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SELF-DIRECTED LEARNING PROJECTS OF OLDER ADULTS

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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Denton, Texas

August, 1989

SPL

Sears, Emma Jo Benson, Self-Directed Learning Projects of Older Adults. Doctor of Philosophy (College and University Teaching), August, 1989, 110pp., 15 tables, bibliography, 57 titles.

This study determined the number of self-directed learning projects undertaken by older adults and examined the motivational factors and anticipated benefits related to the learning activities. In addition, obstacles to conducting self-directed learning were identified by the respondents.

A list of 20,032 names of adults, aged 50 or more years and residing in Tom Green County, Texas, was obtained from voter registration rolls and the residential rolls of four retirement complexes. Four hundred names were randomly selected to serve as the sample of the study. Of the 400 potential subjects, 120 persons agreed to be interviewed.

Indepth interviews were conducted using the questions from Tough's Interview Schedule for Studying Some Basic Characteristics of Learning Projects and a probe sheet to identify obstacles to conducting self-directed learning projects. The interviews focused on the learning activities of older adults during the previous year.

The 120 subjects of this study conducted a total of 239 learning projects in the previous year, an average of 1.99

self-directed learning projects per person. Ninety-five (95%) percent of the persons interviewed reported to have conducted at least one learning project in the past year. The majority of the learning projects were self-planned for the purpose of self-enjoyment and self-fulfillment.

The most frequent obstacles to conducting self-directed learning projects identified by the subjects included: 1) finding the time for the learning activity; 2) the cost of the learning activity; 3) home responsibilities; 4) difficulty deciding what knowledge or skill to learn; 5) difficulty remembering new material or information; and 6) poor health.

Comparisons of the results of this study were made with the results of previous studies by Tough, Hiemstra, and Ralston. The data support the belief that books, pamphlets, and newspapers are the primary source of information for the older adult.

The results of this study indicate that older adults value self-directed learning as a major source of self-fulfillment in their lives and are motivated to develop new knowledge and skills through self-planned, self-directed learning projects.

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CHAPTER I

INTRODUCTION

The recognition that adults devote time and effort to learning throughout their lifespan (Tough, 1971) has served to generate a great deal of research and debate concerning the need for, and the value of, educating older adults. However, much of the research has focused on describing only those older learners who participate in formal educational programs (Houle, 1961; Mackay and Hixon, 1977). Since the older participants in formal learning programs number less than four percent of the total older population past the age of sixty (Lowy and O'Connor, 1987), attention should be directed to answering questions concerning the remaining ninety-six percent. This study of the self-directed learning projects of older adults will add to understanding the educational needs, learning goals, and accomplishments of all older persons.

The seminal research of Tough, represented by his study of the self-teaching activities of forty college graduates (Tough, 1967), has served to generate more than sixty follow-up studies. Verification studies of Tough's original findings constitute the majority of research efforts into the self-directed learning activities of adults (Tough,

1978; Mocker & Spear, 1982; Brookfield, 1984b). Typically, subjects in the verification studies have been young adults in middle and upper socioeconomic strata populations describing the learning activities of select educational and/or occupational groups (Brookfield, 1984b; Caffarella & O'Donnell, 1987). Lumsden (1987) states that "given the number of studies conducted on learning projects during the past 15 years, it is unfortunate that so little information is available about older adults' learning projects" (p. 11).

A review of previous self-directed adult learning projects reveals only three studies related to older adult learning activities. Utilizing Tough's original methodology, Hiemstra (1976b) investigated the learning projects of 214 adults, aged 55 and older residing in Nebraska. Ralston (1978) examined the learning activities of 110 individuals aged 65 to 89 in Illinois, and Simmons (1985) studied the learning projects of 38 retired educators aged 55 to 71 in Texas.

Although older adults have been identified as a "hard-to-reach population" (Darkenwald, 1980) for studying self-directed learning activities, Brookfield notes that "more studies of a wider age range than the young professionals researched by Tough and his team are needed before we can declare that the ways in which younger adults conduct self-planned learning holds true across the age spectrum (1984b, pp. 44-45).

According to Houle (1961), age is an important factor for determining participation in educational activities. He states that "the very young adult seldom takes part, but there is a sharp upturn in the late twenties, a fairly constant level of activity until the age of fifty, and a decline thereafter" (pp. 6-7). A study of the self-directed learning projects of adults, aged 50 and over, should provide a better understanding of the amount of self-directed learning activities, self-directed learning interests, and obstacles to self-directed learning activities of all older adults.

Statement of the Problem

The problem of this study was the self-directed learning projects of older adults.

Purposes of the Study

The purposes of this study were to determine the following:

1. The number of self-directed learning projects undertaken by a selected population during a one-year period;
2. The motivational factors and anticipated benefits for undertaking self-directed learning projects by older adults;
3. The obstacles to conducting self-directed learning projects by older adults; and
4. The relationship between the results of this study and the results of previous studies.

Significance of the Study

Since the early 1970s, an emerging focus of adult education research has been the area of self-directed learning. Self-directed learning has been defined as a process in which the individual assumes primary responsibility for planning, implementing, and evaluating the learning experience. Verification and follow-up studies of Tough's (1971) seminal work on learning projects have provided extensive descriptive evidence about adult self-directed learning projects. However, the majority of these studies have not examined self-directed learning in older age groups. By examining a wider age range of aging and older adults, the extent and nature of self-directed learning projects undertaken by a representative population may be determined.

