having received degrees in social science secondary education (B.S. 1989) from Towson University and in history (M.A. 1995) from University of Maryland, Baltimore County. His research interests include self-directed learning, museum education, and various historical topics.