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Revisiting the Iceberg: A Study of Technology, Self-Direction, and the Learning Projects of Small Business Owners

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To the Graduate Council:

I am submitting herewith a dissertation written by John David Harrison entitled "Revisiting the Iceberg: A Study of Technology, Self-Direction, and the Learning Projects of Small Business Owners." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Educational Psychology and Research.

Ralph G. Brockett, Major Professor

We have read this dissertation and recommend its acceptance:

Gregory Petty, Gary Skolits, Mary Ziegler

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(Original signatures are on file with official student records.)

To the Graduate Council:

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Vice Provost and Dean of the Graduate School

Revisiting the Iceberg: A Study of Technology, Self-Direction, and the Learning Projects of Small Business Owners

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John D. Harrison

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Dedication

This dissertation is dedicated to my wife

Amanda Harrison

who is a wonderful friend and companion on life's journey;

to my children

Lauren Elizabeth and Molly Elliott

who are very special to me and have opened my eyes to a new world waiting to be explored;

and to my parents,

James and Marian Harrison

whose devotion to education and spirit to "persevere" was passed on to their son.

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Finally, I would like to express love and great appreciation for my family - Amanda, Lauren, and Molly – for their many sacrifices. Without their love and support, this difficult endeavor would not have been possible. My greatest supporter has been my wife, Amanda. She has been my pillar and my confidant on this difficult road. The sacrifices made have tested our resolve and strengthened our friendship and commitment to each other. I thank her for walking this road with me and letting me know that I am not alone. We are looking forward to new adventures and life's many possibilities…

Abstract

The purpose of this exploratory study was to examine and describe the learning projects of a selected sample of small business owners in a community in the Southeastern United States. The study included the revision and modernization of Tough's (1971) Learning Project Interview Schedule. A total of 35 small business owners were interviewed using a modified version of Tough's Learning Project Interview Schedule. The schedule consisted of 10 learning project and seven demographic items that were adapted or created by a collaborative research team at the University of Tennessee using Tough's (1971) Interview Schedule.

Data revealed that participants had a mean of 6.8 learning projects conducted over the previous 12-months. The learner was the primary planner of 55.9% of all learning projects with a mix of planners used in 22.7% of cases. This study found that African-Americans identified the learner as the primary planner in 71.9% of learning projects, higher than the overall mean.

Demographic information revealed that a large majority (88.6%) of participants had at least an intermediate computer skill level. This was reflected in the use of technology for learning projects. The Internet was indicated as a resource in 43.3% of learning projects and was second only to print sources (54.2%). Technology played a key role in the learning projects of small business owners as it acted as both a primary source of information and as a secondary source for finding additional resources including content experts, print sources, and multimedia.

Recommendations for further research include the need for additional studies on the preferences for, and impact of using technology for conducting learning projects. Specifically, research may explore the learner's perception of benefits of various forms of technology for conducting learning projects.

Table of Contents

CHAPTER I

INTRODUCTION TO THE STUDY 1

Statement of the Problem 4

Purpose of the Study 5

Research Questions 5

Significance of the Study 5

Community Demographics 8

Assumptions 9

Limitations 9

Definitions 11

Outline of the Study 13

CHAPTER II

LITERATURE REVIEW 14

Nature of Tough Replication Studies 14

Self-Directed Learning: Foundational Research 14

Tough's Learning Projects Study 16

Replication Studies of Self-Planned Learning 21

Tough's Interview Schedule: Benefits and Challenges 33

Small Businesses and Learning 35

Obstacles to Learning 37

Conclusion 38

CHAPTER III

METHOD 39

Population and Sample 39

Instrumentation 40

Human Subjects and Institutional Review Board 42

Procedure 43

Data Analysis 49

Conclusion 50

CHAPTER IV

ANALYSIS OF DATA 51

Sample and Demographic Profile 51

Analysis of Research Questions 57

Research Question One 57

Research Question Two 62

Research Question Three 65

Research Question Four 70

Research Question Five 75

Research Question Six 83

Research Question Seven 90

Chapter Summary 92

CHAPTER V

DISCUSSION AND CONCLUSIONS 93

Summary of the Study 93

Major Findings 94

Discussion and Implications of the Results 95

Recommendations for Future Research 101

Technology and Time In Learning Projects: A Personal Reflection 102

Concluding Comment 105

LIST OF REFERENCES 106

APPENDICES 120

VITA 142

List of Tables

Table		Page
1.	Research on Adult Learning Projects	22
2.	Statistical Analyses: Examining Study Research Questions	50
3.	Demographic Profile of Participants	54
4.	Age and Computer Skill Level	56
5.	Learning Projects Conducted Over 12-month Period	57
6.	Learning Projects by Gender	58
7.	Cross-Tabulation for Learning Projects and Race	59
8.	Cross-Tabulation for Learning Projects and Age Group	60
9.	Cross-Tabulation for Learning Projects and Industry	61
10.	Learning Projects Response Data	64
11.	Time Dedicated to Learning Projects	65
12.	Cross-Tabulation of Time Spent on Learning Projects by Gender	66
13.	Cross-Tabulation of Time Spent on Learning Projects by Age Group	67
14.	Cross-Tabulation of Time spent on Learning Projects by Industry	68
15.	Cross-Tabulation of Time Spent Learning Projects by Race	69
16.	Primary Planner of Learning Projects	70
17.	Cross-Tabulation: Primary Planner by Gender	71
18.	Cross-Tabulation: Primary Planner by Gender	72
19.	Cross-Tabulation: Primary Planner by Industry	73
20.	Cross-Tabulation: of Primary Planner by Race	74

21. Work and Non-work Related Learning Projects..... 75

22. Cross-Tabulation: Work/non-work projects by Gender..... 76

23. Cross-Tabulation: Work/non-work projects by Age Group..... 77

24. Cross-Tabulation: Work/non-work projects by Industry..... 78

25. Cross-Tabulation: Work/non-work projects by Race..... 79

26. Cross-Tabulation: Enthusiasm for New Skill or Knowledge..... 80

27. Cross-Tabulation: Work/non-work projects and Benefit for Others..... 81

28. Cross-Tabulation: Work/non-work projects and Knowledge Gained..... 82

29. Resource Usage for Completing Learning Projects..... 84

30. Cross-Tabulation: Resources by Gender..... 85

31. Cross-Tabulation: Resources by Age Group..... 87

32. Cross-Tabulation: Resources by Industry..... 88

33. Cross-Tabulation: Resources by Race..... 89

34. Obstacles to Conducting Learning Projects..... 91

List of Figures

Figure Page

1. Distribution and Frequency of Participant Age..... 52

CHAPTER I

INTRODUCTION TO THE STUDY

Lifelong learning can be defined as the pursuit of knowledge that occurs throughout life and is both self-motivated and voluntary, or as all formal and informal learning throughout a person's entire life (Houle, 1961; Faure, 1972; Longworth & Davies, 1996). Learning is an essential part of every aspect of life and is increasingly important as knowledge becomes the key to career advancement (Drucker, 2001). Adults are faced with the challenge of updating skills to retain their current work position thus making continued learning an important part of their professional development (Langston, 2008). Small businesses must navigate learning opportunities that are crucial to the business' survival while operating on a limited or increasingly strained budget.

The current economic climate in 2010 affects every organization that provides learning activities, including higher education, libraries, museums, and non-profit organizations (Bernhard Jr., 2009; Center for Non-Profits, 2009; Ilnytzky, 2009; Usher, 2009). As funds become limited and the demand for services increase, organizations, such as libraries and museums (American Library Association, 2010; Goldstein, 2000), must find efficient ways to tailor services to their clients.

Understanding the learning activities of small business owners sheds light on the perceived importance of various activities for their practice. Examining learning projects may uncover satisfaction levels with learning outcomes, prevalent topics of interest, and the amount of time that small business owners dedicate to learning efforts. The nature of learning projects may provide additional information on the value of various types of information in economically difficult times.

While research has been conducted in recent years on the learning activities of adults, most notably the New Approaches to Lifelong Learning Survey (NALL) conducted in Canada (Livingsone, 1999), studies geared toward the self-planned learning projects of small business owners is limited. Understanding this population's learning projects may assist in making those efforts more effective and efficient. Career coaches and practitioners may be able to tailor development towards technological advances in learning such that this population is able to benefit in the quality of their learning efforts.

There have been a number of studies that have examined the learning projects of adults including Allen Tough's seminal work in 1971. Although replication studies using Tough's Learning Projects Interview Schedule were prevalent during the 1970's, they dissipated in the early 1980's (Brockett & Hiemstra, 1991). The adult learning projects research (Allerton, 1974; Coolican, 1973; Denys, 1973; Fair, 1973; McCatty, 1973; Peters & Gordon, 1974; Tough, 1971) focused on the range of learning activities that are self-planned in nature and the amount of time spent on these projects over a 12-month period.

Tough found that the large majority of learning projects taken on by adults, 68 percent, were self-planned (Tough, 1971). This spurred numerous replication studies with a wide range of populations. These studies include research with pharmacists (Johns, 1973), rural and urban populations (Peters and Gordon, 1974), working professionals (McCatty, 1973), older adults (Hiemstra, 1975) and a national survey across populations (Penland, 1977). Most recently, although 10 years old, the NALL study found that over 90% of Canadians are involved in self-planned learning projects, spending an average of 15 hours per week toward their learning goals (Livingstone, 2000). This latest study illustrates that self-directed learning is still a prevalent force in the lives of adults.

Following the initial research on adult learning projects, many studies moved toward examining the projects of specific demographic groups including mothers of preschool children (Coolican, 1973), teachers (Denys, 1973; Fair, 1973), members of the medical community (Graeve, 1987; Hummel, 1985; Johns, 1973), and older adults (Hiemstra, 1975). McCatty's (1973) study on working professionals illustrated management challenges common to those of small business owners who have a need to continue learning skills related to their industry, plan learning with limited resources (Wade, 2009), and find unique ways to combine learning with performance to remain competitive.

These owners face challenges that are similar to those found in the larger corporate environment. Many owners are faced with updating their skills, as they are the primary decision maker for their company. The areas that are needed to be successful in leading and managing an organization include interpersonal skills (Marcketti & Kozar, 2007), general knowledge of financial and accounting practices (Shepherd & DeTienne, 2005), and the ability to think abstractly about strategy and the general direction of the company.

Training in the United States is an industry that is directly impacted by the economic health of the country. In 2008, U.S. companies spent approximately $104.3 billion on training and development (Harward, 2009). This represents up to a 21% decline in spending over 2008, largely due to declines in revenue and discretionary spending (2009). Large corporations, such as those in the mortgage industry, are using their available resources to tap into available training outsourcing services throughout the country (Anderson, 2009; Dymi, 2009; Gordon, 2009). According to a survey conducted by the International Data Corp., 83% of businesses that outsource training and education functions are planning to increase spending in these areas in 2010 (Anderson, 2009). However, as the cost of training and development increases and the

economy slows, small businesses are less likely to invest limited capital in formal training, leaving owners to find alternative methods for developing the skills necessary to run their companies. Options for small business owners include formal and informal programs such as traditional academic settings, workshops provided by consultants, and self-directed learning opportunities.

Statement of the Problem

Small business owners across the country are now faced with unique challenges to keeping their companies viable in a slowing economy and ever-competitive market (Alfonso, 2008). Many problems, high energy and health care costs, coupled with a lack of consumer confidence and shrinking cash flow, are causing business owners to rethink their operating strategies (2008; Moutray, 2008). Expenditures must be kept in check forcing owners to develop their skills to keep their business viable. Self-directed learning is a practical means to achieve their learning goals, as it may be both efficient and effective.

The problem addressed by this research was to examine the nature of self-directed learning activities and projects of small business owners using a revised and updated version of Tough's Learning Projects Interview Schedule.

Purpose of Study

The purpose of this study was to examine and describe the learning projects of a sample of small business owners in a community in the Southeastern United States. The study was based on an updated form of Tough's Learning Projects Interview Schedule to examine and collect data on aspects of the participants' learning projects. The involvement in self-directed learning as it relates to small business owners' personal and professional educational pursuits was examined.

Research Questions

Specifically the study addressed the following questions:

1. What is the number of learning projects conducted by small business owners within the past 12 months?
2. What is the content of the learning projects?
3. How much time is spent on learning projects?
4. Who is the primary planner of the participants' learning projects?
5. What is the percentage of learning projects that are work and non-work related?
6. What resources, including technology, were used during a learning project?
7. What obstacles are encountered while pursuing learning projects?

Significance of the Study

This study was designed to provide an updated perspective on learning project information as it examines small business owners' learning projects and the use of technology for self-planned learning. The study makes contributions in several ways.

Tough's initial research on learning projects was prevalent in the 1970's spurring replication studies using his interview schedule. By the mid-1980's, the research moved beyond the focus on learning projects, especially as it related to Tough's initial study (Brockett &

Hiemstra, 1991). This study provided the opportunity to reexamine Tough's work using an updated Learning Projects Interview Schedule. In an effort to update the learning projects research methodology, the survey has been revised to include updated language, learning themes, and greater emphasis on the role of technology. This effort was aimed at making the instrument more relevant for today's audience. It was the intent of the researcher to examine the influence of technology and perceptions of learning in learning projects today.

Second, this study presented the opportunity to revisit the learning projects research in an updated form that includes an emphasis on technology. With the prevalence of home computers, Internet accessible cell phones, and the wide accessibility of multimedia learning resources, such as Apple Computer's iTunes U, finding information on most topics is available at the touch of a button. One of the latest trends in technology is the advancement of Web 2.0, which focuses on services as opposed to software (Rosen, 2006).

In the past, software would need to be downloaded in order to use services related to a product. Web 2.0 allows people to access services, such as mapped directions, podcasts, RSS feeds for weblogs, podcasts, and interactive wikis without the need for expensive software purchases (Rosen, 2006). This has significant impact on e-learning as it puts a student, or learner, in contact with professionals, experts, and other learners without geographical or time barriers. The advances in technology may impact the amount of time spent conducting learning projects. When accessing information, a learner has access to a wealth of information taking only seconds to download what would have taken hours to obtain in the past.

This study examined if technology had impacted the length of time spent conducting a learning project. Tough's initial criteria of a minimum of 7 hours spent on a learning effort will be reviewed based on information collected from the research project. The technological

innovations since Tough's initial study warranted a reexamination of the time criteria for a learning project.

Third, small business owners have not been the primary focus of previous learning projects studies using Tough's interview schedule. This study adds to the knowledge base of the learning projects and self-directed learning undertaken by a previously unstudied group. Bates (2000) suggests that traditional learning environments are not able to foster workplace skills such as creativity, problem solving, and analysis, stating that:

> "Learners need the opportunity to communicate with one another as well as with their teachers…the [modern] learning context will need to enable people to work alone, interacting with the learning material (which may be available locally or remotely)…or work collaboratively and in an equal relationship with fellow workers at different remote sites" (p.14-15).

This highlights the importance of examining the self-planned learning activities of small business owners as their workplace skills assist in keeping their organization viable.

Of particular interest were the current conditions in the U.S. and global economy. Small business owners are faced with increasingly limited resources brought on by the "Great Recession" (Maltby, 2009). Credit crunches and the lack of consumer confidence means that businesses must compete for already limited resources and a limited consumer base (Davis, 2010; Maltby, 2009). The credit crunch poses a dilemma as credit has acted as a means in the past for businesses to gain the capital needed to expand operations and shift towards a more competitive strategy, service, or product (Banister, n.d.; Iwata, 2008).

There are increasing pressures from global competitors who have entered the U.S. market or are using technology, such as the Internet, to reach U.S. consumers. Businesses are no longer

simply competing in the town or region that they operate. They must be prepared to face the growing impact of businesses operating in China and Southeast Asia. American entrepreneurs are increasing their global footprint by becoming savvy and knowledgeable about the dynamics of the global market place (Bandyk, 2008). Self-directed learning offers business owners a flexible avenue to prepare themselves for the challenges and changes occurring in the global market. Through the use of technology they too can work with foreign nationals and government agencies to establish working relationships and ventures that increase their ability to compete in other countries. They may also use services such as PayPal, which employs large legal teams, to insure that they are paid when conducting international business online (2008). Learning is a major component of this ability to be prepared to compete and may be supplemented largely by self-directed learning projects.

Finally, this study contributes to practice by helping to better understand learning in the lives of small business owners. By nature, these entrepreneurs are typically innovative, spirited, and flexible. Many small business owners are faced with increased competition from large companies, including multinational organizations forcing them to adapt to changing market conditions or face closure. This group seems suitable for a study of this nature as it shows the potential for utilizing self-directed learning.

Community Demographics

Information was collected using the city-data website in order to describe the community where the study took place (www.city-data.com). The community has approximately 185,000 residents with a median household income of $32,000 per year and a median age of 33.4 years. The common industries include educational services, health care, food services, professional and scientific services, construction, administrative support, and financial services. Examining the

racial demographics revealed that the community is predominately white (79%). Other races are represented as follows including African-Americans (16.2%), Hispanics (1.6%), Native Americans (.9%), and others (0.7%) (www.city-data.com).

Assumptions

This study was designed with several assumptions in mind. First, it assumed that small business owners are engaging in a wide range of learning projects. This assumption was based on the findings of previous studies, with various populations, demonstrating the prevalence of learning projects as a common human experience and is supported by Tough's original Learning Projects research (1971). Tough found that 68 percent of learning projects reported by participants were self-planned in nature.

Second, small business owners are able to recognize and communicate their learning activities. The learning projects interview schedule is designed to enhance recollection of learning activities by providing sample areas where learning may take place. For example, adults may undertake learning projects in subjects such as work, history, personal health, sports, and finance.

Finally, it was assumed that learning projects are an important part of improving the health and competitiveness of small businesses. Learning projects assist small business owners in developing personally and professionally. Owners plan learning projects that assist in closing the skills gap and making their company more competitive.

Limitations

Limitations were present in the interview schedule used in Tough's original study. They included relying on the memory and understanding of the participant to recall learning projects, the time lines for what constitutes a learning project, and the inability to generalize the results of

the study beyond the small business owner in the area. In addition, linguistic changes and technological developments over the past four decades resulted in an update to the learning projects interview schedule.

Participants may have bias in understanding the importance or noteworthiness of a learning project. They may also have difficulty recalling all learning projects over a 12-month period of time. Recollection was assisted through questions and examples that probe a participant's experiences. Challenges occur in accurately recalling the time spent on each project. This limitation impacts the completeness of the data collected from the interviews.

Tough's interview schedule requires approximately one hour to conduct. The data collection takes a considerable amount of time and therefore may limit the number of participants who can contribute to the study because of time constraints.

Given the time required to conduct each interview, small and focused sample sizes are common. This population maintains busy schedules driven by workplace needs adding to the challenge of conducting interviews longer than one hour.

Another limitation included the inability to generalize findings beyond the immediate sample. It was important to understand that the findings of the study cannot be generalized across the entire population of small business owners. Examples of limitations in the ability to generalize findings are found in many studies including those mentioned earlier in this article (Coolican, 1973; Peters and Gordon, 1974; Benson, 1974; Hiemstra, 1976). Tough's interview schedule seeks to answer questions that are best suited toward the depth of information collected from one-on-one interviews as opposed to mass surveys and will continue to suffer from this limitation.

Finally, the intent of the interview schedule was to collect data on a learner's intentional self-planned learning projects. Tough (1971) describes a learning project as a "highly deliberate effort to gain certain knowledge and skills (or to change in some other way)" (p. 6). The limited scope of the data collected fails to directly identify learning activities that lead to change within the person, demonstrating that learning has occurred. The intent of the interview schedule is to collect information on the intentional self-planned learning projects undertaken limiting the scope of the study.