This study is significant in that it may accomplish the following:

1. Extend the knowledge concerning the self-directed learning projects of older adults;
2. Explore motivational factors and anticipated benefits of older learners; and
3. Further the theoretical knowledge about the number of self-directed learning projects undertaken by older adults.

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CHAPTER II

REVIEW OF THE RELATED LITERATURE

Introduction

The phenomenon of self-directed learning has been a popular subject of research for the past two decades. The "almost incidental finding of the Johnstone and Rivera study (1965) that adults do initiate learning projects on their own" (Penland, 1978, p. 2), followed by Tough's (1971) seminal investigation of the behavior of people who design and conduct their own learning projects, has led to the development of a conceptual framework for investigating self-directed learning activities of adults.

A literature search revealed more than 60 dissertations, completed since 1971 and listed in Dissertation Abstracts International, that studied topics related to "self-initiated learning", "self-planned learning", "self-directedness", "major learning efforts", and "self-directed learning projects." A search of the Resources in Education (RIE) and Current Index to Journals in Education (CIJE) compiled more than 250 documents available from Education Resources Information Center (ERIC). The topics of these documents included "self-directed learning", "self-planned learning", or

"independent learning."

A drawback in reviewing the literature and associated research is the inconsistency and conceptual ambiguity of terms referring to self-directed learning. The concept of self-directed learning has been previously described in the literature in various ways. These descriptions have included: self-instruction (Johnstone & Rivera, 1965); self-education (Dickinson & Clark, 1975); independent study (Jourard, 1967; Peterson, 1983); self-teaching, (Tough, 1966); individual learning (Smith, 1976); self-directed inquiry (Long & Ashford, 1976); independent self-education (Johnstone & Rivera, 1965); self-initiated learning (Penland, 1979); independent adult learning (Brookfield, 1981); andragogical learning (Knowles, 1975); self-directed study (Miller, 1964); and autonomous learning (Houle, 1961; Smith, 1976).

Oddi (1987) notes that "definitions of self-directed learning in the literature are frequently confusing, overlapping in some respects and differing subtly in others. The lack of a unified, comprehensive conception of and disagreement about the values and practices related to self-directed learning has been the concern of numerous authors for more than a decade" (p.21).

Brookfield (1984b) discusses the fact that the term "self-directed learning" is subject to considerable semantic confusion. He asserts:

The problem arises from the fact that the word "learning" is a gerund; that is, a word which functions colloquially as both a noun and a verb. We use the term "learning" to refer to an internal change in consciousness or to an alteration in the state of the central nervous system. Alternatively, we talk of learning in an active sense as work which describes a range of activities. In this latter sense learning becomes equivalent to the act of learning, and we describe someone as being engaged in learning if they set goals, consult assistants, locate and use books and articles, and devise evaluative indices. It is this second sense of learning which informs the writing and research in this area. Hence to talk of self-directed learning is not to describe a particular kind of internal change in consciousness, but to refer to the activity involved in acquiring particular skills and knowledge (p. 61).

Various terms in the literature have been used to identify self-directed learning activities by adults. These terms include: self-teaching episodes, self-directed learning projects, and major learning efforts. Brookfield (1984b) notes that Tough (1971, 1978, 1979) has used the terms "adult learning projects" and "major learning efforts" interchangeably in the past.

Terms applied to self-directed learners in the

literature have also varied. Tough (1980) states that "such learners have been called autonomous learners, self propelled learners, self-teachers, and autodidacts" (p. 301).

When writing about self-directed learning, authors have addressed such topics as: 1) understanding how adults learn (Brookfield, 1986; Lumsden, 1987); 2) distinguishing forms of learning in the individual mode (Tough, 1980); 3) independent adult learning (Brookfield, 1984a); 4) learning and education as essential functions in life span development (Thornton, 1986); 5) adult learning projects (Tough, 1971, 1979); and 6) critical paradigms providing in-depth analysis of the current state of self-directed learning and recommendations for the future (Caffarella and O'Donnell, 1987; Brookfield, 1984b; Oddi, 1987).

The literature reveals several recent articles which voice concerns and criticisms about research in this rapidly expanding area of adult education. The following represent issues raised in discussing these concerns: 1) most studies have focused on middle-class samples (Brookfield, 1985a; Caffarella & O'Donnell, 1987); 2) quantitative approaches have tended to predominate the study of self-directed learning (Brookfield, 1985b; Brockett (1985); 3) "the Tough interview schedule calls for probing and prompting which can contaminate findings" (Caffarella & O'Donnell, 1987, p. 200); 4) in much of the research, only sketchy descriptions of subjects are included in the research studies, excluding

such demographic variables as social class or ethnic origin (Caffarella & O'Donnell, 1987); and 5) self-directed learning research has not focused on "many hard-to-reach populations" (Brookfield, 1984b, 1985), defined by Darkenwald (1980) as "the elderly, the disadvantaged, blue-collar workers, the handicapped, the geographically isolated, and many other identifiable groups and subgroups within the general population" (p. 1).

Research studies cited in the literature have verified that self-directed learning activities or interests exist in many specific and/or occupational groups. Some of the populations that have been studied include: the general population (Tough, 1971; Penland, 1979); nurses (Kathrein, 1981; Skaggs, 1981); degreed engineers (Rymell, 1981); black adults (Shackelford, 1983); farmers (Bayha, 1984); and older adults (Hiemstra, 1976b; Ralston, 1978; Simmons, 1985).