Definitions

Several terms related to self-directed learning were used throughout this study. Those terms are defined in the following section:

Episode. "A period of time devoted to a cluster or sequence of similar or related activities, which are not interrupted much by other activities." (Tough, 1971, p.6). Each episode has a defined beginning and ending period. All experiences by the learner are included as a part of the episode.

Informal Learning. Can be defined as any learning that takes place outside of the direction, or curriculum, of formal or non-formal educational institutions. Livingstone (2000) defines informal learning as "any activity involving the pursuit of understanding, knowledge or skill which occurs outside the curricula of educational institutions, or the courses or workshops offered by educational or social agencies" (para. 4). In 2001, the definition was expanded to include the pursuit of knowledge, understanding or skill without "the presence of externally imposed curricular criteria" (Livingstone, 2001, para. 7).

Knowledge and Skill. Used to describe the full range of intended or desired changes in an individual's beliefs, judgment, perceptual or physical skills, habits, attitudes, knowledge or

understanding, comprehension, performance or competence, creativity, self-concept, or other personal inner or overt behaviors and characteristics (Tough, 1971, p. 3).

Learning Project. According to Tough (1971), a learning project is defined as:

> "simply a major, highly deliberate effort to gain certain knowledge and skill (or to change in some other way). Some learning projects are efforts to gain new knowledge, insight, or understanding. Others are attempts to improve one's skill or performance, or to change one's attitudes or emotional reactions. Others involve efforts to change one's overt behavior or to break a habit" (p. 1).

For the purpose of this study, a learning project was defined as a combination of related learning episodes that are composed of 7 or more hours dedicated time to a project or those projects with less than 7 hours but deemed by the interviewee as "definitely" or "very important" on a scale of four.

Planner. The person or thing that is responsible for more that 50 percent of planning and decision making in the learning project. According to Tough (1971), the planner guides what, when, and how learning takes place. The learning projects interview schedule separates the planning function into one of four categories including: a group of learners, one person, an object, and the learner. To be considered as a combined effort for a learning project, learning must be at least 51% of the motivation for conducting an episode. The intent must also be to retain the knowledge for a minimum of two days (1971).

Small Business Owner. For the purpose of this study small business owner was defined as an individual who owns a business that employs no more than 19 full and part-time employees. These people are responsible for taking ownership and responsibility for the leadership, direction, planning, financing, and strategic mission of the organization.

The number of employees is based on that which an employer may have before being required to provide an extension of health benefits after for qualifying events under the

Consolidated Omnibus Benefits Reconciliation Act of 1985 (COBRA). Providing such benefits constitute a large contribution on the part of the employer and necessitate a moderate degree of generated revenue.

Outline of the Study

Chapter I of this study presented the introduction and statement of problem, the purpose of the study, the significance of the study, assumptions, limitations, definitions, and the outline of the study. Chapter II will provide a review of early learning projects studies using the original, or adaptations, of Tough's learning projects interview schedule. Chapter III discusses the population and sample, instrumentation, procedure, and data analysis. Chapter IV presents the data collected during the interview process. Finally, a discussion of the analysis of data, findings, and suggestions for future research are presented in Chapter V.

CHAPTER II

LITERATURE REVIEW

The following chapter outlines the foundation of learning projects research, Allen Tough's initial learning projects study, a discussion of research trends, and workforce and technology issues potentially impacting self-directed learning. It includes information from prior learning project studies that provide a foundation for this research project. The intent of the literature review is to provide an overview of learning projects research.

Nature of Tough Replication Studies

The following research reflects trends in self-directed learning that were spurred by Allen Tough's *Adult Learning Projects* (1971) study and utilized his Learning Projects Interview Schedule. Replication studies were most prevalent from the 1970's through the early 1980's and were largely descriptive in nature. In order to move the research forward, the focus shifted from the descriptive to the predictive (Brockett & Hiemstra, 1991, p. 56). Guglielmino's (1977) Self-Directed Learning Readiness Scale (SDLRS) and Oddi's (1984) Oddi Continuing Learning Inventory pushed the research on self-directed learning forward, by looking at learning in relation to individual characteristics, attitudes, and abilities. (1991, p. 56). Due to the shift in focus, most replication studies using Tough's original Learning Projects Interview Schedule were done prior to the mid 1980's and are reflected in the dates of the studies illustrated during the literature review.

Self-Directed Learning: Foundational Research

The foundation of self-directed learning research may be traced back to Cyril Houle and *The Inquiring Mind* (1961; Brockett & Donaghy, 2005); Brockett & Hiemstra, 1991; Merriam, Caffarella, & Baumgartner, 2007). Houle's study identified 22 adults, from Milwaukee,

Wisconsin, who were "conspicuously engaged in various forms of continuing learning" (1961, p. 13). Through structured, in-depth, interviews, Houle probed the participants' perspective on being a learner, their history of learning, and the factors that led them to continue to pursue learning. He found that "the desire to learn is not shared equally by everyone"(1961, p. 3) and focused his study on those adults believed to have highly developed learning practices and orientations. These adults were highly active learners.

From an analysis of the data, Houle (1961) suggested that three learning orientations were present when examining reasons for engaging in continuing learning activities. These learning orientations consist of goal-oriented learners, activity-oriented learners, and learning-oriented learners. The goal-oriented learner uses education to achieve a goal. Here, the learner has an expectation that learning will result in a practical return or payoff. The activity-oriented learner participates in learning for the activity and as a means of social interaction. People in this orientation use learning to meet other people and to alleviate loneliness or undesirable personal situations. They also are not generally as concerned with the learning topic or with conducting additional reading around the subject. Finally, the learning-oriented learner views learning as enjoyable and engages simply for the sake of learning. These learners often make life decisions based on the potential for personal enrichment and growth, and are ardent readers. From this research Houle found that adults are actively engaged in directing and managing their learning efforts.

Cyril Houle influenced the research of self-directed learning beyond his immediate study. Two major contributors to this line of research, Malcolm Knowles and Allen Tough, were both students of Houle (Brockett & Hiemstra, 1991, Brockett & Donaghy, 2005). It is Houle's study and subsequent publication, *The Inquiring Mind* (1961), with the learning-oriented learner

orientation that appears to have intrigued Allen Tough and spurred his research on self-planned learning.

Tough's Learning Projects Study

Allen Tough conducted the initial research on what he renamed self-planned learning (1971; Merriam et al., 2007). As a student of Cyril Houle, Tough sought to examine the extent to which adults managed their learning efforts. In addition, Tough was interested in describing the various aspects of learning efforts including learning themes, the amount of time spent learning, and the assistance provided to individual learners (Tough, 1971). The concept of the learning project served as a means by which self-planned learning could be understood and examined. Tough defined a learning project as "simply a major, highly deliberate effort to gain certain knowledge or skills (or to change in some other way)" (1971, p. 1).

Learning projects were operationalized as a series of related intentional learning episodes lasting seven or more hours for the purpose of adding or retaining a skill or knowledge for two or more days (Tough, 1971). The intent of an episode is to create a lasting change in the learner. This concept is refined through the notion that each episode is a well defined, highly deliberate, and intentional period dedicated to learning. Motivation is factored into each episode by assessing the intent to learn as the primary driver for the episode. If the intent to learn is 51% or more of the person's motivation for an episode, then it is considered highly intentional and deliberate (1971).

In an effort to clarify learning projects and episodes within the context of the Learning Projects Interview schedule, Tough offers a number of borderline cases (1971). During the interview the learner may not be able to determine certain aspects of learning such as their desire to retain information, motivation for learning, or whether an activity constitutes a learning

project. Other times the learner has brief episodes for learning where they spend only 10 minutes, for example, learning about a topic. They did not plan or intentionally seek out information, nor did they meet the time requirement for a learning project, therefore the outcome is not considered a learning project. A firm borderline case may be illustrated when a person is reading directions and learning about assembling a piece of furniture. The immediate motivation to learn is to build the piece of furniture without the purpose of retaining the new knowledge, therefore this would rule out this experience as a learning episode (Brockett & Hiemstra, 1991).

Other cases include not giving consideration to what information is to be attained, how it is to be attained, or the length of time it is to be retained (Tough, 1971) Finally, motivation plays a strong part in the initial learning projects study as Tough sought to quantify a person's motivation for conducting a learning project. If the single motivation of learning was less than 50% of a person's reason for seeking information then an effort is not deemed a learning project.

While related, each episode may encompass different means of organizing, planning, preparing, and evaluating tasks for learning. Tough uses the term "planner" to refer to the "person (or group or object) that does most of the day-to-day planning and deciding a learning project to pursue" (Tough, 1971, p. 77). The planner is responsible for the majority, or 51% or more of the day-to-day planning.

A major aspect of Tough's study centers on the responsibility for planning learning activities. According to Tough, there are four types of planners, including the learner, another person in a one-to-one situation, an object, and a group (1971). To be considered the primary planner, 51% or more of the learning project must be planned by a single planner. In the event that multiple planners are used, a mixed planner is recorded.

The learner as “planner” directs most aspects of the learning project including planning, organizing, and pacing. In the case of a self-planned learning project, the learner makes all decisions regarding the resources used for a project even though they may seek out the advice and input of an expert or professional. The learner may use a variety of resources but always retains the decision making power for the learning project. This was the primary planner in 68 percent of projects in Tough’s initial study (1971).

If the primary planner is a one-to-one situation then the learner may employ a friend, consultant, or mentor, for example, in order to plan their learning projects. The planner in this case may act as a subject matter expert or simply as a guide for the project. Communication can occur face-to-face, over the Internet, by mail, or telephone. Examples of a one-to-one situation include music lessons, individual golf instruction, driving lessons, and swim lessons (Tough, 1971).

When a person chooses to follow a set of pre-planned activities and subject matter designed to guide the learning of the participant then the primary planner is an object. An object as the primary planner includes workbooks, computer based training, and programmed learning. This type of planner is often a pre-designated instructional tool that acts as both the subject matter expert and the planner (Tough, 1971). Examples of an object as planner includes HEPPA computer based training, Mr. Professor instructional programs, and HAZMAT workbook certification courses.

The final type of primary planner is a group. There are two different forms of group planners (Tough, 1971). First, a group can be led by an instructor who plans the primary learning projects. This includes, for example, traditional classroom learning, workshops, or seminars. The other scenario is a group that plans its own learning. This may include professional

organizations, church Sunday school groups, and various social clubs. In this case the group often acts as the subject expert, sharing information from person to person. In any case, groups can range from a small number of members to large groups exceeding several hundred members. Tough makes the distinction that the groups engage via face-to-face meetings. Technology, such as webcams, reaches beyond traditional geographic boundaries making this primary planner more accessible. The mixed planner is used to identify learning projects that have multiple planners without any one planning the majority of the learning project.

Tough set out to examine and describe the intentional learning of adults. He interviewed 66 adults from seven different population groups including politicians, psychology and sociology professors, factory workers, lower-white collar men, lower-white collar women, elementary school teachers, and mothers (Tough, 1971). Tough found that the total sample averaged eight learning projects per person and about 104 hours, on average, were spent conducting each project (p. 18). There was a 98% participation rate for engaging learning projects among the population with less than 1 percent of all projects being conducted for credit. Of the participants, 68 percent reported that the learner was the primary planner of the learning effort (1971). Within the sample, Tough found that men had an overall tendency to be more engaged in learning projects than women. He also found a wide range of motivations behind conducting learning projects.

In collecting information, Tough (1971) also examined the content and reasoning for conducting learning projects. He found that people carry out learning projects on tasks and knowledge related to both personal and professional development. The drive behind learning projects is a product of curiosity or a question regarding a topic, learning for a hobby or personal project, personal responsibilities or home skills, tasks or issues related to work, preparing for a new career or keeping up with work, or improving an area of competence (1971). It is important

to note that Tough found that “a great many learning projects are related to the person’s job or occupation” (p.33). He found that people often plan learning projects in order to keep abreast of the latest developments in their profession and therefore seek to keep-up with the expectations of their field.

There is a great degree of variety between individuals who devote a great deal of time planning, starting, and conducting learning projects, and those who make little effort to do so. Tough addresses these differences in terms of psychological characteristics, past experiences, the influence of other people, and community and societal factors. Past experience can include whether a person’s parents read, experience with school and prior learning success and the activity level of the learner growing up.

Tough stated that there are a wide range of psychological characteristics that may lead to or detract from a person’s learning projects. These characteristics include, but are not limited to, the importance of self-growth and actualization, energy level, the degree of aggressiveness and initiative in daily life, the amount of enjoyment derived from intellectual pursuits, and the degree to which new situations and information are managed (Tough, 1971).

Finally, societal and cultural factors, as well as, other people, may influence the propensity to pursue learning projects. A learner’s peer group and professional friends can strongly influence a person’s desire to learn. For example, if a learner is picked on and taunted by a peer group for succeeding in school then the learner may be less likely to pursue educational opportunities in the future. Cultural and societal factors such as the wealth of a nation, the access to educational opportunities and information also acts upon the learner and their inclination towards conducting learning projects (Tough, 1971).

This line of research is an important approach to studying self-directed learning as it examines learning that takes place outside of formal learning institutions and therefore examines the "iceberg" of learning. Tough used the metaphor of learning as an iceberg in that the majority of learning takes place outside of the formal establishment and is therefore unseen. The approach taken by Tough (1971) examines deliberate self-planned learning projects. In the interview process questions are posed that are designed to probe into areas such as the nature, time spent, and the primary planner of a learning project. There are many advantages to using the interview schedule in that it provides the researcher with a structured set of questions, as well as, support information that gives clarification to the participant and allows for probing for additional information.

Replication Studies of Self-Planned Learning

The publication of Tough's *Adult's Learning Projects* (1971) set in motion a large number of replication studies. The following provides a general overview of studies spurred by Allen Tough's seminal work. While the selected studies include various populations, sample sizes, and contributions to learning projects research, as a whole they focus on the frequency and nature of learning projects within their samples, adhering to the spirit of Tough's initial work.

There has been a great deal of effort put forth to explore self-directed learning efforts in various populations, all with similar results. Hiemstra (1980) and Tough (1992) illustrated target populations and the number of annual learning projects found by various research studies. Table 1 presents the summary table of self-directed studies. The following review discusses the prevalent studies that grew out of Tough's original learning projects study.

Table 1

Research on Adult Learning Projects

Source	Population	Location	No. of Subjects	Annual No. of Proj./Person	% of Self-Planned Learning
Addleton (1984)	Continuing Educators	Alabama	53	7.5	n.a.
Allerton (1974)	Parish ministers	Louisville, KE	12	9.6	n.a.
Armstrong (1971)	Adults of low educational attainment	Toronto (Ontario)	40	3.4-13.9	n.a.
Baghi (1979)	ABE and GED students	Des Moines, IA	46	6.6	57
Benson (1974)	College and university administrators	Tennessee	50	4.5	75
Booth (1979)	Low income adults in public housing	Maryland	141	n.a.	n.a.
Clark & Dickinson (1976)	Registered Nurses	Vancouver	250	5.5	n.a.
Coolican (1973)	Mothers of preschool-aged children	Syracuse, NY	48	5.8	66
Denys (1973)	Secondary school teachers and store managers	Ghana	20	4.0	75
Fair (1973)	First year elementary teachers	Ontario	35	8.8	67
Field (1977)	Cross section of both literate and semi-literate adults	Brownstown (Jamaica)	86	4.2	20
Geisler (1984)	Adult Community	Waco, TX	33	n.a.	n.a.
Graeve (1987)	Registered nurses	Mid-West City	99	n.a.	80
Hassan (1980)	Cross section of adults	Ames, IA	077	9.8	78
Hiemstra (1975)	Cross section of older adults	Nebraska	214	3.3	55

Table 1 Continued

Source	Population	Location	No. of Subjects	Annual No. of Proj./Person	% of Self-Planned Learning
Hummel (1985)	Physicians	n.a.	30	n.a.	89
Johns (1973)	Pharmacists	Atlanta, GA	039	8.4	56
Johnson (1973)	Adults who had just completed their senior high school examinations	Ft. Lauderdale, FL	040	14.4	50
Kathrein (1981)	Secondary School Teachers	New York State	20	7.9	n.a.
Kelly (1976)	Inexperienced secondary teachers and experienced secondary teachers	Cortland County, NY	020	7.9	68
Kitonga (1989)	Methodist Ministers	n.a.	102	n.a.	n.a.
Mason (1983)	Social Workers	Victoria, Canada	48	18.9	n.a.
McCatty (1973)	Professionals in engineering, law, education, medicine, architecture, and science	Ontario	054	11.1	50
Miller (1977)	Teachers and non-teaching professionals in a school system	Upstate New York	060	5.0	89
Miller and Botsman (1975)	Cooperative Extension agents	New York	009	12.0	40
Penland (1979)	Cross section of adults	United States	n.a.	3.3	76
Peters and Gordon (1974)	Adults, both urban and rural	Tennessee	475	3.9	76
Quiroz (1987)	Farmers	Michigan	17	n.a.	n.a.

Table 1 Continued

Source	Population	Location	No. of Subjects	Annual No. of Proj./Person	% of Self-Planned Learning
Ralston (1978)	Two groups of older adults (Black and White)	Champaign, IL	110	2.4	n.a.
Richardson (1986)	CES Home Economists	Michigan	12	n.a.	75
Rymell & Newsom (1981)	Aerospace Engineers	Fort Worth, TX	30	12.4	n.a.
Sears (1989)	Adults over 50	Texas County	120	1.99	n.a.
Shackelford (1983)	Black Adults	Havana, FL	104	n.a.	n.a.
Tough (1971)	Cross section of adults	Ontario	66	8.0	75
Umoren (1977)	Two socio-economic groups of adults	Lincoln, NE	60	4.7	40
Zangari (1978)	Adult educators in various post-secondary institutions	Nebraska	45	7.2	72

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Tough, A. (1992). Recent reports, Intentional changes and self-planned learning projects, Ontario, Canada. as cited by Clardy (1992).

Coolican (1973), who conducted one of the earliest replication studies, examined the learning projects of mothers with young children under six years old. Participants for the study were selected using a stratified random sample from a computerized list of families in a suburban school district in Onondaga County, New York. The master list was divided into two lists of families. One list included families with children under 30 months old and the second list was composed of families with children ages 30 months to six years old. A total of 48 mothers were chosen for the study with 24 interviews being conducted from each participant list.

Coolican concluded that participants conducted an average of 5.8 learning projects over a 12-month span, with the group reporting over 12,000 hours of time spent. The projects were self-planned in 66 percent of cases. The results showed that the mothers of children under six years of age had a genuine interest in learning, but faced obstacles to their efforts. Common obstacles included a lack of time due to family obligations, little energy, the lack of quality childcare and financial pressures. A side note is that nearly a quarter of the participants cited motivation, the fear of failure, and practical issues related to learning as reasons for why they have not engaged in more learning projects (Coolican, 1973).

An interesting finding from the study is the discovery of quick learning projects that could be completed in less than seven hours (Coolican, 1973). Such abbreviated learning sessions have the potential of spurring long term learning projects and may be relevant given today's access to information at a learner's fingertips. The overall study confirmed participation in the learning projects by mothers and demonstrated that through the use of Tough's interview schedule educator's may better address the needs of the learner through planning and possible adult education interventions.

Peters and Gordon (1974) surveyed 277 adults in a predominately metropolitan county and 149 adults in a rural county in east Tennessee. Participants were selected in the metropolitan area by randomly selecting one participant from each page of a 400-page directory. The goal was to gain a sample size of 250 participants, so an additional 150 participants were selected to account for incorrect addresses, unusable interviews, and those who opt-out of participating. Rural participants were selected by dividing the county into clusters of dwellings, 25 units per cluster, and then randomly selecting 20 clusters from the overall group. An adult in each unit in the selected clusters was asked to participate. This resulted in a total of 149 adults interviewed, as one interview was not usable.

Peters and Gordon (1974) found that in the rural areas, participants did not engage in as many learning projects as those in other studies, but the overall group of participants averaged more time spent on learning projects than those in six other studies. The mean number of learning projects in this study was 3.9 with 76 percent of projects being self-planned.

The drive for learning was present in participants but the most frequent reason cited as a deterrent was a lack of time to dedicate to learning projects because of family or financial pressures. Another interesting finding was that participants in both the rural and urban settings had a range of knowledge regarding learning opportunities. Many in the rural county were unfamiliar with libraries and museums in their area (due to a lack of resources) while participants in the urban setting faired moderately better (which may be due to more educational resources). This study was extensive and provided insight into the differences in learning projects and access in rural and small urban communities.

Benson (1974) published a study on self-directed learning using 47 administrators at select Tennessee colleges and universities as participants. Using a modified version of Peters and

Gordon's (1974) interview schedule, adapted from Tough's work (1971), Benson found that the participants conducted an 4.5 learning projects in a 12-month period and that the learner was the primary planner in 75 percent of cases. Each administrator reported an average of 269 hours a year devoted to learning projects. Demonstrating the power of self-directed learning as a means to affordable education, 90 percent of participants in the study reported that they did not incur personal expenses as a result of their learning projects. This is likely due to the accessibility of workshops and conferences associated with their profession. Most learning projects were work related as topics revolved around their duties as administrators.

As with other studies, Benson confirmed that learning projects are conducted in many different settings with many different intentions. Benson found that a participant's learning projects may be influenced by environmental conditions such as work and peers. Related to influence, while administrators conducted learning projects around family and personal interests, it was their work projects that made up the majority of their overall projects. He notes that this is due to the changing nature and pressures associated with the college administrator position.

Benson found that gaining cooperation from those with topic knowledge was an obstacle. Peters and Gordon (1974) found similar results. While this obstacle is present, it did not affect the majority of administrators, as they did not routinely see the need to seek out the assistance of others. Only 2 of the 47 participants sought out the assistance of others. These results were consistent with Peters and Gordon (1974) who determined that gaining the cooperation of people with access to information was a challenge for most people except for those who are well educated. The administrators in this study spent an average of 269 hours on learning projects.

Hiemstra (1976) examined the learning projects of 214 adults 55 or older living in Nebraska. The participants were randomly selected using voter registration cards from 20 towns.

He found that 50 percent of learning projects conducted by those 55 and older were for self-fulfillment (leisure, arts, hobbies, ethics). This finding was important because it shows that older adults are more actively involved in learning that reported in previous studies of participation. Hiemstra states that educators need to look for new ways to engage learners by removing "institutional blinders" and providing learning opportunities in "new settings" (1976, p.337). His statement has been seen as leading to greater opportunities for older adults as the location and accessibility of today's programs have increased.

Comparing participants of different socioeconomic backgrounds led to the conclusion that regardless of background, older adults were actively engaged in self-directed learning (Hiemstra, 1976). Hiemstra added additional support that older adults were active learners and were not resistant or unwilling to learning. This was demonstrated in that while not as active in traditional educational environments as younger adults, older adults engaged in self-directed learning activities on a regular basis. Participants had a mean of 3.33 learning projects with 55.15 percent of projects being self-planned. It is notable that the findings assist in dispelling beliefs about the patterns of learning in older adults. This study compliments both the self-directed learning research and research on structuring learning opportunities to meet the needs older adults.

Penland (1977) conducted one of the first national studies on self-directed learning. A probability sample of 1,501 individuals was taken from 5,493 households across 360 counties in the United States. Participants were 18 or older, with education levels and employment types varying. Penland's research drew on a nationwide population to assist in generalizing findings. The researcher noted that patterns in information processing would emerge as independent variables were analyzed.

After conducting pilot interviews, the survey was reduced in size to take approximately 60-minutes to conduct. Using the Opinion Survey Corporation, phone interviews were conducted over the course of one month by interviewers trained in the purpose, scope, and protocol materials for the survey. The data collected show that learning projects are conducted across the population and range in topics from those that are work related to those with personal interests such as art, childcare, driving, health, sports, and civic projects. Participants in this study conducted just over three projects per year with 76 percent of projects being self-planned.

An interesting result of the study was the motivation behind choosing to engage in self-directed learning as opposed to formal learning. Self-initiated learning was chosen over formal learning for a number of reasons including: the desire to learn at one's own pace, learning style, or structure; the need to start learning immediately; lack of knowledge regarding courses being offered or topics offered; a dislike of formal classroom structure led by a teacher; and transportation, cost, or time concerns (Penland, 1977; Penland, 1979). As with other studies Penland found that individuals initially become involved in and go about their learning projects through a set of random activities due to "chance occurrences". Several examples are provided including being forced into learning because of certain circumstances, random learning searches from reading, or moments of trial and error around topics such as car repair and day-to-day interactions.

While circumstances push learners toward leading their projects, there is evidence to suggest that patterns of learning, or planning, occur during self-directed learning. Divine guidance, past experience with accomplishing a task, and trial and error were cited as ways people go about conducting learning projects. Participants identified seeing, reading, listening

and speaking with someone who will field questions as the best ways they learn. These findings show that learning preferences are varied across segments of the population.

Unlike the Benson (1974) study, only 49.9 percent of respondents identified vocational as an “extremely important” area where learning is used. Primary topic areas for learning projects were personal development and home and family. This study is important both its ability to generalize findings beyond a target population and in its confirmation of self-directed learning projects as a legitimate means of learning outside of traditional education environments.

Research using Tough’s interview schedule slowed after the mid-1980’s. The creation of the Self-Directed Learning Readiness Scale (SDLRS) (Guglielmino, 1977) moved research beyond simply describing the occurrence and nature of learning projects, toward an examination of factors contributing to self-direction (Brockett & Hiemstra, 1991). However, Tough’s influence is still felt with the New Approaches to Lifelong Learning (NALL) study conducted in Canada in 1998. The NALL survey was developed by the Ontario Institute for Studies in Education (OISE), which is associated with the University of Toronto (UT) (Livingstone, 2000). This was the first major national study of self-directed learning since Penland’s U.S. study in 1977, and is the first national Canadian study on the topic (2000).

A telephone survey was used to interview 1562 Canadian adults with a final response rate of 64 percent of households contact. The survey was designed to address three sites of adult learning including a formal schooling in colleges and universities, further education in training programs and workshops, and informal learning that takes place outside of traditional learning avenues (Livingstone, 2000). From the survey, researchers uncovered a number of findings related to age and education. The education level of an individual did not impact the number of

hours reported spent of informal learning, suggesting that the desire to learn and the skills needed to pursue informal learning are often present regardless of educational status.

Researchers also found that older adults are as likely as middle-aged adult seek out further learning opportunities. The 55-64 year old age group spent an average 12 hours per week on informal learning, as did the 65+ age group. This finding trailed the younger age groups of 34-44 and 45-54 year olds by 3 hours on average. Findings suggested that as adults age, they begin to use their personal learning experiences as a guide for learning as opposed to relying on formal learning environments (Livingstone, 2000). This is also supported by the findings that adults over 45 years old are using their informal learning efforts as a primary source of their work development while younger adults rely on co-workers and the experience of older workers (2000). Analyzing the NALL survey uncovered that more than 70 percent of work-related knowledge is being gained via informal learning.

The focus of the NALL was to collect information on the learning efforts of adult learners. It resembled Penland (1974) in that it was a national study on learning. The findings spanned several aspects of personal and professional learning projects with focused questions related to work development. Using telephone surveys allowed for the collection of data beyond that which was able using face-to-face interview techniques. Also a reduced time for completing the survey meant that participation rates could potentially be higher than with Tough's study.

This study reaffirms the prevalence of informal learning in the lives of adults and is being used as a means of guiding policies and programs related to adult learning programs. According to Livingstone (2006), the Canadian Teachers' Federation, along with a number of other professional organizations, is using information gathered from the survey to inform teacher professional development programs and influence government policies regarding teachers. Work

with the NALL also led to the development of the "plar.ca" website in conjunction with the Canadian Labour Force Development Board and the Canadian Association for Prior Learning Assessment (2006). The use of the survey is continuing to expand the working knowledge of informal adult learning.

One final, more recent study, is noteworthy. Clardy (1992) examined work-related, or Vocationally-Oriented self-directed learning projects (VO SDLPs). Clardy interviewed 56 adults within five service organizations. All adults were in non-exempt, or non-managerial, position. Of the 56 participants interviewed, 49 identified conducting VO SDLPs over the past 12 month period. The findings illustrated three primary VO SDLPs including: induced, voluntary, and synergetic.

Related to the three primary VO SDLPs was the idea that each was initiated by organizational conditions and individual patterns. Induced VO SDLPs were often tied to job changes such as changes in job duties. The desire to change and develop was associated with voluntary VO SDLPs. Finally, the synergetic VO SDLPs included a combination of changes on the job and personal motivation to develop or learn (Clardy, 1992). The researcher's focus on vocational learning projects excluded data related to personal projects and therefore cannot be examined related to Tough's (1971) mean for overall projects per person.

The studies on self-directed learning suggest several trends that are relevant to the small business owner. Learning, especially self-directed, is prevalent in adults. Each study found that the majority of learning projects were self-planned in nature. Second, work related topics were close to, or at the top, of the most conducted learning projects. This is of particular importance for small business owners who operate and provide the vision and direction for their business on a daily bases. Finally, there are many different types of planners and resources that are available

for conducting learning activities. Understanding the differences and advantages of each type of planner and resource may act to improve learning project outcomes for small business owners.

Tough's Interview Schedule: Benefits and Challenges

Early studies in self-directed learning sought to describe the nature and frequency of learning projects in adults. The interview schedule is a quantitative interview schedule that utilizes a qualitative face-to-face structured interview format to assist the participant in recalling information regarding their learning projects. The data collected includes a list of learning projects, hours spent per project, current activity level, amount of knowledge gained, importance of the effort to the participant, benefit to others, sources of information, and obstacles to learning. The format of the interview schedule and the nature of information collected presented several advantages for the researcher.

The interview format allows the researcher to follow a structured schedule while also providing room to assist the participant with additional information when needed. As the participant seeks to recall learning efforts that were conducted over a 12-month period, they may often have questions about what constitutes a learning project. The interview schedule allows for the clarification of learning projects and further probing on the part of the interviewer. Combining the interview questions with a face-to-face format provides the advantage of assisting in clarifying the learning projects study and increasing the participant's memory recollection The personal nature of the interview schedule gives the interviewer the opportunity to build rapport with the participant, therefore increasing the participant's response rate (Jonassen, 2004). In the case of the learning projects schedule, the researcher has the opportunity to set the tone for the study and allow time for questions, which may lead to added trust and confidence from the participant.

Tough's instrument, having been used in previous studies on self-directed learning, provides a solid foundation that guides the present study. The initial learning projects interview schedule provided a format that has been modified and updated to reflect cultural changes in wording and advances in technology. While the updates modernize the study, the foundation established by the learning projects study and the data gleaned from previous research will be important to making sense of the information collected by the researcher.

Coolican (1973) suggests that Tough's instrument may be suited for use in uncovering the educational interests of learners in new target groups. As it stood, adult education used planning committees and involved representatives of a target group in the decision making process for planned learning. Tough's interview schedule, Coolican believed, might be used to suggest themes for learning, preferred learning styles, and reasons a target population is undertaking learning projects, enhancing adult education and learning efforts.

Using the learning projects schedule increases the depth of information that is collected. Providing flexibility in the responses and devoting time to the interview process leads to depth in responses that may be more difficult to capture when using a self-reporting questionnaire. The greater depth of information allowed by using the interview schedule is countered by lower overall sample sizes that hinder the ability to generalize the findings beyond the immediate sample population.

A one-to-one interview provides some additional challenges. The interviewer must have appropriate training to conduct the interview in a way that is consistent with the intent of the study. In addition, the interviewer must be able to control the pace of the interview so that the time is effectively and efficiently used. An example is when a participant is asked a question and gets off track with a long answer that says little about what was asked. In this case, the

interviewer must take charge of the interview and provide the proper balance between providing support and appearing to guide the information given.

Small Businesses and Learning

Small businesses provide the jobs, services, and taxes that are essential to maintaining a healthy economy (Langan, 2009; Pinckney, 2003; Silverman 2008). They also have special access to lending and government contracts. It is therefore important to answer the question, "what is a small business?" In the United States the Small Business Administration (SBA) provides a series of guidelines that assists in the classification of a small business. According to the SBA, in order to be considered a small business, the business must be organized for profit; have a place of business in the United States; make a significant contribution to the U.S. economy by paying taxes or using American products, materials or labor; and, does not exceed the numerical size standard for its industry ("Summary of Size Standards", 2009).

As the standards for classifying a small business vary per industry, it is necessary to accurately identify a business's market. The industry classifications in the United States are found in the North American Industry Classification System (NAICS). The NAICS was designed by the U.S. Census Bureau for use in the collecting, analyzing, and dissemination of statistical data related to U.S. businesses ("North American Industry Classification System", 2007). The process of formally classifying small businesses is often cumbersome as different rules apply based on the various industries. For example, a retail company with an annual revenue of less than $5 million is considered to be a small business while in manufacturing, small businesses are considered to be those companies with 500 or less employees. Differences in determining the classification of industries are a reflection of operating in a particular market.

Beyond classification, the research on learning and learning projects provides a starting point for small business owners to plan and carry out learning activities. Tough (1971) found that work related topics was one of the most frequently undertaken learning projects. In addition, Tough (1978), Penland (1979), and Rymell and Newsom (1981) also indicated that projects related to work were at, or near, the most frequent learning projects planned by the learner. This has implications for practitioners, such as coaches and mentors, who may gain insight into the types of planners, topics, and preferences that this population has for conducting learning projects.

Learning research on small businesses include studies on the learning stances and strategies of owners (Murphy, 1996; Doyle & Young, 2005), e-learning (Doyle & Young, 2004), collective learning (Staber, 2009), informal workplace learning and outcomes (Doyle & Young, 2003; Doyle & Young, 2005; Rowden, 2002), collaborative self-help models (Kearns, 2002), and barriers of workplace learning (Doyle & Young 2003). A prevalent line of research is found in the literature on action learning. Action learning is a process where participants study and reflect on their experience in order to improve performance (Dilworth & Boshyk, 2009; Raven, 1980). This is a group process and includes asking questions about experience and reasons for taking certain actions while engaging in a process.

Networking organizations, such as the one used for the current study, may take advantage of the action learning method. In these organizations, small business owners discuss their organization, the way that they conduct business, and the current endeavors that they are pursuing. In doing so they are reflecting on the nature of their business and gaining input from other owners who may too have similar experiences. Together, the members of the networking group are able to learn about ways of doing business that they may not have previously

considered while also sharing experience and knowledge with others. Crucial to the process is self-exploration and the reinforcement of current information that is working for the owner (Marquardt, 1999).

Continued research in this field will have implications for coaches and mentors, small business owners, and educational institutions as it will inform their practice. Understanding the learning efforts of this population provides an opportunity to impact not only the professional and personal development of the small business owner, but also the productivity of their businesses and the health of the economy.

Obstacles to Learning

Much of the research following Tough's initial learning projects study (1971), and research associated with adult learning, included an examination of the obstacles that learners face when planning and conducting projects, as well as, the deterrents to engaging in learning projects. It is important to understand the barriers that may inhibit small business owners from undertaking learning projects. The obstacles that are encountered by other learner may be common to those experienced in the business sector. There are a number of studies that address obstacles, or deterrents, to learning and may shed light on why people do not participate in learning activities. The most commonly given explanations by adults for the lack of participation in learning activities include a lack of time, lack of money, and family responsibilities (Merriam et al., 2007).

Researchers have addressed barriers to adults' participation in learning activities (Cross, 1981; Johnstone & Rivera, 1965;Merriam et al., 2007). Johnstone and Rivera (1965) suggest that barriers may be divided into situational and dispositional barriers. Situational barriers are those found to be outside of the control of the learner. These barriers may include the cost of

education, the location of the program, or the course offerings. Dispositional barriers are internal in nature and considered within the control of the learner. These barriers are related to personal beliefs, values, and attitudes. The lack of motivation, fear of failure, and the feeling that the learner does not deserve an education are examples of dispositional barriers. Institutional barriers were added to the categories in a later study (Cross, 1981). This category includes obstacles that prevent or discourage an adult from participating in organized educational activities.

Darkenwald and Valentine (1985) developed the Deterrents to Participation Scale and conducted a study that included 215 participants from random households. Using a factor analysis, the researchers identified six aspects of non-participation among adults. These factors included a lack of confidence, lack of course relevance, time constraints, low personal priority, cost, and personal problems or issues.

Obstacles are examined in the interview schedule and were noted by many researchers including but not limited to Coolican (1973), Peters and Gordon (1974) and Penland (1977). A discussions on obstacles found by researchers in self-directed learning studies is found in the replication studies section.

Conclusion

This chapter provides a foundation on learning projects research stemming from Tough's (1971) original study, including Canada's NALL study, obstacles to learning, and technological changes impacting learning in today's society. The impact of technology and the lack of available research on small business owners' learning projects, have led to the need for to revisit Tough's original study in 1971. In Chapter III, there will be a discussion of the population and sample, instrumentation, procedure, and the data analyses used for this study.

CHAPTER III

METHOD

The following chapter outlines the method used in this study. It includes information on the population and sample, instrumentation, procedure, and data analysis. After a discussion of each topic, Chapter III ends with a general conclusion outlining the structure for the remaining chapters.

Population and Sample

Participants were selected using a convenience sample of small businesses from a community in the Southeast United States. The researcher contacted an organization for business networking to recruit participants. The members of the networking group undergo a vetting process where references are checked to ensure the quality and reputation of the owner's business. As networking requires contacts be made and references given, it is crucial to find quality members for the group. The vetting process may exclude business owners in the community who may want to participate but do not pass the screening process or those owners who simply do not have the time or motivation to join. The majority of people that undergo the vetting process are approved to become members of the networking group, as the intent of the process is to insure quality for future references not to exclude people from participation. Most participants who were interested in the study showed interest in education and in the research being conducted, possibly influencing their decision to participate in the study.

During meetings with the networking group, the researcher had one-to-two minutes to introduce the study, its benefits, and then to ask for participants. A one-page summary of the study was given to those at the meeting for their review. Those interested in participating had the opportunity to provide their contact information. After the study presentation and the collection

of potential participant contact information, the researcher followed-up with business owners via email and phone, confirming their participation in the study and setting a time and location for the interview.

The convenience sample included 35 small business owners. The number of participants was determined based on the constraints associated with conducting one-hour interviews. Previous learning studies (Baghi, 1979; Benson, 1974; Coolican, 1973) have included approximately the same number of participants based on such constraints. The interviews were conducted, and information collected, by one researcher.

For the purpose of this study, and to simplify the selection criteria, a small business was defined as those businesses with 19 or fewer employees. Most consulting, services, and brick-and-mortar businesses, with the exception of grocery, convenience, department, and warehouse stores, fall within the criteria established for small businesses.