A majority of the research studies cited in the literature have been conducted in urban areas located in central and eastern geographical locations in the United States. Three research studies of self-directed learning were found to have been conducted outside these geographical locations. The populations studied in these research efforts include: nurses (Skaggs, 1981); degreed engineers (Rymell, 1981); and retired educators (Simmons, 1985).

The major focus of this review is studies that are relevant to the present study. Therefore, research about

older adult self-directed learning activities and general perceptions on self-directed learning as they relate to older learners will be examined.

Self-Directed Learning and Older Learners

Self-directed learning as a concept of nontraditional educational practices is not new. Long & Ashford (1976) discuss the lengthy history of this mode of learning in early colonial America where there was limited opportunity for school-directed inquiry. "Self-directed inquiry" during this era referred to the "informal educational activities in which men and women voluntarily engaged through their own personal planning and motivation for the purpose of self-improvement or sheer curiosity or both" (pp. 245-46). In colonial society, informal educational activities undertaken at the learner's own initiative were the most common means of learning because they allowed learners to learn at their own volition and according to their own interests.

The recognition that learning occurs in all stages of life has served as the basis for researching the educational needs of older persons. Havighurst (1976) has described two basic aspects of education, the instrumental and the expressive aspects, as methods for "educating the mind as an instrument of learning rather than a storehouse of knowledge" (p. 41). "Instrumental education is education

for a goal that lies outside and beyond the act of education. In this form, education is an instrument for changing the learner's situation. Expressive education is education for a goal that lies within the act of learning, or is so closely related to it that the act of learning appears to be the goal" (pp. 41-42).

The definitions of self-directed learning generally reflect a process in which certain skills and abilities are required for an individual to engage in the process. In the most commonly cited definition, Knowles (1975) defined self-directed learning as "a process in which individuals take the initiative in designing learning experiences, diagnosing needs, locating resources, and evaluating learning" (p. 18). He notes that this process can occur with or without the help of others. Authors who have adopted definitions similar to that of Knowles include Brockett (1983), Cheren (1983), Mocker & Spear (1982), and Skager (1978).

Similarly, Tough (1966) has defined "self-teaching" as "the assumption of responsibility by the learner for planning and directing the course of learning" (p. 30). Penland (1977), in a study of self-initiated learning, defined self-directedness in terms of the learners' ability to independently plan, conduct, and evaluate their learning activities. Hiemstra (1980) defined self-planned learning as "a learning activity that is self-directed,

self-initiated and frequently carried out alone" (p. 353).

At the present, this individual mode of adult learning has been described by Tough (1978) as "the adult learning iceberg." In this analogy he proposed that the massive bulk of the iceberg hidden below the water can be compared to 80 per cent of adult learning efforts" (p. 253).

Brookfield (1984a) notes that this 80 percent of adult learning is usually self-planned by the learner and has been largely ignored by professionals in the field.

For the past two decades, Tough has investigated this adult learning iceberg, the submerged portion which constitutes self-directed learning by adults. In 1967, he investigated the self-teaching activities of a sample of 40 college graduates in the Toronto area, concluding that "many of the projects seemed to form an extremely important part of the subject's life and seemed to dominate his time and thought for weeks and even months" (Tough, 1967, p. 43).

In 1968 Tough interviewed 35 adults with more than a high school degree in order to determine their reasons for beginning and continuing learning projects. The terms "learning episode" and "learning project" were introduced to describe the learning activities of adults.

In 1971, Tough presented a summary of his research in the 1960s and presented data from a new study of 66 individuals drawn from seven occupational groups. The term "major learning effort" was introduced and used

interchangeably with the term "learning project." When summarizing research studies of adult learning projects, Tough concluded that the typical adult conducts five learning efforts each year, requiring 100 hours for each learning effort, and over 70% of the learning efforts are self-planned. Brookfield (1981, 1984a) has examined Tough's research endeavors extensively. He acknowledges that "Tough has now established an acceptable research paradigm, an assemblage of methodologies, concepts, and typologies, which can be adapted by researchers to a variety of settings" (1984a, p. 35).

Brookfield (1984a) states that "in terms of confirmatory evidence for Tough's speculations on a national level, the most important work done to date is that conducted by Patrick Penland" (p. 41). From a sample of 1501 adults drawn from across the United States, Penland (1978) concluded that the probability of involvement in learning activities was about 80% for all adults, and that 76% of the learning activities were self-initiated. His findings, in support of Tough's previous research regarding adult learning projects, stated that self-planned learners were involved in an average of three projects a year, spending an average of 155.8 hours per project.

Studies related to the self-directed learning needs of older adults specifically include Hiemstra (1976b), Ralston (1978), and Simmons (1985). This paucity of studies

investigating the learning needs of older adults has been noted in the literature by Brookfield (1985a) and Caffarella & O'Donnell (1987).

Hiemstra's research (1976b) of the learning projects of older adults utilized the interview methodology devised by Tough. Investigating the learning projects of 214 adults aged 55 or older residing in Nebraska, Hiemstra found that the older adults conducted 3.3 projects per year, spending an average of 325 hours per year engaged in self-directed learning. A majority of the projects, 55%, were self-planned. The dominant reason for the learning was for enjoyment or self-fulfillment. Books, pamphlets, and newspapers were the major learning resource used by the older adults.