Instrumentation

This study utilized an updated version of Tough's Learning Projects interview schedule (1971). The Learning Projects interview schedule uses a standardized interview protocol in order to assist the participant in recalling self-planned learning projects. The interview involves a face-to-face meeting with the participant, where the researcher asks structured questions that result in quantitative data. That is, while there is an interview being conducted, the information recorded is quantitative in nature. For example, a person will often describe their learning project in great detail. However, the information recorded will include categories such as the time spent on the learning project, the nature (or topic) of the project, the amount learned, and the primary planner. The benefit of a quantifiable assessment is that it provides a means by which to collect and analyze information on learning projects. Tough's interview schedule assists the participant in

recalling learning projects that have been conducted over the past 12-months that may have otherwise not been recognized as learning projects at all. Additional benefits and challenges to using Tough's interview schedule is reviewed in Chapter 2.

A research team at the University of Tennessee undertook the initial modification of Tough's interview schedule. Permission to edit the interview schedule was given by Dr. Tough. His approval letter is found in Appendix A. The team was led by Dessa Beswick and included Dr. Ralph Brockett, Megumu Doi, and John Harrison. The team met over a period of about three months.

The research team collaborated on potential revisions to the interview schedule. Team members made suggestions and were assigned sections for revision. Upon the completion of the sections, team members would come back together to examine the revisions, providing further input and approving the draft.

The revisions and updates to the interview schedule included wording, formatting, technology, learning activities, and locations for potential learning programs. A section was included updating the types of learning projects that people engage in and included using computers, the Internet, and other forms of media. The impact and development of technology acted as one of several primary drivers for revising Tough's interview schedule. There have been many technological changes since 1971. Personal computers are widely available in homes, businesses, schools, and libraries. The Internet and information sites such as Wikipedia have introduced access to information on a global scale. Wording was revised as the original study was a reflection of the culture at the time and was not representative of the language and phrases used today. An additional section discussed obstacles and was intended to gain insight into the

challenges to conducting learning projects. Edits and additions to the original schedule reflect the collaborative effort of the research team.

During the spring semester of 2009, a team in a doctoral seminar at the University of Tennessee made additional revisions to the format of the modified interview schedule. This team included Amelia Davis, Carine Bailey, Tracy Rees, Mary Nypaver, and Dr. Ralph Brockett, the course facilitator. The researcher for the current study chose to incorporate the revisions to the format of each section into the final interview schedule found in Appendix B. These revisions include changes that clarify section headings.

The researcher added a revised resource section modified from Benson's (1974) learning projects study. The additions to the survey assisted in providing information on the nature of the learning projects and resources used by small business owners while pursuing learning activities.

The interview schedule underwent pilot testing using two participants familiar with the learning projects study. It included one participant who was familiar with and had conducted research using Tough's Interview Schedule and one who was representative of the target population. The pilot interviews assisted the researcher in becoming comfortable using the interview schedule prior to the start of the study. They also allowed the researcher to receive feedback on the interview process, which was helpful in conducting the study.

Human Subjects and Institutional Review Board

The Institutional Review Board (IRB) at the University of Tennessee is composed of between 16 and 21 members. There are three options available for the review and approval of research: Form A, exempted research; Form B, expedited review; Form C, full IRB review. This study was approved under the exempted research, Form A, category. Form A includes research that uses educational tests, survey and interview procedures, or public behavior where the

information obtained cannot be linked to the human subjects from the study, either directly or through identifiers or place the subjects at risk of liability. In addition, this review may include studies using previously collected information and food evaluations. The research study and the human subjects form was approved by the IRB.

Procedure

The interview process began with initial contact being made during meetings conducted by a business networking organization. In the initial presentation, the researcher discussed the study and invited potential participants to join. A one-page study summary was provided, explaining the nature of the study and its benefits. Participants had the opportunity to provide their contact information following the presentation. Follow-up contact was made via email and telephone confirming participation in the study and setting an appointment time and location.

Prior to the start of the interview, the researcher asked the participant to sign an informed consent form. Afterwards, the interview began with a statement from the researcher intended to set the atmosphere for the exchange of information, establishing a relaxed tone. The purpose of the interview was explained and the objectives were identified. Next, the interview was introduced as follows:

> Our research is about what people learn and how they go about learning it. Everyone LEARNS, but different people learn different things in different ways.
>
> I'm interested in what YOU have tried to learn in the past year.
>
> When I say "learn" I don't just mean learning things that people learn in schools and colleges. I mean any deliberate effort AT ALL to learn something, or to learn how to DO something. Perhaps you tried to get some information or knowledge – or to gain new skill or improve your old ones – or to gain new skills or improve your old ones – or to increase your sensitivity or understanding or appreciation.
>
> Can you think of any efforts like this that you have made during the past 12 months?

At this point, the interviewer paused and allowed the participant to reflect and recall learning activities that have taken place over the past 12 months. The first series of questions was designed to generate a list of learning activities, or projects, identified by the participant. In-depth questioning was used to probe the participant's memory to increase the ability to recall learning activities that may otherwise be deemed unimportant or not considered learning by the participant. A follow-up prompt was delivered to probe deeper into the participants learning projects.

> Try to think back over all of the past 12 months—right back to (name of month) last year. I am interested in any deliberate effort you made to learn anything at all. Anything at all can be included, regardless of whether it was easy or hard, big or little, important or trivial, serious or fun.
>
> It doesn't matter if it was in a class or outside of a class, with others or on your own, or even when your effort STARTED, as long as you have spent at least a few hours at it since last (name of month).

At this time Participant Sheet 1 was given to the interviewee. This sheet provided examples of topic areas for learning projects (Appendix B, Participant Sheet 1). The sheet was provided in conjunction with the researcher stating:

> Now, here is a list of things people learn. It may remind you of other things that you have tried to learn during the past 12 months. Take as long as you want to read each word, and to think about whether you have tried to learn something similar.

The participant was then asked to examine Participant Sheet 2 for further prompts on possible learning projects and locations where intentional learning episodes may have taken place within the past 12 months (Appendix B, Participant Sheet 2). This list provided examples of potential learning resources including: professionals such as a medical doctor or tax advisor; resources such as books or online articles; various media such as the internet or television; group settings including committee meetings or conferences; and informal contacts like family and

friends. Examples of locations for possible learning projects included churches or synagogues, colleges, companies, government programs, or museums.

Participant Sheet 2 was designed with additional prompts that assisted in enhancing recall, while also giving the researcher more information on the participant's intended retention time. As was stated in Chapter I, the criteria for learning projects are as follows (Tough, 1971):

- The participant must intend on retaining the information learned for longer than 48 hours following the initial learning activity.
- There must be a deliberate effort to acquire knowledge or a skill.
- The learning project must include a minimum of 7 hours of time dedicated to learning over the past 12-month period.

Given the use of technology and the ease with which information can be collected, the criteria were altered to include learning projects deemed as very important to the interviewee but do not meet the seven hour requirement set by Tough. This change was addressed in Item 2 (Appendix B, Participant Sheet 3).

From this point forward, the interviewer instructed the participant that the information collected would be derived from each individual learning project. The researcher then handed out Participant Sheet 3 and facilitated discussion on the amount of time spent by the participant on each learning project (Appendix B, Participant Sheet 3). Participants estimated hours dedicated to a learning project.

After recalling the hours spent on the project, the interviewee was asked to identify the level of importance they placed on the learning effort. From Participant Sheet 3 (Appendix B, Participant Sheet 3), the participant was asked to choose between four levels of importance:

> ANSWER # 1 NOT VERY IMPORTANT -- that is, you do not feel that it was of great value (you have not retained the information or do not see the value in the learning effort).
>
> ANSWER # 2 SOMEWHAT IMPORTANT -- that is, you believe that it had some value (you have retained the bits of information and see some value in the learning effort).

ANSWER # 3 DEFINITELY IMPORTANT -- that is, you definitely find value in this learning effort (you have retained most information and definitely find value in the learning effort).

ANSWER # 4 VERY IMPORTANT -- that is, you find a great deal of value in this project and the information learned (you find great value in the information retained and learned).

If the project was less than seven hours, but deemed as “definitely” or “very important”, the survey continued for the learning project. The inquiry stopped if the project was less than seven hours and recognized as being “not very” or “somewhat” important.

Sheet 3 then asked about the current state of activity for each project. The participant was asked to choose between four levels of activity:

ANSWER # 1 NOT VERY ACTIVE -- that is, you have dropped it, completed it, or set it aside (you are spending much less time at it now than you were before).

ANSWER # 2 SOMEWHAT ACTIVE -- that is, you are still working at it, and you are spending less time at it now than you were before.

ANSWER # 3 DEFINITELY ACTIVE -- that is, you are definitely continuing this learning effort right now, and you are spending about as much time as ever at it.

ANSWER # 4 VERY ACTIVE -- that is, you are continuing this learning effort and spending, more time than ever at it.

Next, the interviewee was provided with Participant Sheet 4 (see Appendix B, Participant Sheet 4). This sheet asked about the participant’s perceived knowledge gained, enthusiasm for having a project’s new knowledge or skill, and the benefits of the participant’s knowledge or skill acquisition for other people.

In Participant Sheet 5, (Appendix B, Participant Sheet 5) the primary planner of the day-to-day aspects of the learning project was a key component to determining the nature of each learning project. The researcher assisted recall of the participants by stating:

> With this learning project, try to decide who (or what) was the planner. That is, who decided what you would learn—how you would learn—and when you spent time trying to learn? Does this learning project fit into any of the four types on this sheet?

The researcher then instructed the participant to review Participant Sheet 5 (see Appendix B, Participant Sheet 5), which explained the four types of planners. The planners include a group, one-to-one situation, an object such as a computer or worksheet, and the learner. A group can plan a learning project by incorporating input from all members or by taking direction from an instructor or leader. A one-to-one situation occurs when a learner engages a professional, expert, friend or family member who provides guidance and structure for a learning project.

Following further questions the researcher probed to identify the primary planner of the learning activities. The primary planner is the person, group, or object responsible for the majority (51% or more) of the planning for a learning project. If no primary planner was responsible for 51 percent or more of the project then the researcher recorded “mixed”. If the primary planner was a group, or it’s leader or instructor, then the researcher asked for more information by stating:

> Now, please choose one of two possibilities. The first possibility is that this group was sponsored by an institution: did the learning activity have an instructor, leader, or speaker who was assigned to that group or was paid for this task? The second possibility is that it was just a group of equals meeting outside of any organized or institutional framework, and taking turns planning their own learning activities. Which was your group?

The participant had the option of selecting “one-to-one”. In that event the researcher probed to determine if the planner was paid by the participant or if the planner was a friend or relative. The interviewer stated:

> Now I will suggest two possibilities, and I want you to tell me which one is correct. One possibility is that the one person who helped you was paid to do so (paid by you, or by someone else), or the person was doing so because this was a definite responsibility for him or her, or part of his or her job. The other possibility is that the person was helping primarily because he or she was a friend or relative. Which was the case for your learning project?

Following the identification of the primary planner the researcher began to probe for the resources used for the learning project. The participant was handed Participant Sheet 7 (See Appendix B, Participant Sheet 7) and given an opportunity to read and reflect on the resources that they used during the learning project. The researcher inquired if the source was electronic in nature. The process was then repeated for each learning project identified by the participant.

Prior to completing the interview, the researcher asked the participant to fill out a demographic data sheet (Appendix B, Demographic Data Sheet). The sheet requested information such as the participant's age, racial background, years as a business owner, level of education, business industry, and computer skill level. The data sheet was kept with the interview schedule for later analysis.

Obstacles to learning were addressed in item 11 of the interview schedule. The interviewee reviewed Participant Sheet #8 (Appendix B, Participant Sheet #8) and was given the following prompt, modified from Peters and Gordon's study (1974):

> Many adults describe problems and OBSTACLES that they have faced while conducting certain learning activities. Of all the activities that have been mentioned, think about the major problems that you have had to resolve. Please identify obstacles that you have faced while conducting your learning efforts in the past 12 months.

The participant was asked to examine Participant Sheet 9 (Appendix B, Participant Sheet 9) with examples of obstacles adapted from prior research on learning projects (Peters and Gordon, 1974; Benson, 1974) and was given the opportunity to discuss obstacles that they have encountered over the past 12 months. The researcher continued stating:

Now, here are examples of obstacles people face. It may remind you of other obstacles that you have past 12 months. Take as long as you want to read each example, and to think about whether you have encountered something similar.

The list includes, but is not limited to, issues with technology, lack of time, family obligation, lack of available programs, and lack of personal motivation to pursue additional

learning opportunities. The interviewer recorded any additional obstacles mentioned by the interviewee on the participant data sheet. Item 10 was asked toward the end of the interview. It is not repeated for each learning project, as it is reflective of all obstacles encountered over a 12-month period.

The interview was then concluded. At this time, the participant was presented with an opportunity to ask any questions about the interview process, clarify or add to any information provided, and learn more about the study. The researcher closed by thanking the participant for the time and assistance given. Following the interview the researcher examined and recorded notes in greater detail. The participant data sheets were filed for data analysis.

Data Analysis

Descriptive statistics were used in the data analysis process. The statistical methods included frequency and percentage distributions to examine the number of learning projects, time spent conducting learning projects, and primary project planner. These types of analysis are used to determine the mean, standard deviation and other descriptive information from the data collected. The data was also analyzed along various demographic variables including age, race, sex, number of years in business, type of business, and comfort with technology. The intent was to uncover trends in learning efforts among different demographic variables.

Table 2 presents the statistical analysis methods used to address each of the study's research questions.

Table 2

Statistical Analyses: Examining Study Research Questions

Research Question	Statistical Analysis
What is the number of learning projects conducted by small business owners within the past 12 months?	Mean, Std. Dev., One-way ANOVA
What is the content of the learning projects?	Freq. Dist.
How much time is spent on learning projects?	Mean, Std. Dev.
Who is the primary planner of the participants' learning projects?	Mean, Freq. Dist., Std. Dev.
What is the percentage of learning projects that are work and non-work related?	Mean, Freq. Dist., One-way ANOVA
What assistance is needed to complete the project?	Mean, Freq. Dist., Std. Dev.
What resources, including technology, were used during a learning project?	Mean, Freq. Dist., Std. Dev.
What obstacles are encountered while pursuing learning pro	Mean, Freq. Dist., Std.

Conclusion

This study was designed to provide insight into the learning projects and resources dedicated by small business owners in their knowledge and skill development. The revision of Tough's Learning Projects Interview Schedule added to the depth of data collected on small business owners' learning activities.

Chapter IV presents and discusses the data resulting from the learning projects study. The discussion includes information on the nature of the learning projects conducted by small business owners and will address the questions raised by the researcher as a part of the purpose of the study. Chapter V provides a general summary of the study, conclusions, and implications and recommendations for further research.

CHAPTER IV

ANALYSIS OF DATA

The intent of this research was to examine the learning projects conducted by a group of small business owners over a 12-month period. An updated version of Tough's Learning Projects Interview Schedule was used to collect data from 35 individuals. All participants who started the interview completed the process. The data were analyzed in order to answer seven research questions. This chapter will present the findings from data collected in the following sections: (a) the sample and demographic profile of participants and (b) an analysis of data collected related to the seven research questions.

Sample and Demographic Profile

Study participants were asked to complete a demographic information form indicating their age, gender, race, and education level. In addition, the form included questions related to the interviewee's business, including the number of years as a business owner, the business industry, and perceived computer skill level. These questions served as a base for comparison of data and descriptive analysis.

The mean age indicated by participants was 49.06 years with a standard deviation of 11.34. The ages ranged from 26 to 69 years old with a median age of 49 and mode ages of 35 (N=3) and 48 (N=3). Figure 1 illustrates the age frequency distributions of the study participants. Analyzing the age frequency distribution revealed a negative skew (g^1= -.121) and a negative kurtosis (g^2= -.675). The skew is between -.5 and .5, indicating a near symmetrical curve (Bulmer, 1979). The negative kurtosis indicates that the peak of this distribution curve is slightly flatter than a normal distribution. The lack of significant skew allows for the use of parametric statistics, which were used to analyze the data from this study.

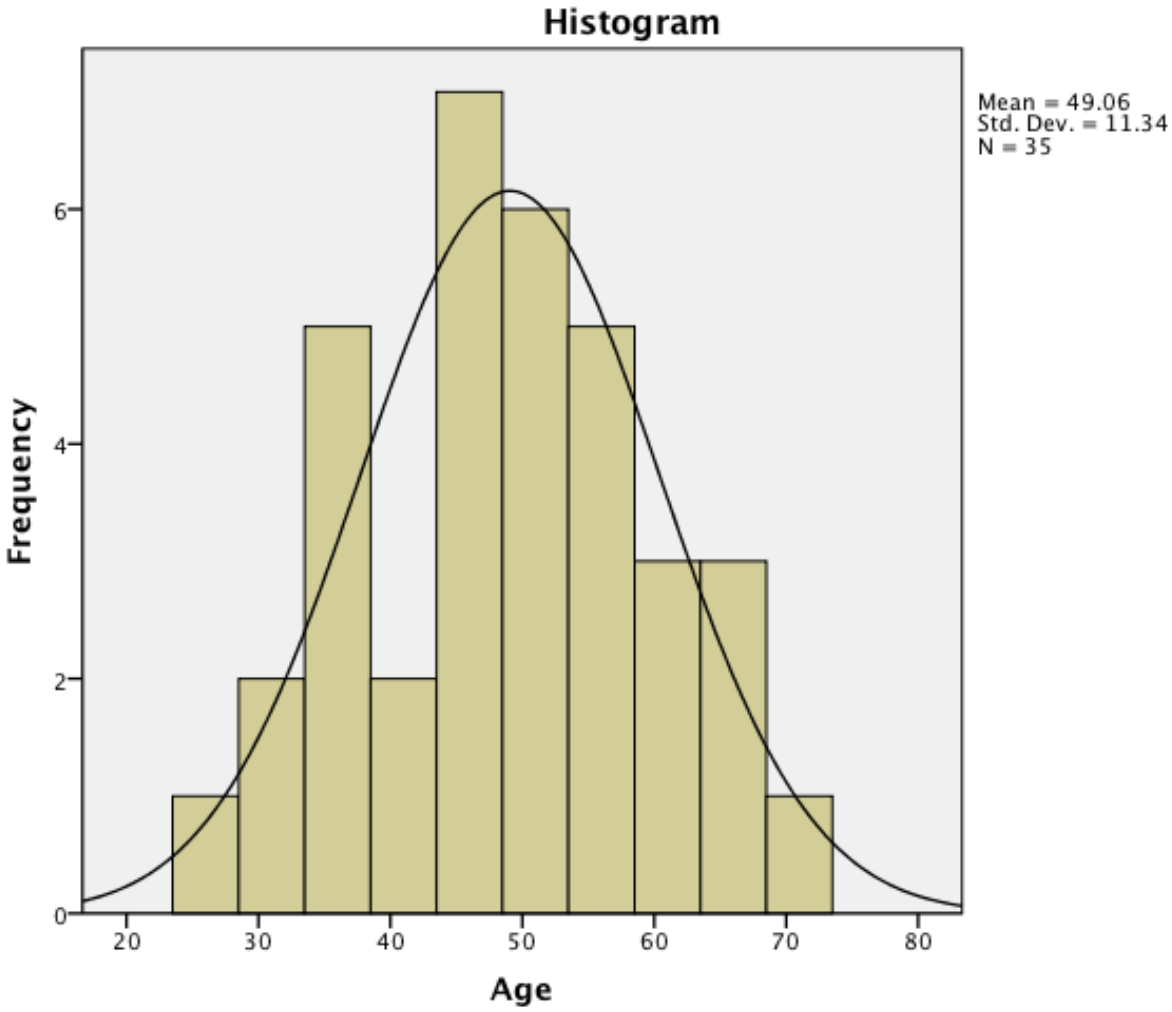

Figure 1. Distribution and Frequency of Participant Age

Of the participants, 60% (N=21) were men and 40% (N=14) were women. Additional demographic data, including the information previously described, is found in Table 3.