Ralston (1978) investigated the self-perceived educational needs and activities of older adults aged 65 to 89 years in Illinois. Her sample of 110 individuals revealed that the respondents were involved in an average of 2.45 learning projects, totalling 249.9 hours. The findings of this study indicated that the educational needs of older adults varied by race, gender, socio-economic status, and educational level.

Simmons (1985) identified the learning projects undertaken by 38 retired educators and examined the extent to which these learning experiences were related to body weight and the exercise patterns of her subjects. The

findings of this study support the assertion that health related obstacles diminish learning activity in later years.

Although the research described in the literature reveals a high level of self-directed learning activity among younger adults, little literature on older adults as self-directed learners can be found (Hiemstra, 1985, p. 188).

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CHAPTER III

PROCEDURES FOR COLLECTION OF DATA

Research Questions

Within the context of exploring the self-directed learning projects of older adults, this study addressed ten main areas of interest:

1. How many learning projects are undertaken by older adults?
2. How much time is spent by older adults on learning projects?
3. What is the nature of the content of learning projects by older adults?
4. To what extent are the learning projects of older adults self-planned?
5. To what extent are the learning projects of older adults beneficial to others?
6. What is the primary reason for the learning?
7. What are the major obstacles to self-directed learning projects by older adults?
8. What is the major source of subject matter for the self-directed learning projects of older adults?
9. Are the self-directed learning projects of older adults expressive or instrumental in nature?

10. Is age a mediating variable in self-directed learning activities of older adults?

Definition of Terms

The following terms are defined for use in this study:

A self-directed learning project- "a highly deliberate effort to gain and retain some definite knowledge or skill through a series of related learning sessions that last at least seven hours, the equivalent of a working day" (Tough, 1980, p. 33).

Older adult-an individual aged 50 years or more.

Self-directed learning-intentional learning for the purpose of acquiring definite knowledge or skill (Tough, 1979).

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

Instrumental categories of learning-learning activities designed for "effective mastery of old-age challenges and includes such topics as health, income, legal affairs, and adjusting to changing relationships with others (Hiemstra, 1976a, p. 228); "for basic or skill mastery" (Hiemstra, 1982a, p. 143). "...a kind of

investment of time and energy in the expectation of future gain" (Havighurst, 1976, p. 42).

Expressive categories of learning-learning activities that "increase the enjoyment of life, expand horizons, provide fairly immediate gratification, or facilitate opportunities for self-expression" (Hiemstra, 1976a, p. 228).

Basic Assumptions

It was assumed that the subjects of this study would:

1. Respond honestly to the questions used to determine the demographic characteristics of the sample and the extent and nature of self-directed learning projects undertaken during the past year; and
2. Understand the definition of a self-directed learning project.

Subjects

The population for the study consisted of registered voters of Tom Green County, Texas, aged 50 years or more. San Angelo, a prominent retirement center in the county, serves as the regional health center for much of West Texas. Recent estimates place the population of the county at 98,587, and the population aged 50 or more in years at 27,704, 28.1% of the total population (Texas Department of Commerce, 1988). Further population data related to gender and ethnicity may be found in Tables 14 and 15.

In order to establish a master list of county residents

meeting the criteria for the study, a voter registration roll for county was obtained. The roll listed all persons registered to vote in the county as of January 1, 1989, and included name, age, birthday, and address. The roll consisted of two parts: persons with a local San Angelo address and persons with a rural route address. Only those persons whose birthday fell on or before February 1, 1939, were considered for the study. A total of 19,349 names was obtained from the roll.

Five nursing homes and a geriatric hospital declined to provide information about residents when contacted. Similarly, the Office of Community Development and Housing, the Senior Services Outreach Program, and the Senior Services Nutrition Program declined to provide information about clients served when contacted.

The 1987 San Angelo Texas City Directory includes the names, addresses, and phone numbers of 1,162 residents of four large residential complexes built especially for the elderly. This directory, available at the county library, proved to be a valuable resource throughout the study for locating and obtaining addresses and phone numbers.

The names and addresses of persons residing in the residential complexes were compared with the names and addresses on the voter roll. Any name appearing on both rolls was removed from one list in order that the name would appear only once on the master list when compiled. A total

of 683 names was obtained in this manner.

A master list was then prepared incorporating the voter roll and the residents of the retirement complexes. A master list of 20,032 names was obtained.

The master list was organized and each member of the population was numbered in sequential order for ease in selecting the sample in a random manner. Due to the length of time required for administering the interview, the sample was limited to 400 persons. Four hundred names were selected from the master list to make up the sample by using a table of random digits (Kachican, pp. 556-559).

Limitations of the Study

This study is subject to the following limitations which may restrict the generalizability of the findings:

1. The subjects' memories concerning the self-directed learning projects initiated within the twelve previous months could be incomplete;
2. Subjects of the study reside in Tom Green County, Texas, and the findings of the study may not generalize to older adults in other geographic locations;
3. Persons selected randomly from the population to serve as the sample could not be controlled in such a way as to insure their participation in the study; and
4. Reliability information concerning the interview schedule has not been made available from previous research.