Education level was assessed with intervals ranging from no high school diploma or GED to PhD or equivalent. Nearly three quarters (71.4%) of participants indicated that they hold an undergraduate degree or higher. Undergraduate educational attainment represented the highest percentage, 37.1%, of total responses while Graduate was second at 28.6% and Associates/Trade third with 22.9% of participants. Of those remaining, 5.7% indicated that they attained a High school diploma/GED and 5.7% a PhD. or equivalent.

The racial makeup of the study population was closely representative of the region from which they were drawn. Whites represented the largest section of participants at 82.9% with African-Americans at 11.4%. Hispanic and Asian participants both represented 2.9% of the sample.

In addition to personal demographic information, interviewees were asked questions related to their business and the number of years that they have been a small business owner. The mean number of years as an owner was 8.26 with a standard deviation of 11.34. The range was from 2 to 34 years with a median of 5 and a mode of 4 (N=6).

Table 3

Demographic Profile of Participants

Interview Item		Freq.	Percent
Gender	Male	21	60%
	Female	14	40%
	Total	35	100%
Race	White	29	82.9%
	African-American	4	11.4%
	Hispanic	1	2.9%
	Asian	1	2.9%
Level of Education	High School/GED	2	5.7%
	Associates/Trade	8	22.9%
	Undergraduate	13	37.1%
	Graduate/Masters	10	28.6%
	PhD or Equiv.	2	5.7%
Business Industry	Service	18	51.4%
	Consulting	9	25.7%
	Retail	3	8.6%
	Medical	2	5.7%
	Construction	1	2.9%
	Hospitality	1	2.9%
	Other	1	2.9%
Level of Computer Skill	Novice	4	11.4%
	Intermediate	17	48.6%
	Advanced	11	31.4%
	Expert	3	8.6%

In order to gain a better understanding of participant backgrounds, they were asked to identify their business industry from a pre-designated list. The service industry comprised of 51.4% of the sample; Consulting, 25.7%; Retail, 8.6%; Medical, 5.7%; Consulting, Construction, and Other represented 2.9% each.

Perceived computer skill level was deemed important in order to determine the use of technology as a resource for completing learning projects. Participants were asked to rate their computer skill level based on their understanding of basic and advanced computer functions. The majority of respondents (88.6%) indicated at least an intermediate computer skill level, demonstrating that most were at least comfortable using software, such as Microsoft Office and the Internet, for daily tasks. Novice computer skill level was selected by 11.7% of the respondents; Intermediate 48.7%; Advanced, 31.4%; Expert 8.6%. No participants identified themselves as having a beginner computer skill level. A Pearson's R showed no significant relationship between age and skill level ($r = -.275$; $p = .109$). Data regarding computer skill level are presented in Table 4.

Table 4

Age and Computer Skill Level

Age Groups		Computer Skill Level			
		Novice	Intermediate	Advanced	Expert
< 35 years old	Freq.	1	2	3	0
	%	16.7%	33.3%	50.0%	0%
36 to 46 years old	Freq.	0	3	4	1
	%	0%	37.5%	50.0%	12.5%
47 to 52 years old	Freq.	0	5	1	2
	%	0%	62.5%	12.5%	25.0%
53 to 59 years old	Freq.	0	5	2	0
	%	0%	71.4%	28.6%	0%
60+ years old	Freq.	3	2	1	0
	%	50.0%	33.3%	16.7%	0%

Analysis of Research Questions

This study explored the learning projects of small business owners by posing seven research questions. The following summary addresses each question by presenting data collected using Tough's modified interview schedule. All analysis is based on the responses of the 35 research participants.

Research Question One: *What is the number of learning projects conducted by small business owners within the past 12 months?*

This question was addressed by analyzing the number of projects conducted by each participant in order to identify the mean, range, and standard deviation. From the participants interviewed, the mean number of learning projects over the previous 12-month period was 6.8 projects with a standard deviation of 1.89. The projects ranged from a minimum of 3 to a maximum of 11. Table 5 includes data on learning projects.

Table 5

Learning Projects Conducted Over 12-month Period

N	Minimum	Maximum	Mean	Std. Deviation
238	3	11	6.8	1.89

N is equal to the number of projects

Table 6 presents information on the number of learning projects conducted by men and women over a one-year period. Women conducted a total of 101 learning projects with a mean of 7.21 projects and a standard deviation of 2.01. Men conducted 137 learning projects with a mean of 6.52 and a standard deviation of 1.81. This finding varies greatly from early studies on self-planned learning as women in this sample population were found to conduct more learning projects than their male counterparts. However, a t-test revealed no significance between gender and the number of learning projects conducted (t= 16.66; p= .05). Implications will be discussed in the following chapter.

Table 6

Learning Projects by Gender

Gender	Freq.	Minimum	Maximum	Mean	Std. Deviation
Male	137	3	10	6.52	1.806
Female	101	4	11	7.21	2.007

There was only one Asian and one Hispanic participant interviewed for this study. Therefore, there were an insufficient number of participants from these groups for which conclusions may be drawn. Whites had a mean of 6.72 learning projects with a standard deviation of 1.91 and a range of 3 to 11. African-American's conducted a mean of 8 learning projects with a standard deviation of 1.826 and a range of 6 to 10. Information regarding the race and learning projects may be found in Table 7.

Table 7

Cross-Tabulation for Learning Projects and Race

Race	Freq.	LP	Minimum	Maximum	Mean	Std. Deviation
Asian	1	6	6	6	6	N/A
African-American	4	32	6	10	8	1.83
Hispanic	1	5	5	5	5	N/A
White	29	195	3	11	6.72	1.91

Age groups were created by grouping together a similar number of learning projects around the category of age. Table 8 illustrates the age groups and the mean, range, and standard deviation of learning projects. A one-way ANOVA revealed no significant difference (F= .472; p= .756) between the age group and the number of learning projects among age groups.

The breakdown of learning projects by participants from different industries is illustrated in Table 9. Retail reported a mean of 5 learning projects; Service, 7.22; Consulting 7.33; and Medical, 3.50. The range and standard deviation for each industry is found in Table 7. One participant each represented the construction and hospitality industries, as well as the "other" variable. There is an insufficient representation from each industry from which conclusions may be drawn.

Table 8

Cross-Tabulation for Learning Projects and Age Group

Age Group	Freq.	Minimum	Maximum	Mean	Std. Deviation
< 35	6	6	9	6.83	1.169
36 to 46	8	4	10	6.25	1.982
47 to 52	8	5	11	7.38	2.134
53 to 59	7	3	10	7.14	2.673
60+	6	5	8	6.33	1.032

Table 9

Cross-Tabulation for Learning Projects and Industry

Industry	Freq.	LP	Minimum	Maximum	Mean	Std. Deviation
Retail	3	19	4	6	5	1.000
Service	18	130	5	10	7.22	1.478
Consulting	9	66	5	11	7.33	2.121
Construction	1	6	6	6	6.00	N/A
Hospitality	1	9	9	9	9.00	N/A
Medical	2	7	3	4	3.50	.707
Other	1	5	5	5	5.00	N/A

Research Question Two: *What is the content of the learning projects?*

Personal learning projects (those not related directly to a small business owner's business) covered a variety of topics. Projects included musical endeavors, such as playing an instrument or writing music; exploring historical topics such as WWII and the American Civil War; pet and animal themes including horseback riding, dog training, and pet grooming; sports hobbies such as playing golf or working out; and spiritual endeavors built around religion and philosophy.

Business related topics varied between participants with the most frequently identified projects including financial planning, networking skills, business operations and strategic planning, and marketing topics including social media sites. Many participants indicated that they were pursuing self-help and self-improvement learning projects that were geared toward such topics as improving their understanding of work-life balance issues and positive psychology. These issues seemed especially important as participants struggled to meet the time obligations of owning and operating their business.

Most projects related to work were specific to the type of business and industry in which the company operated. For example, travel agents indicated that they engaged in geography, cultural, and transportation learning projects while financial planners were interested in topics related to market conditions, providing excellent service, and return-on-investment for their clients.

In some cases new business owners were faced with the challenge of understanding their industry, while experienced owners were faced with adapting to an evolving industry. Projects in these situations included learning how to purchase businesses, using technology and social media sites to market and contact customers, and understanding the trends in their respective industry.

The majority of work related projects were aimed at improving their practice, increasing competitive sustainability, and growing their business.

Small business owners indicated that 58.4% of their learning projects were very important to them. Of the projects identified, 57.1% were described as “very active”. In most cases (48.7%), participants stated that they gained an “extremely large amount” of knowledge during their learning projects. There was a high degree of enthusiasm expressed (55.5%) for the new skill or knowledge gained as a result of their learning project. In 43.7% of learning projects, participants indicated that they felt the project benefited others. Of the learning projects discussed, only 4.2% were for credit. Table 10 presents additional information on the learning projects data for each category.

Table 10

Learning Projects Response Data

Survey Item	Level	Freq.	Percent
Importance of Learning Project	Very Important	139	58.4%
	Definitely Important	64	26.9%
	Somewhat Important	32	13.4%
	Not Very Important	3	1.3%
Learning Project Activity Level	Very Active	136	57.1%
	Definitely Active	50	21.0%
	Somewhat Active	44	18.5%
	Not Very Active	8	3.4%
Knowledge Gained During Learning Project	Extremely Large Amount	116	48.7%
	Large Amount	77	32.4%
	Moderate Amount	39	16.4%
	Little	6	2.5%
Enthusiasm for New Skill or Knowledge	Very enthusiastic	132	55.5%
	Definitely enthusiastic	69	29.0%
	Somewhat enthusiastic	33	13.9%
	Not very enthusiastic	4	1.7%
Benefit of Learning Project for Others	Very beneficial	104	43.7%
	Somewhat beneficial	59	24.8%
	Definitely beneficial	41	17.2%
	Not very beneficial	34	14.3%
Learning Project for Credit	Yes	10	4.2%

Research Question Three: *How much time is spent on learning projects?*

The time spent per learning project was divided into three options: Less then 7 hours, 8-40 hours, and greater than 40 hours. Hourly intervals were used as recalling the specific number of hours spent per project is often difficult and frustrating for participants. Those projects that were identified as fewer than 7 hours were only recorded in the event that the participant identified them as "definitely" important. Only three projects met this criterion. Table 11 includes information on the time spent on learning projects.

More than half of all learning projects (59.2%) exceeded 40 hours. The second category, 8-40 hours, represented 39.5% of all projects conducted.

Men reported 34.3% of their learning projects were between 8-40 hours and 65.0% were greater than 40 hours, while women indicated 46.5% of projects being between 8-40 hours and 51.5% being greater than 40 hours. Table 12 outlines these data.

Within age groups, those participants who were 60 or older spent the most overall time on their learning projects with 68.4% of projects lasting 40 or more hours with the 47-52 year old group indicating 66.1%. These groups spent more time per learning project than the mean of the sample (59.2%). Of those participants who were 35 or younger, 58.5% of projects were over 40 hours.

Table 11

Time Dedicated to Learning Projects

Survey Item	Hours Dedicated	Freq.	Percent
Hours Dedicated to Learning Project	< 40 hours	141	59.2%
	8-40 hours	94	39.5%
	Less than 7 hours	3	1.3%

Table 12

Cross-Tabulation of Time Spent on Learning Projects by Gender

Gender		Hours Dedicated to Learning Project			Total
		Less than 7 hours	8-40 hours	< 40 hours	
Male	Freq.	1	47	89	137
	%	.7%	34.3%	65.0%	100.0%
Female	Freq	2	47	52	101
	%	2.0%	46.5%	51.5%	100.0%
Total	Freq	3	94	141	238
	%	1.3%	39.5%	59.2%	100.0%

The 36-46 year old and 53-59 year old age groups show a mean below 59.5% for projects over 40 hours. Both groups had a mean of 52% of projects involving over 40 hours. Excluding the two projects in the 53-59 year old group that were less than 7 hours, both the 36-46 and the 53-59 year old age groups indicated that 48% of their projects were 8-40 hours in length. Data related to age groups and the time spent on learning projects are found in Table 13.

The industry data suggest that participants who work in retail (73.3%) and consulting (65.2%) spend the greatest amount of time, more than 40 hours, per learning project. The service industry indicated that 54.6% of projects exceeded 40 hours. Industry related information is found in Table 14.

Examining the data suggests that most learning projects conducted were greater than 40 hours learning projects. African-Americans indicated 71.9% of learning projects were greater than 40 hours. Whites indicated that 56.9% of their projects were over 40 hours. Table 15 illustrates the information on race and time.

Table 13

Cross-Tabulation of Time Spent on Learning Projects by Age Group

Age Groups		Hours Dedicated to Learning Project			Total
		Less than 7 hours	8-40 hours	< 40 hours	
< 35 years old	Freq	1	16	24	41
	%	2.4%	39.0%	58.5%	100.0%
36 to 46 years old	Freq	0	24	26	50
	%	0%	48.0%	52.0%	100.0%
47 to 52 years old	Freq	0	20	39	59
	%	0%	33.9%	66.1%	100.0%
53 to 59 years old	Freq	2	22	26	50
	%	4.0%	44.0%	52.0%	100.0%
60+ years old	Freq	0	12	26	38
	%	0%	31.6%	68.4%	100.0%

Table 14

Cross-Tabulation of Time spent on Learning Projects by Industry

Business Industry		Hours Dedicated to Learning Project			Total
		Less than 7 hours	8-40 hours	< 40 hours	
Retail	Freq.	0	4	11	15
	%	0%	26.7%	73.3%	100.0%
Service	Freq.	0	59	71	130
	%	0%	45.4%	54.6%	100.0%
Consulting	Freq.	1	22	43	66
	%	1.5%	33.3%	65.2%	100.0%
Construction	Freq.	0	2	4	6
	%	0%	33.3%	66.7%	100.0%
Hospitality	Freq.	2	4	3	9
	%	22.2%	44.4%	33.3%	100.0%
Medical	Freq.	0	2	5	7
	%	0%	28.6%	71.4%	100.0%
Other	Freq.	0	1	4	5
	%	0%	20.0%	80.0%	100.0%

Table 15

Cross-Tabulation of Time Spent Learning Projects by Race

Race		Hours Dedicated to Learning Project			Total
		Less than 7 hours	8-40 hours	< 40 hours	
Asian	Freq.	0	2	4	6
	%	0%	33.3%	66.7%	100.0%
African-American	Freq.	0	9	23	32
	%	0%	28.1%	71.9%	100.0%
Hispanic	Freq.	0	2	3	5
	%	0%	40.0%	60.0%	100.0%
White	Freq.	3	81	111	195
	%	1.5%	41.5%	56.9%	100.0%
Total	Freq.	3	94	141	238
	%	1.3%	39.5%	59.2%	100.0%

Research Question Four: *Who is the primary planner of the participants' learning projects?*

The primary planner of more than half of the learning projects from this study was the learner at 55.9%. A mix of planners was used for 22.7% of projects. The remaining planner percentages include: a group with professional, 7.1%; a peer group, 5.0%; a one-to-one professional, 6.3%; a one-to-one friend or relative, 2.5%; and an object (workbook, programmed learning, computer based training) as primary planner, .4%. Table 16 illustrates the data on the primary planner of the learning projects.

Table 16

Primary Planner of Learning Projects

Primary Planner of Learning Project	Frequency	Percent
Learner (self-planned)	133	55.9%
Mixed	54	22.7%
Group w/professional	17	7.1%
1-to-1 Professional	15	6.3%
Peer group	12	5.0%
1-to-1 Friend/Relative	6	2.5%
Object	1	.4%

The learner as the primary planner was indicated in 54% of learning projects conducted by men and 58.4% conducted by women. Women were more likely than men to use a one-to-one professional as a planner at 10.9% to the men's 2.9%. A mixed planner was indicated by women in 20 projects, or 19.8% of their total projects; men indicated mixed planner in 34 projects or 24.8% of their total projects. The group with professional planner was 8.0% of men's total projects and 5.9% of women's. Men indicated using a peer group as a planner in 5.8% of projects; women, 4.0%. Men used a friend or relative to plan 4.4% of projects. Women did not report any projects where a friend or relative was the primary planner. The object as a planner was identified in one learning project as it represented 1.0% of women's total project planners. Information on gender and primary planners is found in Table 17.

Table 17

Cross-Tabulation: Primary Planner by Gender

Gender		Primary Planner of Learning Project							Total
		Group w/prof.	Peer group	1-to-1 Prof.	1-to-1 Friend/Rel.	Object	Learner	Mixed	
Male	Freq.	11	8	4	6	0	74	34	137
	%	8.0%	5.8%	2.9%	4.4%	.0%	54.0%	24.8%	100.0%
Female	Freq.	6	4	11	0	1	59	20	101
	%	5.9%	4.0%	10.9%	0%	1.0%	58.4%	19.8%	100.0%

Examining the primary planner by age group showed that the learner as primary planner represented more then half of all learning projects in all age groups. The learner was the primary planner more than 60 percent of the time in the 47-52 (61.0%) and 53- 59 (64.0%) age groups. The 60+ age group had the lowest frequency of the learner as planner at 44.7% and the highest percentage of mixed planner at 36.8%. Mixed planner was identified by 26.8% of participants 35 or younger; 36-46 years old, 18.0%; 47-52 years old, 11.9%; 53-59 years old, 26.0%. Table 18 provides a cross-tabulation of all primary planner data collected within age groups.

Table 18

Cross-Tabulation: Primary Planner by Age Group

Age Groups		Primary Planner of Learning Project							Total
		Group w/prof.	Peer group	1-to-1 Prof.	1-to-1 Friend/Rel.	Object	Learner	Mixed	
< 35 years old	Freq.	2	0	6	0	0	22	11	41
	%	4.9%	0%	14.6%	0%	0%	53.7%	26.8%	100.0%
36 to 46 years old	Freq.	5	3	3	4	0	26	9	50
	%	10.0%	6.0%	6.0%	8.0%	0%	52.0%	18.0%	100.0%
47 to 52 years old	Freq.	7	5	3	1	0	36	7	59
	%	11.9%	8.5%	5.1%	1.7%	0%	61.0%	11.9%	100.0%
53 to 59 years old	Freq.	2	0	2	0	1	32	13	50
	%	4.0%	0%	4.0%	0%	2.0%	64.0%	26.0%	100.0%
60+ years old	Freq.	1	4	1	1	0	17	14	38
	%	2.6%	10.5%	2.6%	2.6%	0%	44.7%	36.8%	100.0%
Total	Freq.	17	12	15	6	1	133	54	238
	%	7.1%	5.0%	6.3%	2.5%	.4%	55.9%	22.7%	100.0%

Within the different industries, consulting had a mean of 62.1% of projects planned by the learner; service, 55.4%; retail, 53.3%. The remaining industries did not have a sample size large enough to draw conclusions. A group with a professional planner represented 20.0% of all learning projects in the retail industry; consulting, 9.1%; service, 4.6%. Information on the primary planners across industry categories is found in Table 19.