Instrument

"The Interview Schedule for Studying Some Basic Characteristics of Learning Projects" developed by Tough and associates (1975), with additional segments developed by Hiemstra (1982b) was administered to each subject during this study. (See Appendix B). This interview tool has been used in numerous research studies since 1975, including studies by Hiemstra (1976B), Ralston (1978), Penland (1979), and Simmons (1985).

In an effort to establish the reliability of the tool, Tough (1981) "developed, tested, and several times revised the interview schedule and three questionnaires. Three faculty members at the University of Chicago criticized the typewritten interview schedule, and one faculty member criticized initial interviews recorded on tape" (p. 34).

The questions used in the interview were field-tested by Tough and revised prior to the original studies, "Learning Without a Teacher" (1967) and "The Adult's Learning Projects" (1971).

Efforts by Hiemstra in his study (1976b) to insure reliability include: conducting extensive training sessions for all interviewers, pilot-testing the initial draft with four subjects, refining the final interview schedule, reviewing the consistency of each interviewer's work, and follow-up telephone calls to various respondents one month after the interview to check for differences in responses to

questions. "No observable differences in the data reported over the phone and that collected by the interviewers were found" (pp. 333-334). However, a literature search does not reveal further information concerning reliability information concerning the interview schedule.

Hiemstra (1976b) made further efforts to establish validity by reviewing previous research that had utilized the interview schedule. A panel of judges examined and evaluated the instrument for "ambiguity, clarity, wording, and sequence" (p. 334). Only questions receiving the unanimous agreement by the panel were included in the interview instrument and further appraisal was made through a pilot study.

Brookfield (1984a) states that "in all of Tough's studies the exact wording of questions, the order and manner in which such questions are put, and the kinds of prompts offered to subjects to encourage a response, are closely prescribed. The advantage of using the interview schedule lies in the fact that replication studies can be conducted in a variety of settings" (p. 45-46).

Procedures for the Study

A letter was prepared to explain the purpose of the study and a post card was enclosed for the recipient to return to the researcher. The postcard allowed for the recipient to agree to an interview or decline. If the recipient agreed to participate in the study, space on the

post card allowed for the recipient to state the best time for the researcher to call to schedule an interview time. (See Appendix A).

On February 13, 1989, 50 letters, with the postcard to be returned, were mailed to the first 50 persons of the sample. The letter instructed the recipient to return the card as soon as possible, but no later than March 1, 1989.

By March 1, 1989, 12 postcard had been returned, four blank, and eight giving permission to call and schedule an appointment for the interview. These eight were called and appointments were scheduled according to their convenience.

By March 10, six more postcards had been returned, three blank and three unsigned, but checked that they preferred not to participate in the study. The poor response prompted the researcher to contact the remainder of the sample by telephone when possible, or in person since the addresses of the subjects were known. Efforts to locate the subjects by telephone were made using the 1987 San Angelo Texas City Directory, local telephone books, and the local telephone company information services.

A telephone conversation to introduce the researcher and the study to be conducted was developed. This conversation included: introducing the researcher and the purpose of the research study, verifying the age of the subject, requesting the subject's permission to agree to participate in the study, and, if agreement was given,

scheduling a convenient time for the interview to take place.

Of the 400 persons selected for the sample, 130 persons agreed to be interviewed. A total of 182 persons, including the 32 nonrespondents to the original mailing, declined to participate in the study. Twenty-seven persons were reported by someone at the address or phone number to be deceased, 56 persons could not be located by phone or personal visit to the given address, five persons gave their age as less than 50 years on February 1, 1989; and ten persons could not keep interview appointments due to problems resulting from sudden illness or unexpected travel.

Various reasons were given for declining to participate in the study. The most frequent reason given was the lack of time. Some persons stated they did not have the time to talk to the researcher during initial contact and would not have time at a later date. When told during the initial contact telephone call that the interview could last one to two hours, some persons stated they did not have time to schedule the interview. Others stated that they had no interest in the subject of the study and did not want to participate. Some stated that they had not learned in the past year and could add nothing to the study. Persons who hung up the telephone at the onset of the initial contact were counted as declining to participate in the study.

The convenience sample for this study consisted of 120

persons, aged 50 years or more, residing in Tom Green County, Texas. This figure represents 1.9% of the age 50 and over population in the county and a 30% response rate by the subjects selected for the study. All subjects agreed to participate in an interview designed to elicit information concerning their self-directed learning projects for the previous twelve months.

Seven interviews were conducted in nursing homes, nine interviews were conducted at retirement complexes, three interviews were conducted in offices of local businesses, 95 interviews were conducted in private homes, and four interviews were conducted by telephone, at the request of the subjects. Before the telephone interviews were conducted, Sheet One and Sheet Two, necessary for the interview were mailed to each of the four subjects (See Appendix B).

All but one of the initial contacts and interviews were conducted in English. A translator served as interpreter.

The determination of residence community was based on the mailing address of the subject. Those listing a San Angelo city address were considered to be urban. Subjects listing an address in a city of less than 5,000 were considered to be small town and subjects with a rural route address were considered to be rural.

Each subject was contacted individually by telephone or in person by the researcher. At that time, a date and time

was established according to the subject's schedule, for the interview schedule to be administered.

All initial contacts and the interviews were conducted by the researcher. Eighty of the subjects lived in an urban area, 16 lived in a small town of less than 5,000 population, and 24 lived in rural areas of the county. Eighteen of the interviews were conducted during the evening and the remainder were conducted during the morning or afternoon hours. The majority of the interviews were conducted in the subjects' homes.