Table 19

Cross-Tabulation: Primary Planner by Industry

Business Industry		Primary Planner of Learning Project							Total
		Group w/ Prof.	Peer group	1-to-1 Prof.	1-to-1 Friend/ Rel.	Object	Learner	Mixed	
Retail	Freq.	3	1	1	2	0	8	0	15
	%	20.0%	6.7%	6.7%	13.3%	0%	53.3%	0%	100.0%
Service	Freq.	6	8	6	3	0	72	35	130
	%	4.6%	6.2%	4.6%	2.3%	0%	55.4%	26.9%	100.0%
Consulting	Freq.	6	3	6	1	0	41	9	66
	%	9.1%	4.5%	9.1%	1.5%	0%	62.1%	13.6%	100.0%
Construction	Freq.	1	0	0	0	0	2	3	6
	%	16.7%	0%	0%	0%	0%	33.3%	50.0%	100.0%
Hospitality	Freq.	1	0	1	0	1	3	3	9
	%	11.1%	0%	11.1 %	0%	11.1%	33.3%	33.3%	100.0%
Medical	Freq.	0	0	1	0	0	4	2	7
	%	0%	0%	14.3 %	0%	0%	57.1%	28.6%	100.0%
Other	Freq.	0	0	0	0	0	3	2	5
	%	0%	0%	0%	0%	0%	60.0%	40.0%	100.0%
Total	Freq.	17	12	15	6	1	133	54	238
	%	7.1%	5.0%	6.3%	2.5%	.4%	55.9%	22.7%	100.0%

Examining race revealed that African-Americans identified the learner as the primary planner in 71.9% of all learning projects; for Whites, this figure was 53.3%. African-Americans responded that a mix of planners was used in 25.0% of projects, while Whites reported that they used a mix of planners in 23.6% of their learning projects. Additional data on the primary planner is cross-tabulated with race in Table 20.

Table 20

Cross-Tabulation: of Primary Planner by Race

Race		Primary Planner of Learning Project							Total
		Group w/prof.	Peer group	1-to-1 Prof.	1-to-1 Friend/ Rel.	Object	Learner	Mixed	
Asian	Freq.	0	0	0	0	0	6	0	6
	%	0%	0%	0%	0%	0%	100.0%	0%	100.0%
African-American	Freq.	0	0	1	0	0	23	8	32
	%	0%	0%	3.1%	0%	0%	71.9%	25.0%	100.0%
Hispanic	Freq.	3	1	0	1	0	0	0	5
	%	60.0%	20.0%	0%	20.0%	0%	0%	0%	100.0%
White	Freq.	14	11	14	5	1	104	46	195
	%	7.2%	5.6%	7.2%	2.6%	.5%	53.3%	23.6%	100.0%
Total	Freq.	17	12	15	6	1	133	54	238
	%	7.1%	5.0%	6.3%	2.5%	.4%	55.9%	22.7%	100.0%

Research Question Five: *What is the percentage of learning projects that are work and non-work related?*

The learning projects of small business owners were categorized as either work or non-work related through discussions with study participants and an examination of the recorded projects. The overall majority of learning projects were on topics related to work (60.5%). Table 21 illustrates the frequency of work and non-work related projects. There was variation across gender and age groups as will be presented below.

Table 21

Work and Non-work Related Learning Projects

Survey Item	Frequency	Percent
Work Related	144	60.5%
Non-Work Related	94	39.5%

Work related projects represented 65% of learning projects for men and 54.5% of projects for women. Men conducted only 35% of learning projects on topics not related to work while women reported that 45.5% of their projects were not work related. Table 22 presents a cross-tabulation of work and non-work related projects by gender.

Table 22

Cross-Tabulation: Work/non-work projects by Gender

Gender		Work Related Learning Projects		Total
		Non-work Related	Work Related	
Male	Freq.	48	89	137
	%	35.0%	65.0%	100.0%
Female	Freq.	46	55	101
	%	45.5%	54.5%	100.0%
Total	Freq.	94	144	238
	%	39.5%	60.5%	100.0%

Between age groups, the work related projects varied slightly although the differences were not significant, according to a one-way ANOVA (F= .582; p= .446). Those participants 35 or younger showed a balance between work (51.2%) and non-work projects (48.8%); 36-46 years old, work (64.0%), non-work (36.0%); 47-52 years old, work (62.7%), non-work, (37.3%); 53-59 years old, work (68.0%), non-work (32.0%); 60+ years old, work (55.3%), non-work (44.7%). Information on age groups and project type is found in Table 23.

Table 23

Cross-Tabulation: Work/non-work projects by Age Group

Age Groups		Work Related Learning Projects		Total
		Non-work Related	Work Related	
< 35 years old	Freq.	21	20	41
	%	51.2%	48.8%	100.0%
36 to 46 years old	Freq.	18	32	50
	%	36.0%	64.0%	100.0%
47 to 52 years old	Freq.	22	37	59
	%	37.3%	62.7%	100.0%
53 to 59 years old	Freq.	16	34	50
	%	32.0%	68.0%	100.0%
60+ years old	Freq.	17	21	38
	%	44.7%	55.3%	100.0%
Total	Freq.	94	144	238
	%	39.5%	60.5%	100.0%

The retail and service industry had similar results for work related learning projects. Those participants identifying their industry as service conducted 66.7%, and retail, 64.6%, respectively, of all learning projects on work related topics. The consulting industry had an equal number of projects that were work and non-work related at 50.0%. Additional information on industries is located in Table 24.

Table 24

Cross-Tabulation: Work/non-work projects by Industry

Industry		Work Related Learning Projects		Total
		Non-work Related	Work Related	
Retail	Freq.	5	10	15
	%	33.3%	66.7%	100.0%
Service	Freq.	46	84	130
	%	35.4%	64.6%	100.0%
Consulting	Freq.	33	33	66
	%	50.0%	50.0%	100.0%
Construction	Freq.	2	4	6
	%	33.3%	66.7%	100.0%
Hospitality	Freq.	4	5	9
	%	44.4%	55.6%	100.0%
Medical	Freq.	1	6	7
	%	14.3%	85.7%	100.0%
Other	Freq.	3	2	5
	%	60.0%	40.0%	100.0%
Total	Freq.	94	144	238
	%	39.5%	60.5%	100.0%

By race, African-Americans conducted 56.3% of projects on work related topics compared to 61.0% of White's learning projects. Table 25 outlines the data on all racial categories by type of project.

Table 25

Cross-Tabulation: Work/non-work projects by Race

Race		Work Related Learning Projects		
		Non-work Related	Work Related	Total
Asian	Freq.	3	3	6
	%	50.0%	50.0%	100.0%
African-American	Freq.	14	18	32
	%	43.8%	56.3%	100.0%
Hispanic	Freq.	1	4	5
	%	20.0%	80.0%	100.0%
White	Freq.	76	119	195
	%	39.0%	61.0%	100.0%
Total	Freq.	94	144	238
	%	39.5%	60.5%	100.0%

Small business owners indicated a enthusiasm for the new skill or knowledge gained during the majority of their learning projects. Work-related skill or knowledge enthusiasm (those indicated as definitely or very enthusiastic) was 84% while non-business related as 85.1%. Table 26 provides detailed information on enthusiasm and work-related projects.

Table 26

Cross-Tabulation: Work/non-work projects and Enthusiasm

Enthusiasm for New Skill or Knowledge		Work Related Learning Projects		
		Non-work Related	Work Related	Total
Not very enthusiastic	Freq.	2	2	4
	%	2.1%	1.4%	1.7%
Somewhat enthusiastic	Freq.	12	21	33
	%	12.8%	14.6%	13.9%
Definitely enthusiastic	Freq.	32	37	69
	%	34.0%	25.7%	29.0%
Very enthusiastic	Freq.	48	84	132
	%	51.1%	58.3%	55.5%

The majority of work-related projects (70.2%) were perceived as being beneficial to people besides the learner. Non-work related projects were perceived to benefit others in only 46.8% of total projects. Additional information is provided in Table 27.

Table 27

Cross-Tabulation: Work/non-work projects and Benefit for Others

Benefit of Learning Project for Others		Work Related Learning Projects		
		Non-work Related	Work Related	Total
Not very beneficial	Freq.	20	14	34
	%	21.3%	9.7%	14.3%
Somewhat beneficial	Freq.	30	29	59
	%	31.9%	20.1%	24.8%
Definitely beneficial	Freq.	17	24	41
	%	18.1%	16.7%	17.2%
Very beneficial	Freq.	27	77	104
	%	28.7%	53.5%	43.7%

Small business owners indicated that they gained a great deal of knowledge in both their work (82.7%) and non-work (78.8%) related projects. This information is further illustrated in Table 28.

Table 28

Cross-Tabulation: Work/non-work projects and Knowledge Gained

Knowledge Gained During Learning Project		Work Related Learning Projects		
		Non-work Related	Work Related	Total
Not much gained	Freq.	3	3	6
	%	3.2%	2.1%	2.5%
Some gained	Freq.	17	22	39
	%	18.1%	15.3%	16.4%
Definitely gained	Freq.	34	43	77
	%	36.2%	29.9%	32.4%
Very much gained	Freq.	40	76	116
	%	42.6%	52.8%	48.7%

Research Question Six: *What resources, including technology, were used during a learning project?*

Resource usage for completing learning projects is illustrated in Table 29. It is important to note that multiple resources were often used in completing projects. For example, a participant who conducted a learning project on horse grooming indicated using a book, a professional, and the Internet as resources. As a result of multiple resources being identified per learning project, resources in Tables 29-33 will not total 100% between resources.

Of all resources, print sources, the Internet, and professionals were the most frequently enlisted. Half of all learning projects used a print source (54.2%) as a resource. The Internet was the second most frequent resource at 43.3% and professionals were listed in 36.1% of learning projects. This finding is an important change from earlier learning projects studies and will be discussed in Chapter 5. Participants frequently cited the Internet as both a primary source of data and also as a support resource in locating print and professional resources. Only 6.3% of participants identified formal courses as a resource for their learning projects.

Table 29

Resource Usage for Completing Learning Projects

Source	Frequency	Percent
Print Source (Newspaper, Magazine, Journal)	129	54.2%
Internet (Website, Blog, Discussion Board)	103	43.3%
Professionals (Coach, Mentor, Paid Guidance)	86	36.1%
Peers or Family Members	43	18.1%
Multi-Media (TV, DVD's, CD's, iTunesU)	25	10.5%
Professional Organizations/Affiliations	26	10.9%
Formal Course	15	6.3%
Seminars and Conferences	14	5.9%
Trial and Error/Previous Experience	14	5.9%
Government and Public Institutions	9	3.8%
E-Documents (E-Journals, E-Magazines)	9	3.8%

Within gender, women demonstrated balance between resources with print sources (46 projects/45.5%), professionals (44 projects/43.6%), and the Internet (41 projects/40.6%). Men used print sources (83 projects/60.6%), the Internet (62 projects/45.3%), and Professionals (42 projects/30.7%). Information related to gender and resource use is found in Table 30.

Table 30

Cross-Tabulation: Resources by Gender

Resource		Gender		Total
		Male	Female	
Print Source (Newspaper, Magazine, Journal)	Freq. Used	83	46	129
	%	60.6%	45.5%	54.2%
Internet (Website, Blog, Discussion Board)	Freq. Used	62	41	103
	%	45.3%	40.6%	43.3%
E-Documents (E-Journals, E-Magazines)	Freq. Used	7	2	9
	%	5.1%	2.0%	3.8%
Peers or Family Members	Freq. Used	22	21	43
	%	16.1%	20.8%	18.1%
Professionals (Coach, Mentor, Paid Guidance)	Freq. Used	42	44	86
	%	30.7%	43.6%	36.1%
Formal Course	Freq. Used	12	3	15
	%	8.8%	3.0%	6.3%
Multi-Media (TV, DVD's, CD's, iTunesU)	Freq. Used	9	16	25
	%	6.6%	15.8%	10.5%
Professional Organizations/Affiliations	Freq. Used	17	9	26
	%	12.4%	8.9%	10.9%
Seminars and Conferences	Freq. Used	8	6	14
	%	5.8%	5.9%	5.9%
Government and Public Institutions	Freq. Used	5	4	9
	%	3.6%	4.0%	3.8%
Trial and Error/Previous Experience	Freq. Used	12	2	14
	%	8.8%	2.0%	5.9%

Internet use was common among all age groups, but was used most frequently among the 36-46 year old (50.0%) and 53-59 year old (56.0%) age groups. Print sources were identified in 71.7% of learning projects conducted by the 60+ year old age group and were less frequently indicated by the remaining age groups. The use of professionals varied from 28.8% to 42.0% depending on age group. The remaining resource use was negligible. These data are found in Table 31.

Table 31

Cross-Tabulation: Resources by Age Group

Resources		Age Groups					Total
		< 35 years old	36 to 46 years old	47 to 52 years old	53 to 59 years old	60+ years old	
Print Source (Newspaper, Magazine, Journal)	Freq. Used	17	23	31	31	27	129
	%	41.5%	46.0%	52.5%	62.0%	71.1%	54.2%
Internet (Website, Blog, Discussion Board)	Freq. Used	16	25	20	28	14	103
	%	39.0%	50.0%	33.9%	56.0%	36.8%	43.3%
E-Documents (E-Journals, E-Magazines)	Freq. Used	3	0	3	1	2	9
	%	7.3%	.0%	5.1%	2.0%	5.3%	3.8%
Peers or Family Members	Freq. Used	5	11	11	8	8	43
	%	12.2%	22.0%	18.6%	16.0%	21.1%	18.1%
Professionals (Coach, Mentor, Paid Guidance)	Freq. Used	15	18	17	21	15	86
	%	36.6%	36.0%	28.8%	42.0%	39.5%	36.1%
Formal Course	Freq. Used	3	3	6	0	3	15
	%	7.3%	6.0%	10.2%	.0%	7.9%	6.3%
Multi-Media (TV, DVD's, CD's, iTunesU)	Freq. Used	7	3	9	5	1	25
	%	17.1%	6.0%	15.3%	10.0%	2.6%	10.5%
Professional Organizations/Affiliations	Freq. Used	0	5	6	10	5	26
	%	.0%	10.0%	10.2%	20.0%	13.2%	10.9%
Seminars and Conferences	Freq. Used	2	1	3	5	3	14
	%	4.9%	2.0%	5.1%	10.0%	7.9%	5.9%
Government and Public Institutions	Freq. Used	0	1	2	1	5	9
	%	.0%	2.0%	3.4%	2.0%	13.2%	3.8%
Trial and Error/Previous Experience	Freq. Used	2	7	3	1	1	14
	%	4.9%	14.0%	5.1%	2.0%	2.6%	5.9%

Within industries, the resource use data suggests that each industry relies heavily on print sources as well as the Internet and professionals to complete learning projects. Data on industry use are found in Table 32. Table 33 illustrates the responses related to race and resources.

Table 32

Cross-Tabulation: Resources by Industry

Resources		Business Industry							Total
		Ret.	Serv.	Consult.	Const.	Hosp.	Med.	Other	
Print Source (Newspaper, Magazine, Journal)	Freq. Used	3	84	26	4	3	6	3	129
	%	20.0%	64.6%	39.4%	66.7%	33.3%	85.7%	60.0%	54.2%
Internet (Website, Blog, Discussion Board)	Freq. Used	4	63	25	1	3	2	5	103
	%	26.7%	48.5%	37.9%	16.7%	33.3%	28.6%	100.0%	43.3%
E-Documents (E-Journals, E-Magazines)	Freq. Used	2	4	3	0	0	0	0	9
	%	13.3%	3.1%	4.5%	0%	0%	0%	0%	3.8%
Peers or Family Members	Freq. Used	3	22	17	0	0	0	1	43
	%	20.0%	16.9%	25.8%	0%	0%	0%	20.0%	18.1%
Professionals (Coach, Mentor, Paid Guidance)	Freq. Used	3	49	22	3	5	3	1	86
	%	20.0%	37.7%	33.3%	50.0%	55.6%	42.9%	20.0%	36.1%
Formal Course	Freq. Used	3	7	3	2	0	0	0	15
	%	20.0%	5.4%	4.5%	33.3%	0%	0%	0%	6.3%
Multi-Media (TV, DVD's, CD's, iTunesU)	Freq. Used	1	9	12	1	2	0	0	25
	%	6.7%	6.9%	18.2%	16.7%	22.2%	0%	0%	10.5%
Professional Organizations/ Affiliations	Freq. Used	2	18	4	0	0	2	0	26
	%	13.3%	13.8%	6.1%	0%	0%	28.6%	0%	10.9%
Seminars and Conferences	Freq. Used	1	6	3	1	2	1	0	14
	%	6.7%	4.6%	4.5%	16.7%	22.2%	14.3%	0%	5.9%
Government and Public Institutions	Freq. Used	0	6	3	0	0	0	0	9
	%	0%	4.6%	4.5%	0%	0%	0%	0%	3.8%
Trial and Error/Previous Experience	Freq. Used	1	9	3	1	0	0	0	14
	%	6.7%	6.9%	4.5%	16.7%	0%	0%	0%	5.9%

Table 33

Cross-Tabulation: Resources by Race

Resources		Race				Total
		Asian	African-American	Hispanic	White	
Print Source (Newspaper, Magazine, Journal)	Freq. Used	1	18	2	108	129
	%	16.7%	56.3%	40.0%	55.4%	54.2%
Internet (Website, Blog, Discussion Board)	Freq. Used	3	17	0	83	103
	%	50.0%	53.1%	0%	42.6%	43.3%
E-Documents (E-Journals, E-Magazines)	Freq. Used	2	0	0	7	9
	%	33.3%	.0%	0%	3.6%	3.8%
Peers or Family Members	Freq. Used	0	6	2	35	43
	%	0%	18.8%	40.0%	17.9%	18.1%
Professionals (Coach, Mentor, Paid Guidance)	Freq. Used	0	11	2	73	86
	%	0%	34.4%	40.0%	37.4%	36.1%
Formal Course	Freq. Used	0	0	3	12	15
	%	0%	.0%	60.0%	6.2%	6.3%
Multi-Media (TV, DVD's, CD's, iTunesU)	Freq. Used	1	7	0	17	25
	%	16.7%	21.9%	0%	8.7%	10.5%
Professional Organizations/Affiliations	Freq. Used	0	5	1	20	26
	%	0%	15.6%	20.0%	10.3%	10.9%
Seminars and Conferences	Freq. Used	1	1	0	12	14
	%	16.7%	3.1%	0%	6.2%	5.9%
Government and Public Institutions	Freq. Used	0	1	0	8	9
	%	0%	3.1%	0%	4.1%	3.8%
Trial and Error/Previous Experience	Freq. Used	1	2	0	11	14
	%	16.7%	6.3%	0%	5.6%	5.9%

Research Question Seven: *What obstacles are encountered while pursuing learning projects?*

Respondents were given a list of obstacles and asked to identify those that they experienced related to their learning projects. The responses varied from lack of time, other obligations, and issues related to formal classes.

For the total sample, lack of time (85.7%), family (62.9%), work (60.0%), and social (45.7%) obligations were most common. Cost was also a concern for many participants. This included the cost of resources (31.4%), programs (31.4%), and other financial obligations (25.7%), which deterred many participants from pursuing various learning endeavors.

In addition to cost, inconveniently scheduled courses were cited as an obstacle by 31.4% of respondents; time required to complete a program, 22.9%; unwilling to attend full-time, 20%; strict attendance requirements, 14.3%; and the lack of available programs, 11.4%. A small number of participants (14.3%) indicated that a lack of motivation was an obstacle in conducting learning projects. Table 34 notes the frequency and percentage of responses for each obstacle.

Table 34

Obstacles to Conducting Learning Projects

Obstacle	Freq.	% Identified as Obstacle
Lack of time	30	85.7%
Family obligations	22	62.9%
Work obligations	21	60.0%
Social obligations	16	45.7%
Cost of resources	11	31.4%
Cost of programs	11	31.4%
Inconveniently scheduled courses	11	31.4%
Financial obligations	9	25.7%
Time required to complete program	8	22.9%
Unwilling to attend full-time	7	20.0%
Strict attendance requirements	5	14.3%
Lack of motivation	5	14.3%
Lack of available programs	4	11.4%
Unable to identify learning needs	3	8.6%
Health issues	3	8.6%
Not a high priority	3	8.6%
Lack of available resources	2	5.7%
Not comfortable with formal classes	2	5.7%
Issues with technology	1	2.9%
Lack of industry specific programs	0	0%

Chapter Summary

Chapter IV presented the data collected during interviews conducted with 35 small business owners. Data are categorized based on research questions proposed for the study. The following chapter will present a summary of this study and its main findings, a discussion of the results, implications from the data collected, conclusions, and recommendations for future research.

CHAPTER V

DISCUSSION AND CONCLUSIONS

Chapter V will provide a summary of the study of learning projects undertaken by small business owners. Sections in the chapter will include: (a) Summary of the Study, (b) Major Findings, (c) Discussion and Implications, and (d) Recommendations for Future Research.

Summary of the Study

The purpose of this study was to examine and describe the learning projects of small business owners. As a part of the study, Tough's Learning Projects Interview Schedule was updated and revised to provide a fresh perspective for collecting data. The study contributed to both the learning projects research and to an understanding of small business owners' personal and professional development.

Understanding the learning projects of small business owners provides insight into the value of certain topics of learning, the obstacles faced when learning, the resources used and planners needed to complete learning goals. Technology was examined as a part of the study to determine to extent to which it is being used during learning efforts. The study provides information on a little studied population in self-directed learning.

In this study, Tough's Interview Schedule was updated and revised. The intent of the revision was to provide a fresh perspective on the learning projects research through Tough's seminal research study. Data were gathered in order to assess the nature of the learning projects of small business owners with particular emphasis on self-planned learning projects and technology.

The researcher attended multiple meetings of a networking organization where small business owners attend. At that time the researcher was given about two minutes to describe the

study provide the group with general information. Those small business owners who were interested were asked to provide their contact information. Several days later they were contacted by the researcher in a follow-up email and phone call in order to answer any questions they had and to schedule a meeting time. A total of 35 participants were interviewed for this study. The time to complete interviews ranged from approximately 40 minutes to 2 hours.

Data from the face-to-face interviews were compiled into an SPSS database for analysis. Descriptive statistics were derived from the questions on the interview schedule and included information on learning projects such as: time spent, importance, benefit to others, knowledge gained, enthusiasm for having new skill or knowledge, primary planner, resources used, and obstacles faced while conducting learning projects. Frequency distributions and cross-tabulations were conducted in order to gain perspective on the data across multiple variables.

Major Findings

The current research produced the following findings based on the responses to demographic questions, information gathered through the interview process, and 6 primary research questions:

1. Participants conducted a mean of 6.80 learning projects with a range between 3 and 11 projects, over a 12-month period of time.
2. The mean number of learning projects of female business owners exceeded that of their male counterparts. Females had a mean of 7.21 projects while men had a mean of 6.52 projects. However, there were no significant difference between gender and the number of learning projects conducted ($t= 16.66$; $p= .05$).
3. The primary planner was the learner in 55.9% of all identified learning projects, followed by a mix of planners at 22.7%. The findings from the current study are in line with many

early learning projects replication studies including: Hiemstra (1975), 55%; Johns (1973), 56%; McCatty (1973), 50%, and Baghi (1979), 57%.

4. African-Americans identified the learner as the primary planner in 71.9% of learning projects, higher than the mean (55.9%) of learning projects across all participants.
5. Examining learning projects based on non-work/work related topics revealed that 65% of men's learning projects were work related compared to 54.5% of projects completed by women.
6. Technology played a role in the learning projects of those interviewed. The Internet was indicated as a resource in 43.3% of all learning projects and was second only to print sources used in 54.2% of projects.
7. Perceived computer competency illustrates that the majority of participants (88.6%) have an intermediate to advanced understanding of computers.
8. Participants indicated learning projects were important (85.3%) and were beneficial for others (60.9%). Enthusiasm and the knowledge gained from learning projects were also high for the majority of participants.
9. Lack of time (85.7%), family obligations (62.9%), and work obligations (60.0%) were the top three obstacles faced by the small business owners interviewed for this study. Financial issues also provided obstacles as participants identified the cost of resources (31.4%), the cost of programs (31.4%), and financial obligations (25.7%) as obstacles.

Discussion and Implications of the Findings

As an exploratory study based on a small sample, the findings from this sample are not intended to be generalizable. However, the results may serve to provide suggestions for future research studies with a similar population.

Examining the data collected from the interviews revealed a mean of 6.80 learning projects conducted by participants. The projects ranged from 3 to a maximum of 11 projects. In addition, 60.5% of all learning projects were conducted on work related topics with 59.2% of projects taking more than 40 hours to complete. These findings suggest that not only are small business owners actively engaged in learning and dedicating a great deal of time to their learning projects, but that they may also be using learning as a means to improve their overall business operations and remain viable in their industry. Understanding that small business owners are engaging in and dedicating extensive amounts of time towards learning projects has potential for consultants and coaches. This presents a point of discussion that may shed light on the interests of a particular owner and also expose areas in need of further focus and refinement. Consultants can use this information to assist in guiding and enriching further learning efforts to the benefit of the business and its owner.

Data from the study indicate the learner as the primary planner in nearly 56% of projects followed by a mix of planners (22.7%). Many early studies in self-planned learning show self-planned learning rates similar to those in this study including Hiemstra (1975), 55%; Johns (1973), 56%; McCatty (1973), 50%, and Baghi (1979), 57%. Other major studies found a higher mean including Tough (1971), 68%; Peters and Gordan (1974), 76%; and Penland (1979), 76%.

The study confirms the presence of self-directed learning as a prominent component of the learning experience. The finding also suggests that small business owners in this sample are comfortable with self-planned learning and are also aware of the usefulness of other types of planners. Further examination of preferences for planners has practical implications for the individual small business owner. An inclination for using a particular planner or combination of planners has the potential for guiding educators and trainers charged with planning the learning

activities for an owner. It may also provide the small business owner with a point of reflection and introspection when seeking out methods for conducting further learning activities.

The data revealed that African-Americans indicated the learner as that primary planner in 71.9% of all learning projects. This raises questions as to the importance of self-planned learning for various races, and the possible explanation for such a level, if confirmed. Because the sample size was limited for this study, inferences cannot be about this finding but it is noteworthy. There are several possibilities for the level of self-planned learning among African-Americans including a propensity for planning their learning, a lack of available programs, the ability to identify resources to meet their learning objectives, or the inability of program planners to reach this segment of the population. Future research should focus on the self-planned variable as it relates to race.

Participants cited a lack of time (85.7%), family obligations (62.9%), and work obligations (60.0%) as the top three obstacles to conducting learning projects. This may begin to explain why participants plan the majority of their learning projects. Competing obligations take a great deal of time, making the flexibility of self-planned learning a practical alternative to formal learning environments that often require set schedules to complete. Participants indicated a mix of planners for their learning projects suggesting that they are aware of the impact of obstacles and the benefits of using a combination of one-to-one situations, groups, and objects to meet their learning objectives. An examination of the planners engaged and the obstacles faced for specific learning projects may provide insight into how this population overcomes challenges to learning.

Implications for practice may include examining the development or use of work-life balance workshops and resources for this population. Many participants indicated that they were

engaging in learning projects aimed at helping them balance the demands of their professional and personal life. Career and executive coaches may direct their clients to support and information such as the Sloan Family Research Network associated with Boston College and workshops provided by their area Chamber of Commerce.

The data suggest that women engaged in more learning projects ($\bar{x}$ = 7.21) compared to men ($\bar{x}$ = 6.52). This finding differs greatly from previous studies that found women engaged in fewer learning projects than men. However, there were no significant differences between genders (t=16.66; p= .05) and the number of learning projects. This finding may be explained by also examining the type of learning projects conducted. Women displayed a greater degree of balance between work and non-work related learning projects suggesting that women are striking a balance between the responsibility of leading a business and managing the pressures of their personal life.

These findings were explained in part by the participants. During interviews several women mentioned the desire to balance the challenges of work with the demands of home life. Non-work related projects for women included seeking spiritual fulfillment, home planning topics, and learning more about relationship management. Like their male counterparts, they indicated a strong drive to be successful with their business and conducted learning projects on topics such as improving business operations, learning about being a CEO, and work specific tasks based on their industry.

Learning projects were perceived as having a benefit beyond that of the learner. Participants believed that there were at benefits for other people in 60.9% of all learning projects. It appears that participants view projects that are work related as more beneficial to others than projects that are non-work related. Using Pearson's R, there was a slight correlation

(r=.261; p= .01) between the benefit to others and the type of learning project. The possibility exists, and was indicated by several participants, that work related projects benefit the product or service of the business and therefore benefit the customer. This may hint at a deeper motive for selecting a learning project and demonstrate that the owner is consciously aware of their development impacting the customer.

Participants indicated that they were enthusiastic about having and using the new knowledge or skill gained in 74.5% of learning projects. In 81.1% of learning projects, respondents indicated they gained a great degree of knowledge. It appears that participants were pleased with their learning projects and the information gained. This is important as the data suggests that participants were able to successfully engage in learning projects that facilitated their personal and professional development and meet their needs for new information and skills. The acquisition of knowledge may lead to an increased ability to drive business plans and endeavors that assist in expanding small business.

Technology was a major resource for the learning projects of small business owners. Most participants indicated that they had a computer skill level of intermediate or higher (88.8%). At the intermediate skill level, participants are comfortable using the Internet and other programs for daily tasks and operations.

Comfort with technology may be a contributing factor for resource selection. The Internet was identified as a resource in 43.3% of learning projects and was second only to print sources at 54.2%. Highlighting its impact, technology was used as a primary source of information or as a means of locating other sources of information such as print and professional resources. This finding suggests that technology may become, or has become, a natural and powerful means for identifying and implementing learning projects. Technology is not only a primary source but it

also acts as a means for connecting the learner with various resources and planners, only increasing the magnitude of its influence on learning activities.

An interesting finding was the use of the Internet as a resource for the 36-46 (50%) and the 53-59 (56%) year old age groups. Using technology for the completion of learning projects may be contributed to many factors including generational differences, novelty, interest in new ways of collecting information, the type of knowledge sought, or simply a preference for the resource.

The personal computer became more accessible to the general public in the late 1970's with the advent of the Apple II, Commodore PET, and Tandy Corporation's TRS-80 (Chapman, 2010). The age groups with the highest usage of the Internet as a resource were in their adolescence to early adulthood when computers were becoming accessible. It was an unexpected finding as the 35 and younger age group indicated the Internet as a resource in 39% of learning projects. This may also indicate that technology and computer use is not just the domain of younger age groups. Further research in this area may provide additional information on age related factors for the use of the Internet for learning projects.

Professionals were identified as a resource in 36.1% of all learning projects. This finding emphasizes the possible importance, or perceived benefit, of experts for conducting learning projects. It may also illustrate a preference to network and associate with experts both inside and outside their industry. Engaging professionals for learning projects has the potential for providing small business owners with the opportunity to learn from the experience of others, use professionals as a benchmark for their learning efforts, and make connections that transcend the immediate learning goal. Larger sample sizes may provide greater information on the use of professionals as a source of information for the learning projects of small business owners.

Recommendations for Future Research

This study examined the learning projects of small business owners. Further research on this population may lead to a better understanding of their learning projects and would contribute to the body of research on self-directed learning. Recommendations for future research include the following:

1. Additional research should examine further the impact of technology on learning projects conducted by small business owners. Participants indicated the Internet as an important resource when conducting these projects. Studies may examine different types of technology and the benefits and deterrents for use in learning projects.
2. Further studies may focus on the use of technology as a secondary resource for locating content experts, workshops, and sources of information. What is the perception of outcomes by the learner for learning projects using technology? Is the perception of quality and the transfer of learning altered by the use of technology for conducting a learning project?
3. Changes in technology may warrant revisiting Tough's 7-hour criteria for learning projects. The prevalence of the Internet, access to computers, and the rise of collaborative community information sites such as Wikipedia, may impact the amount of time needed to complete a learning project. Further research in this area may explore technology's role in learning projects.
4. While not generalizable, data from this study suggest that African-Americans reported a higher percentage of self-planning than the mean for the sample. Future research should examine differences in the type of planner by race.

5. Additional populations may be reached by creating an online version of Tough's Learning Projects Interview Schedule. Perceived computer skill levels suggest that participants in this study possess the skills to successfully navigate an online survey. It is possible that expanding the study to include online surveys may be an economical and time saving method to reach a larger population.
6. Reflecting on the research process revealed an area where changes could be made to benefit future studies. The interview schedule was often lengthy after the participant answered the items for two or more learning projects. Most participants quickly understood the structure of the interview schedule and did not want to wait for each prompt to be read. This presented an issue for the researcher as the possibility existed for losing the interest and cooperation of the participant. Future studies may examine further revisions to the interview schedule to shorten prompts in response to the participant's level of understanding.

Technology and Time in Learning Projects: A Personal Reflection

Reflecting on the current study has led to several observations regarding the impact of technology on learning projects. These observations are separate of the data collected and may act to guide future research on learning projects. Developments in technology have the potential to change the way that people go about planning and conducting learning efforts. With the advent of the personal computer, the Internet, and a global communications network, people have unprecedented access to experts and information regardless of traditional barriers such as distance and time.

A major development in technology is the accessibility of information on the Internet and the prevalence of search engines for the Web. Mike McIntyre, a North Carolina Representative

and chair of a subcommittee on rural development, stated his belief that “Broadband can be the great equalizer between the rural areas and the urban-suburban areas” (Herszenhorn, 2009; para. 18). McIntyre believes that broadband has benefited schools and hospitals that have gained access to larger research hospitals and educational outlets (2009). In a sense, the learner is no longer limited to the resources available at the local library or immediate geographic area. Access and the availability resources provided limitation in most early learning projects studies and was most apparent in Peters and Gordon’s (1974) research with rural and urban samples. The growth of the broadband network means that information, cultural development, and educational opportunities are available to people whose demographic area or local resources may have provided little opportunities in the past.

Vast gains in active search engines, such as Google, reduce the time that it takes to conduct access information on a topic and impacts the timeliness of the data retrieved. The availability of research, journals, books, and experts online may greatly impact the overall time spent on a learning project and necessitate a revisit of Tough’s initial seven-hour criteria for learning projects. Google now indexes the Web in minutes and provides access to headlines, blogs, and other information that is seconds old (Talbot, 2009). The active indexing of information means that people have access to information and a growing knowledge base as it is created, providing unlimited avenues for learning. Coolican (1973) noted that there is evidence to support the idea of “quick learning” or projects that take place in under 7 hours. This supports the revisit of the learning projects criteria and is bolstered by active indexing and the prevalence to search engines for the Web.

The quality of information accessed in a shorter period of time has also greatly changed since the initial learning project studies. For example, in the past if a person were interested in

knowing more about birds that are native to Tennessee they would need to visit their local library. In the event a book was not readily available the library could requisition one for the public collection. Accessing information took time. In the aforementioned example, an individual could spend several hours minimum to simply acquire the information. Today, a person can simply access the Internet and conduct a search using on native birds of Tennessee and find a host of reliable and ready information.

Accessibility to experts in various fields has evolved over the past 30 years. Email has allowed unprecedented access to information by allowing a person to contact and leave questions or information for those who require it without geographic or time barriers. Webcams afford people with a chance to meet face-to-face without being in the same location. The technology is growing in prevalence as was demonstrated on March 19, 2009, President Barack Obama led the first live Internet Video chat by a president of the United States (Stolberg, 2009). The chat was viewed by more than 64,000 people with over 100,000 questions being asked of the President (2009). In addition, online discussion boards and blogging has opened up the option to ask questions or post comments around a large variety of issues and topics. With the advent of such forums as Wikipedia, information is written and edited in an online format that creates the ability to have information at the touch of a button.

Stanford, Harvard, and a large number of other universities and colleges are now posting lectures online through their websites and through programs such as iTunes. This provides learners with the opportunity to listen to professors lecture on topics that may be a part of learning projects that they are undertaking. iTunes U is accessible through iTunes, Apple Computer’s music management software, and provided as a free service. Many lecture topics are

available including economics and finance, homeownership and mortgage lending, literature and the arts, teaching and education, history and teaching and education.

Concluding Comment

This study was intended to examine the learning projects of small business owners. The data suggest that self-planned learning is an important component in owning and operating a business. The study has uncovered findings that may warrant further examination including the impact of technology on conducting learning projects; revisiting Tough's (1971) 7-hour time criteria for defining a learning project; factors contributing to the high degree of self-planned learning indicated by African-Americans; and the basis for the potential shift in the mean number of learning projects conducted by women, when compared to earlier studies on self-directed learning.

There is great potential for research on the learning projects of small business owners. The current downturn of the national economy and the importance of small businesses to the financial health of the country highlight the importance of studies that address learning as it relates to the professional and personal development of small business owners. Understanding the drivers, obstacles, and learning preferences of this important contributor to the American economy may lead to the quality learning efforts for continued entrepreneurship and innovation.

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APPENDICES

APPENDIX A

Permission from Dr. Allen Tough to modify his Learning Projects Interview Schedule for this study.

From: Allen Tough [mailto:allentough@sympatico.ca]
Sent: Wednesday, February 20, 2008 3:52 PM
To: Beswick, Dessa Mae
Cc: sghi@ieti.org
Subject: Re: to Prof. Tough via allentough.com

Sure, I am glad that my interview schedule is being used or modified. Permission granted.
Best wishes to Ralph and the members of your SDL research group.
Allen
==========

At 08:48 AM 2/20/2008, Beswick, Dessa Mae wrote:
Dear Dr. Tough,

I am a doctoral candidate in the Educational Psychology and Counseling Department at the University of Tennesse in Knoxville, TN and a member of the UTK SDL Research Group. Our group is facilitated by Dr. Ralph Brockett who is also my doctoral committee chair.

You and I met at the ISDLS 20th Annual Meeting in Cocoa Beach Florida in February of 2006. At that time, I asked you about using your interview schedule for my dissertation research. I am now preparing a proposal for that dissertation. I have, at your suggestion in 2006, been in touch with Dr. Roger Hiemstra who used your interview schedule a few years ago and incorporated then current, technology into the interviews.

The purpose of this message is to request your permission to modify your interview schedule to accommodate current technology and language. The modifications will be done by the UTK SDL Research Group. The modified instrument will be used for several studies by members of the group, my dissertation being one of those studies.

Thank you for considering this request. Ralph sends his best.

Sincerely,
Dessa Beswick

Dessa Beswick, IT Specialist II, Customer Technology Support/OIT

2426 Dunford Hall, University of Tennessee, 974-3056, dbeswick@utk.edu

M.S. Adult Education, 1996; MOUS 2000 Master Instructor, 2002;
In progress: PhD Adult Education ABD, Graduation Spring 2009.

"The hearts that love will know never winter's frost and chill.
Summer's warmth is in them still." Eben Eugene Rexford

□_____□Professor Allen Tough
□http://www.allentough.com□allentough@sympatico.ca□Phone 416-444-3135□.

APPENDIX B

2009 Learning Projects Interview Schedule
Self-Directed Learning Research Group
Learning Projects Group
University of Tennessee, Knoxville

Interviewer Instructions & Script

[Introduce yourself.]

Learning Projects

ITEM 1 (Relative to Interviewer Data Sheet # - Participant Sheets # 1 & 2)

Our research is about what people learn and how they go about learning it. Everyone LEARNS, but different people learn different things in different ways.

I'm interested in what YOU have tried to learn in the past year.

When I say "learn" I don't just mean learning things that people learn in schools and colleges. I mean any deliberate effort AT ALL to learn something, or to learn how to DO something. Perhaps you tried to get some information or knowledge—or to gain new skills or improve your old ones—or to increase your sensitivity or understanding or appreciation.