The amount of time required for conducting the interviews varied from 31 minutes to 210 minutes, with an average time of all interviews of 112.5 minutes. Careful attention by the researcher was given to each subject in order to assure that no one became unduly fatigued during the interview process. Many of the longer interviews with older subjects included conversations of a reassuring nature in order to place the subjects at ease and acquaint the older person with the researcher.

The interview was conducted in the following manner:

1. The researcher reintroduced self and explained the purpose of the study.
2. The subjects reaffirmed agreement to participate in the study and verified actual age.
3. All subjects were advised that the researcher would be recording pertinent data during the course of the

interviews and these data could be reviewed at any time by the subjects. The researcher also offered to make explanation or clarify any question or information at any time during the interview.

4. "The Interview Schedule for Studying Some Basic Characteristics of Learning Projects" (Tough, 1975; Hiemstra, 1982b) was then administered to each subject (See Appendix B).

5. Answers given by the subjects were recorded during the course of the interview on the Data Sheet for reporting the self-directed learning projects of older adults. Appendix C is a copy of the Data Sheet.

6. At the conclusion of the interview, the subjects were thanked for their participation in the project and given the opportunity to ask any questions or make comments concerning the interview process.

7. The obtained data from each interview were compiled and added to previously obtained data as quickly as possible. Nine subjects were contacted later to clarify information given in the interviews. There were no missing responses in the data obtained according to the interview schedule.

8. The obtained data were organized and appropriate measures of central tendency were computed. The results are discussed in Chapter IV.

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CHAPTER IV

RESULTS

The purposes for conducting this study were to determine the number of self-directed learning projects undertaken by older adults during a one-year period; to determine the motivational factors and anticipated benefits for undertaking self-directed learning projects by older adults; and to determine the relationship between the results of this study and the results of previous studies. Data collection was guided by the following research questions:

1. How many learning projects are undertaken by older adults?
2. How much time is spent by older adults on learning projects?
3. What is the nature of the content of learning projects by older adults?
4. To what extent are the learning projects of older adults self-planned?
5. To what extent are the learning projects of older adults beneficial to others?
6. What is the primary reason for the learning?
7. What are the major obstacles to self-directed

projects by older adults?

8. What is the major source of subject matter for the self-directed learning projects of older adults?

9. Are the self-directed learning projects of older adults expressive or instrumental in nature?

10. Is age a mediating variable in self-directed learning activities of older adults?

Demographic Characteristics of the Sample

The sample for the study consisted of 120 adults, 50 years of age and older, living in Texas. They were selected randomly from a county voter registration roll and residents of four residential complexes built especially for the elderly. The sample consisted of 86 women and 34 men of which: 45.83% were married, 66.67% lived in an urban area, 84.17% were white Americans, 41.67% had graduated high school, and 67.5% were retired. The median age of the sample was 72.5 years and 53.33% were age 70 or over. Demographic data obtained in the study related to the sample are presented in Table I.

Table 1

Older Adults: Demographic Information

Informational descriptor	Values			
	Mean	Number	Percent	
Age:				
Men	69.59	34	28.33	
Women	71.64	86	71.67	
Sample	71.06	120	100.00	
			Men	Women
			Total	Percent
Age Range	50-96	50-102	120	100.00
Marital Status				
Married	22	33	55	45.83
Widowed	8	43	51	42.50
Divorced	2	3	5	7.50
Never married	2	7	9	4.17

(Table 1 continued) Men Women Total Percent

Years of Formal Education

Less than 8th grade	3	15	18	15.00
8th to 11th grade	4	15	19	15.83
High school graduate	12	38	50	41.67
Some college	7	8	15	12.50
College graduate	4	7	11	9.17
Graduate school	4	3	7	5.83

Other training

Vocational/technical	9	7	16	13.33
On-the-job	13	30	43	35.84
Correspondence courses	2	1	3	2.50
Business school	1	6	7	5.83
Other as home training or self-taught	9	42	51	42.50

(Table 1 continued) Men Women Total Percent

Profession/Occupation

Executive/Professional	8	7	15	12.50
Business Manager	4	3	7	5.83
Administrative	7	8	15	12.50
Clerical, sales, technical	2	23	25	20.83
Skilled manual employee	8	7	15	12.50
Semi-skilled	3	2	5	4.17
Unskilled worker	1	10	11	9.17
No outside employment/ homemaker	1	26	27	22.50

Retired

Yes	15	66	81	67.50
No	19	20	39	32.50

Average Number Years

Retired	12.42	12.91		
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Range of Years Retired	1-30	1-37		
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(Table 1 continued) Men Women Total Percent

Community

Urban	23	57	80	66.67
Small Town	5	11	16	13.33
Rural	6	18	24	20.00

Race and National Origin

American Indian	1	0	1	0.83
Asian/Oriental	1	2	3	2.50
Black	3	2	5	4.17
Hispanic	6	4	10	8.33
White/Anglo	23	78	101	84.17

Note: N=120.

The sample was representative of the estimated race/ethnicity character of the county. County-wide data is presented in Table 2.

Table 2

Population Estimates of Race/ethnicity and Ethnic composition of the Sample

Information descriptor	Estimated ^a percent	Sample n=	Sample percent
Race/ethnicity			
White/Anglo	81.82	101	84.17
Hispanic	14.00	10	8.33
Black	3.63	5	4.17
Other	0.55	4	3.33
Totals	100.00	120	100.00

Note: ^aFrom The Texas State Population Estimates and Projections Program, Texas Department of Commerce.

Data Relating to Research Questions

The responses to the interview questions relative to the ten research questions were tabulated and frequency and percentages were computed. A discussion of the findings and tables presenting appropriate data for each research question follows.

1. How many learning projects are undertaken by older adults?

The 120 subjects of this study conducted a total of 239 learning projects in the previous year, an average of 1.99 self-directed learning projects per person, s.d. 0.8. Ninety-five percent (95%) of the persons interviewed reported to have conducted at least one or more learning project in the past year. The number of learning projects conducted for the previous year were reported as follows: six persons (5%) reported no learning projects; 27 (22.5%) reported at least one learning project; 59 (49.17%) reported at least two learning projects; 21 (17.5%) reported at least three learning projects; and seven (5.83%) persons reported conducting four learning projects. Women conducted an average of 2.07 learning projects and men conducted 1.79 learning projects during the year. The detailed data are presented in Table 3.

Table 3

The Number of Older Adult Learning Projects

Informational descriptor	Men n=34	Women n=86	Total for sample	
Learning projects				
conducted per year:	61	178	239	
Average per person				
per year:	1.79	2.07	1.99	
Number of learning projects conducted:	Men	Women	Total	%
None	2	4	6	5.00
1	10	17	27	22.50
2	16	43	59	49.17
3	5	16	21	17.50
4	1	6	7	5.83
Totals	34	86	120	100.00

Table 4 presents the range of learning projects according to age-groups. Based on the age ranking: persons aged 50-58 years, conducted 44 learning projects for the previous year or 18.41% of total learning projects; persons aged 59-67 years, conducted 53 learning projects or 22.18% of total projects conducted; persons aged 68-74 years, conducted 52 learning projects or 21.76% of total projects conducted; persons aged 75-83.25 years, conducted 50 learning projects or 20.92% of total projects; and persons aged 83.26-102 years, conducted 40 learning projects or 16.73% of total projects. These data are summarized in Table 4.

Table 4

Older Adult Learning Projects According to Age-groups

Age Range	Men n=34	Women n=86	Number of learning projects	% of total learning projects
50-58	15	29	44	18.41
59-67	17	36	53	22.18
68-74	11	41	52	21.76
75-83.25	10	40	50	20.92
83.26-102	8	32	40	16.73
Totals	61	178	239	100.00

Note: n=24 per age group.

2. How much time is spent by older adults on learning projects?

The total number of hours reported for all learning projects was 57,255 hours. The mean of this total was 477.13 and the median was 425.75 hours. The range of the hours of the learning projects was 0-2130 hours.

Women spent an average of 507.73 hours conducting 2.07 learning projects and men spent an average of 399.7 hours conducting 1.79 learning projects. The average number of hours spent conducting one learning project was 261.3 hours; for two learning projects, 494.08 hours; for three learning projects, 627.39 hours, and 1125 hours for four learning projects. Table 5 presents the number of hours spent at learning projects in one year. Table 6 summarizes total, average, and range of learning projects by older adults.

Table 5

Number of Hours Spent at Learning Projects in One Year

Number of hours	Number of persons	Number of hours	Number of persons	Number of hours	Number of persons
0-99	7	800-899	5	1600-1699	0
100-199	7	900-999	4	1700-1799	1
200-299	15	1000-1099	5	1800-1899	0
300-399	30	1100-1199	2	1900-1999	0
400-499	17	1200-1299	2	2000-2099	0
500-599	11	1300-1399	0	2100-2199	1
600-699	9	1400-1499	0		
700-799	4	1500-1599	0		

Table 6

Older Adults Learning Projects: Total, Averages, and Ranges of Hours of Participation

Informational descriptor	Men	Women	Total
Total number of hours			
participation:	13590	43665	57255
Average hours of			
participation	399.71	507.73	477.13
Average number of hours			
participation per projects:			
0	0	0	0
1	225.50	282.35	261.30
2	444.06	512.68	494.08
3	495.99	668.43	627.39
4	1750.00	1020.84	1125.00
Learning projects:			
	Hours per	No.projects	Total
	<u>each effort</u>	<u>conducted</u>	<u>hours</u>
Average per men per year	222.79	1.79	399.7
Average per women per year	245.42	2.07	507.73
Average per sample per year	239.65	1.99	476.72

3. What is the nature of the content of learning projects by older adults?

The nature of the content of learning projects undertaken by the older adults in this study included: learning projects of an occupational/vocational nature, 5.44%; learning projects of a personal/family nature, 5.86%; learning projects of a social/civic nature, 12.13%; and learning projects of a self-fulfillment nature, 76.57%. The occupational/vocational area included any learning related to an occupation, including retraining or updating skills. The personal/family area included learning related to personal relationships and physical health. The social/civic area included learning related to volunteer activities and political interests. Learning projects for self-fulfillment included learning for leisure, arts and crafts, hobbies, music and art appreciation, and religion. This information is summarized in Table 7.

4. To what extent are the learning projects of older adults self-planned?

The older adults interviewed in this study reported 70.29% of the learning projects were self-planned. The remaining learning projects were reported to have been planned by a group or group instructor (16.32%), by one person helping the learner in a one-to-one situation (5.44%), or by material or nonhuman resources (0.84%). More than one planner was reported in 7.11% of the learning

projects. The data related to planners of learning projects by the older adults in this study are presented in Table 7.