Can you think of any efforts like this that you have made during the past 12 months?

[Pause and Record Responses]

Try to think back over all of the past 12 months—right back to (name of month) last year. I am interested in any deliberate effort you made to learn anything at all. Anything at all can be included, regardless of whether it was easy or hard, big or little, important or trivial, serious or fun.

[Pause and Record Responses]

It doesn't matter if it was in a class or outside of a class, with others or on your own, or even when your effort STARTED, as long as you have spent at least a few hours at it since last (name of month).

[Pause and Record Responses]

We want to get as COMPLETE a list as possible, because we think that people make far more attempts to learn than anyone realizes. We can include any sort of information—knowledge—skill—or understanding that you have tried to gain—just as long as you spent at least a few hours at it sometime during the past 12 months. Can you please tell me anything else you recall?

[Pause and Record Responses]

[Instruct the participant to pick up and read Sheet 1 containing the learning activities prompts.]

Now, here is a list of things people learn. It may remind you of other things that you have tried to learn during the past 12 months. Take as long as you want to read each word, and to think about whether you have tried to learn something similar.

[Instruct participant to pick up and read Sheet 2 containing additional learning activities prompt questions.]

OK, THANK you. That gives us a fairly complete list. However, if you suddenly think of something ELSE you have learned please tell me at any time.

ITEM 2a (Relative to Data sheet # and participant sheet 3)
Less than 7 hours
8-40 hours
40 or more hours)

Now I want to find out a bit more about each of your efforts to learn. Let's begin with the first one on the list. It was your effort to learn _____. This sheet will help us to estimate the number of hours you spent attempting to LEARN this, plus the number of hours spent at planning or preparing for this learning activity. In addition, please include any evaluation or reflection time you spent on this activity.

[Instruct the participant to pick up and read sheet #3, question #1 with Time range in hours.]

(If possible, pin down and record just what the learning episodes the participants referenced. For example, you could ask, “How did you go about learning this? What did you do?” or “Was there anything else that you learned from it?” Examples of the activities you might record are: watched a program, listened to records, read, practiced, attended… This list of activities is primarily for your benefit in helping the person to estimate time accurately: we do not need the data for other purposes.)

(If you are doubtful about any activities suggested as learning episodes, check whether the desire to gain and RETAIN certain knowledge and skill was stronger than all the other purposes put together. For example, you might ask the following question: “In that activity], was your desire to gain certain definite knowledge and skill, AND to retain it for at least two days, stronger than all your other purposes put together?” Or you could ask, “During that activity, how long did you intend to retain what you were learning?”)

ITEM 2b:

We need you to think about the importance of this learning effort to you and rate it on the following scale: NOT VERY, SOMEWHAT, DEFINITELY, VERY IMPORTANT.

Any project less that 7 hours but identified as Definitely and Very Important will be subject to the full interview schedule.

ITEM 3 (Relative to Data sheet # and participant sheet #3)

[Instruct participant to read and verbally answer question #2. Record the numerical response to question #2 concerning the level of involvement in this learning activity.]

ITEMS 4, 5, & 6 (Relative to Data sheet # and participant sheet 4)
The knowledge and skill you gained in _____ learning activity was _____. For that knowledge and skill, please tell me your answers to the following questions.

[Instruct participant to pick up sheet #4 and read question #4. Simply record the numerical rating for each learning project.]

ITEM 7 (Relative to Data sheet concerning credit versus no credit)

Was academic CREDIT any part of your motivation? That is, did you hope to use any of your learning efforts for credit towards a degree or certificate or diploma, for example?

[Pause]

Was any of your learning directed toward passing a test or examination, completing an assignment for a course, or producing a thesis? [Pause]
Were any learning efforts toward a license, such as a driving test, toward an examination related to a job or community service, such as the Red Cross, Habitat for Humanity, a Museum, or other organization volunteer training program?

[Probe to determine if there are any other learning projects in the list for which you think may have been for credit.]

[On the data sheet, record as “credit” or; as “non-credit” based on the participant’s response.]

ITEM 8 (Relative to Data sheet and participant sheet #5)

With this learning project, try to decide who (or what) was the planner. That is, who decided what you would learn—how you would learn—and when you spent time trying to learn? Does this learning project fit into any of the four types on this sheet?

[Instruct participant to pick up and read sheet 5. Give time to read through.]

(If no one resource was primarily (over 50%) responsible, classify that learning project as “mixed planner.” If the person does not seem to understand, or if you feel doubtful about the response, ask who the MAJOR planner was. If the learner asks, or if you anticipate difficulty, say that we are interested in whom the planner was during the past 12 months.)

(If the planner was a GROUP please clarify using the paragraph below and referencing participant sheet 5.)

Now, please choose one of two possibilities. The first possibility is that this group was sponsored by an institution: did the learning activity have an instructor, leader, or speaker who was assigned to that group or was paid for this task? The

second possibility is that it was just a group of equals meeting outside of any organized or institutional framework, and taking turns planning their own learning activities. Which was your group?

[You may have to assist the participant to locate the group in the correct category.]

(If the learning project had a one-to-one planner, see below paragraph and refer to participant sheet 5.)

Now I will suggest two possibilities, and I want you to tell me which one is correct. One possibility is that the one person who helped you was paid to do so (paid by you, or by someone else), or the person was doing so because this was a definite responsibility for him or her, or part of his or her job. The other possibility is that the person was helping primarily because he or she was a friend or relative. Which was the case for your learning project?

ITEM 9 (Relative to Data sheet and participant sheet 7)
[Instruct participant to pick up and read sheet 7. Give time to read through.]

During your efforts to learn, you probably used a variety of resources. Some of these resources may have been people who helped you in some way, perhaps by giving advice or suggestions, or by cheering you up or increasing your activation. Others may have recommended or provided materials or equipment for you. Resources are often the materials you need for your learning, such as books, supplies, and the equipment involved in your project. What were the resources – both human and non-human – that you used in this project? Please note if the non-human resource was electronic in nature (ex. accessed via a computer or other electronic resource).
NOTE: Record the major source of subject matter. That is, what resource provided most of the content AND WAS IT ELECTRONIC? Examples: a family member; a professional instructor; a how-to book; several books; a discussion group at a religious, community, or academic organization; or an online listserv, chat, or internet site.] REFER THEM TO PARTICIPANT SHEET 7 FOR EXAMPLES

ITEM 10 (Relative to Data sheet and participant sheet #9 & #10)

[Instruct participant to pick up and read sheet 9. Give time to read through.]

Many adults describe problems and OBSTACLES that they have faced while conducting certain learning activities. Of all the activities that have been mentioned, think about the major problems that you have had to resolve. Please identify obstacles that you have faced while conducting your learning efforts over the past 12 months.

{Instruct participant to pick up and read sheet 10. Give time to read through.}

Now, here are examples of obstacles people face. It may remind you of other obstacles that you have past 12 months. Take as long as you want to read each example, and to think about whether you have encountered something similar.

ITEM 11 (Relative to Data sheet)[Record the appropriate demographic and personal data for this particular interviewee.]

Miscellaneous Notes for Interviewers

Do not interrupt the person's list of learning projects in order to ask criterion questions unless it is clear that the person is far off the track. Whenever there is a long pause, though, you may want to clarify the one, two, or three possible learning projects that have just been mentioned. At this point, it might be very useful for you to check and jot down the person's HIGHLY INTENTIONAL learning episodes, just to make sure that the criteria of a learning project are understood. Occasionally, too, at this stage you might want to check the number of hours to be sure the minimum is being met.

Use all of your insight and questioning skill in order to understand just what the real focus was. Try to become precise about what the person was trying to learn. If the person selects one of the methods or subjects from our lists, try to get them to use THEIR phrase rather than ours. Record the desired knowledge and skill, the task or responsibility, the question or interest, or whatever the focus was.

Do not quarrel with the person's decisions and data, but do sometimes make one or two attempts to check their understanding of the question or to clarify an answer. Record any doubts you have about the responses you get.

Whenever the person mentions some activity or some area of life that you think might have produced other learning projects, too, ask about this possibility.

Detailed definitions and criteria are presented in the book The Adult's Learning Projects. See especially Chapter 2 and Appendix A, and portions of Chapters 7 and 8.

DATA FOR ONE LEARNING PROJECT

ITEM 1a & 1b: Desired knowledge and skill:

[Perhaps jot down some highly intentional learning episodes.]

ITEM 2a & b: Circle Number of hours:

Less than 7 hours, 8-40 hours, 40 or more hours)

Circle Importance: NOT VERY, SOME, DEFINITELY, VERY

ITEM 3: 1 2 3 4

ITEM 4: 1 2 3 4

ITEM 5: 1 2 3 4

ITEM 6: 1 2 3 4

ITEM 7: Credit: NO YES

ITEM 8: **Type of planner (Circle ONE):**

Group with professional (Group 1)

Peer group (Group 2)

One-to-one professional

One-to-one friend or relative

Object (nonhuman resource)

Learner (self-planned)

Mixed

ITEM 9: Major source (and source nature) of subject matter:

ITEM 10: List obstacles to learning projects

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

ITEM 11: Demographic and personal data sheet

ITEM 1a:

Categories of things that people learn about, with examples

Arts
- music
- painting

Academic(s)
- research
- degree

Career/Work
- job search
- career advancement

Community
- neighborhood watch
- habitat for humanity

Cultural
- history
- roots

Family
- child care
- genealogy

Games
- computer
- cards - Bridge

Health
- mental
- physical

Hobbies
- collecting
- antiquing

Home
- improvement
- decorating

Innovation
- new technique
- new device

Legal
- business
- will

Medical
- illness
- wellness

Nature
- gardening
- birds

Recreation/Sports
- baseball
- hiking

Relationships
- communication
- roles

Religion
- church
- synagogue

Societal
- pollution
- sociology

Technology
- internet searching
- software/programs

Other Business Activities
- professional development
- investing
- networking
- account management
- human resource law

ITEM 1b:

Can you recall any other efforts to learn that were related to the categories on Sheet 1?

Going back over the past 12 months, can you recall any other times that you tried to learn something by reading a book, newspapers, magazines, or Internet based articles? Do you read certain topics or sections because you want to REMEMBER the content? Have you tried to learn anything else from other printed materials?

Have you learned anything from a medical doctor, a lawyer, a counselor, or a therapist? Have you learned from a financial, tax advisor, a social worker, or a coach? Did you learn from a private teacher, a specialist, or an expert? Did you receive individual private lessons?

Have you learned from documentaries or courses on television, the computer, or the Internet? Have you learned from TV news, some other media programs, or in a theatre?

Have you tried to learn from conversations with your family, friends, or other people? Have you deliberately sought to learn by seeking out stimulating individuals?

Have you learned something in a meeting or a group such as a discussion group? Did you learn from attending a conference, a retreat, a club, an association meeting, a committee meeting, or a staff meeting? Did you learn from taking a course, an evening class, a lecture, or a speech?

Did you learn using tape recordings, a CD, a computer-based training module, or "a language lab” during the past year?

Have you learned in any of these locations:
Church or synagogue
College, university, or school, or community organization
Company, factory, or office
A government program, an exhibition, museum, or art gallery
Vacation program, extracurricular activity after school, a club, the “Y” or a camp?

Think back to 12 months ago. Try to recall your main jobs, activities, and problems at that time. Were there any efforts to learn connected with these? How about SIX months ago?

ITEM 2a

We need your best guess about the total amount of time that you spent at all aspects of this particular learning effort during the past 12 months. Of course, you cannot remember EXACTLY how many hours, so just make a choice from this range:

1) Less than 7 hours 2)8-40 hours 3)40 or more hours

ITEM 2b

We need you to think about the importance of this learning effort to you and rate it on the following scale:

ANSWER # 1 NOT VERY IMPORTANT -- that is, you do not feel that it was of great value (you have not retained the information or do not see the value in the learning effort).

ANSWER # 2 SOMEWHAT IMPORTANT -- that is, you believe that it had some value (you have retained the bits of information and see some value in the learning effort).

ANSWER # 3 DEFINITELY IMPORTANT -- that is, you definitely find value in this learning effort (you have retained most information and definitely find value in the learning effort).

ANSWER # 4 VERY IMPORTANT -- that is, you find a great deal of value in this project and the information learned (you find great value in the information retained and learned).

ITEM 3

Which of these following four answers best describes this particular learning effort AT THE PRESENT TIME?

ANSWER # 1 NOT VERY ACTIVE -- that is, you have dropped it, completed it, or set it aside (you are spending much less time at it now than you were before).

ANSWER # 2 SOMEWHAT ACTIVE -- that is, you are still working at it, and you are spending less time at it now than you were before.

ANSWER # 3 DEFINITELY ACTIVE -- that is, you are definitely continuing this learning effort right now, and you are spending about as much time as ever at it.

ANSWER # 4 VERY ACTIVE -- that is, you are continuing this learning effort and spending, more time than ever at it.

Participant Sheet 3

ITEM 4

Please think for a moment about how much knowledge, information, and understanding you gained as a result of this one learning project. Would you say that altogether:

1. you learned a little
2. you learned a moderate amount
3. you learned a large amount
4. you learned a extremely large amount

ITEM 5

How enthusiastic have you been about having this new knowledge and skill? Would you say that altogether:

1. you were not enthusiastic
2. you were somewhat enthusiastic
3. you were very enthusiastic
4. you were extremely enthusiastic

ITEM 6

Let’s set aside your own benefits for a moment, and look at any possible benefits for other people. Your new knowledge and skill might have been of some benefit to your friends, relatives, boss, company or organization, field, or people who live in other places. To what extend did the knowledge and skill you gained provide some benefit to people other than you?

1. to no extent at all
2. to a small extent
3. to a moderate extent
4. to a large extent

Participant Sheet 4

ITEM 8: PLANNERS

There are four different kinds of learning efforts, according to who directs them: Group, One-Person, Object, and The Learner. That is, a person's efforts to learn can be classified according to who was RESPONSIBLE FOR THE DAY-TO-DAY PLANNING. We have to look at who planned or decided exactly WHAT AND HOW the person should learn at each session. For example, who decided what the person should read or hear, or what else he or she should do in order to learn?

1. Group - Some learners decide to attend a GROUP or class or conference or distance learning, and let the group (or its leader or instructor) decide the activities and detailed subject matter from one session to the next. A group may be of any size from five persons to several hundred.

2. One Person - In other learning efforts, the planning or deciding of the details is handled by ONE PERSON, who helps the learner in a ONE-TO-ONE SITUATION. That is, there is one helper (or instructor, teacher, expert, or friend) and, in most cases, there is only one learner. Two or even three learners receiving individualized attention from one other person during the same session can be included here. These two persons interact face-to-face, or through email, instant messaging, and video conferencing such as Yahoo or AOL, or the telephone. Examples include private music lessons, individual lessons from a golf pro, and being taught to drive a car by a friend. These can be face-to-face or through the use of distance learning technology.

3. Object - In some learning projects, most of the detailed planning regarding what to learn and do at each session is guided by an OBJECT (some nonhuman resource).
Examples include: audio recordings, television programs or videos, computer based training, the Internet, programmed instruction materials, a workbook or other printed materials, and a language lab. The learner follows the programs or materials: with instructions of what to do next.

4. The Learner - In other learning projects, THE LEARNER retains the major responsibility for the day-to-day planning and decision-making. The learner may get advice from various people and use a variety of materials and resources. But he or she usually decides just what activities and resources to use. Instead of turning the job of planning over to someone or something else, the learner makes these day-to-day decisions.

Item 9

During your efforts to learn, you probably used a variety of resources.

Some of these resources may have been people who helped you in some way, perhaps by giving advice or suggestions, or by cheering you up or increasing your activation. Others may have recommended or provided materials or equipment for you.

Resources are often the materials you need for your learning, such as books, supplies, and the equipment involved in your project.

What were the resources – both human and non-human – that you used in this project? Please note if the non-human resource was electronic in nature (ex. accessed via a computer or other electronic resource).

Participant Sheet 6

Examples of Resources

Reading a book or pamphlet

Reading a magazine or newspaper

Reading something related to your work

Reading a professional journal or material

TV News, Documentaries, or Educational TV Programs

Going to the theatre or library

Chamber of commerce

In conversation with individuals, friends, relatives, or neighbors

Internets Websites

From programmed instruction or work books

Online and Distance Learning programs

Attending staff, committee, or professional meetings

Going to classes, courses, or conferences

Discussion groups, workshops, or retreats

Taking correspondence courses

Consulting an expert (doctor, teacher, etc.)

Going to a club or the Y

Listening to lectures (For example, in Person or on iTunes U)

Going to the museum or gallery

Listening to audio/visual teaching (language programs, etc.)

Consulting an encyclopedia or reference work

Taking private lessons

Educational TV

Computer Assisted Instruction

Special and Dedicated Websites (Society for Human Resource Management, etc.)

Newsletters

Other business owners

Wikipedia

Online instructional videos

Consumer Reports and related product review materials

Social Networking Sites (Facebook, MySpace, etc.)

State Department of Education

Government websites and documents

Participant Sheet 7

Item 10

Many adults describe problems and OBSTACLES that they have faced while conducting certain learning activities. Of all the activities that have been mentioned, think about the major problems that you have had to resolve. Please identify obstacles that you have faced while conducting your learning efforts in the past 12 months.

Participant Sheet 8

EXAMPLES OF PROBLEMS AND OBSTACLES

1) Lack of time
2) Family obligations
3) Social obligations
4) Cost of resources
5) Cost of programs
6) Work obligations
7) Lack of available resources
8) Lack of available programs
9) Unable to identify learning needs
10) Issues with technology
11) Lack of industry specific programs or resources
12) Inconveniently scheduled courses
13) Amount of time required to complete a program
14) Strict attendance requirements
15) Unwilling to attend classes full time
16) Lack of motivation to pursue additional learning opportunities
17) Financial Obligations
18) Health Issues
19) Not a High Priority
20) Not comfortable with formal classes

Participant Sheet 9

Item 11

Demographic Data Sheet

Small Business Owners: Adult Learning Projects

DEMOGRAPHIC FORM

1. Age: _____

2. Gender:

O Male O Female

3. Race and Ethnic Background (Choose one):

O American Indian
O Alaskan Native
O Asian
O Black, African American, African Descent
O Hispanic origin or descent
O Native Hawaiian or Pacific Islander
O White

4. Years as a business owner: _____

5. Level of education?

O No Degree
O High School Diploma/GED
O Associates/Trade School
O Undergraduate
O Graduate/Masters
O PhD. Or Equivalent

6. Industry:

O Retail
O Manufacturing
O Service
O Consulting
O Construction
O Hospitality (Food Service)
O Medical
O Other

7. Please rate your Computer Skill Level:

O ***Beginner*** (New to Computers)
O ***Novice*** (Able to use basic computer functions including opening programs and surfing the internet)
O ***Intermediate*** (Comfortable using software such as Microsoft Office for daily, but not advanced tasks)
O ***Advanced*** (Skilled in working with advanced software features, able to trouble shoot most problems)
O ***Expert*** (Coding, Write Programs)

VITA

John Harrison was born in Baltimore, Maryland. He and his wife, Amanda, currently live in Knoxville, Tennessee with their children, Lauren and Molly, and their standard poodle, Sugie. John graduated from the University of North Carolina at Greensboro in 2002. He received a Bachelor of Science degree, double majoring in Business – Human Resource Management, and Economics – International Economic Policy. In 2004, John received his Master of Science degree in Organizational Change and Leadership from Pfeiffer University in Charlotte, North Carolina. He has been employed as an Adjunct Faculty Member at Tusculum College since 2007, teaching in the Bachelor of Science in Organizational Management program, as well as, the Gateway program.