5. To what extent are the learning projects of older adults beneficial to others?

The older adults interviewed in this study reported that 94 learning projects, or 39.33% of the total, were to a large extent, beneficial to others. One-hundred and thirty-three (133) learning projects, or 55.65 %, were reported to be of small benefit to others. Twelve learning projects were reported to be of medium benefit to others. Data related to the benefits of older adult learning projects are presented in Table 7.

6. What is the primary reason for the learning?

Older adult learners in this study reported that the primary reason for undertaking 222 (92.89%) of the learning projects was for self-enjoyment. Seven (16.74%) of the learning projects were undertaken for credit in a formal program of learning; four (1.67%) were undertaken for job retraining or updating; four (1.67%) had more than one reason for undertaking; and two (0.84%), were undertaken for the purpose of taking an examination or a test. The data related to the reasons for older learners undertaking learning projects are presented in Table 7.

Table 7

Older Adult Learning Projects: Supportive Information

Informational descriptor	Number of learning projects	% learning projects
Current status of projects:		
Active	220	92.05
Inactive/completed	19	7.95
Amount of learning from the learning project:		
Large amount of learning	228	95.40
Small amount of learning	7	2.93
Medium amount of learning	4	1.67
Amount of enthusiasm related to the learning:		
Very enthusiastic	228	95.40
Fairly enthusiastic	8	3.34
Not enthusiastic	3	1.26

(Table 7 continued)

Subject matter area:

Occupational/vocational	13	5.44
Personal/family	14	5.86
Social/civic	29	12.13
Self-fulfillment	183	76.57

Primary reason for learning:

For credit	7	2.93
For a test or examination	2	0.84
For job or employment	4	1.67
For self-enjoyment	222	92.89
Mixed reasons	4	1.67

Primary planner of project:

Group/group instructor	39	16.32
One-to-one situation	13	5.44
Material resource	2	0.84
Self-planned	168	70.29
Mixed (more than one planner)	17	7.11

(Table 7 continued)

Benefits of new knowledge or
skill to others:

Large extent of benefit to others	94	39.33
Small extent of benefit to others	133	55.65
Medium benefit to others	12	5.02

Primary source of subject matter:

Group/group instructor	56	23.43
Friend, relative, or neighbor	13	5.44
Expert	7	2.93
Books, pamphlets, newspapers	129	53.98
Programmed materials	4	1.67
Television, radio, recordings	4	1.67
Displays, exhibits, museums, or galleries	1	0.42
Mixed (more than one source)	25	10.46

7. What are the major obstacles to self-directed learning projects by older adults?

Of the 120 subjects in the study, 119 (95%) reported at least one obstacle to conducting learning projects, with only one reporting no obstacles to learning. The range of obstacles to learning was 0-16, with two subjects answering "yes" to 16 of the 26 possible obstacles presented. The two subjects listing 16 obstacles to learning conducted no learning projects for the previous year. Twenty-five of the possible 26 obstacles to learning were identified by at least one of the respondents as being an obstacle for their learning. Only one of the possible obstacles, "I'm tired of school and classrooms", was not identified as an obstacle to learning. "Finding the time for the learning activity" was identified by 68 (56.67%) of the interview respondents as being the greatest obstacle to their learning projects. "The cost of the learning activity" was identified as the second greatest obstacle by 66 (55%) of the respondents. Other obstacles to learning identified included: "home responsibilities" by 45 (37.5%); "difficulty deciding what knowledge or skill I want to learn" by 42 (35%); "difficulty remembering new material or information" by 34 (28.3%); and "my health is not good enough for me to learn" by 33 (27.5%). Table 8 presents obstacles to learning identified by the respondents. Table 9 presents obstacles to self-directed learning projects by age categories.

Table 8

Self-directed Older Learning Projects: Major Identified
Obstacles to Learning

Obstacles to learning	<u>F</u>	% of subjects
a. The cost of the learning activity	66	55.00
b. Finding the time for the learning activity	68	56.67
c. Home responsibilities	45	37.50
d. Job responsibilities	29	24.17
e. Amount of time to complete a course or program	32	26.67
f. I feel I'm too old to begin learning	27	22.50
g. Difficulty obtaining resources or information	7	5.83
h. Courses I want aren't scheduled when I can attend	3	2.50
i. Strict attendance requirements for courses	3	2.50
j. Poor performance or grades in the past	2	1.67
k. Dealing with the difficult part of learning	14	11.67
l. Too much red tape in getting enrolled	9	7.50
m. I don't have enough energy and stamina	12	10.00
n. I don't enjoy learning	11	9.17
o. Courses or subjects often are not interesting	10	8.33

(Table 8 continued)

p. No transportation available	10	8.33
q. I'm tired of school and classrooms	0	0.00
r. I don't meet requirements to begin a learning program	5	4.17
s. Difficulty understanding new material or information	29	24.17
t. Difficulty deciding what knowledge or skill I want to learn	42	35.00
u. Difficulty remembering new material or information	34	28.33
v. My health is not good enough for me to learn	33	27.50
w. Lack of desire to complete a learning activity	7	5.83
x. Not confident of my present ability to learn	26	21.67
y. Deciding whether to continue a learning activity	16	13.33
z. Deciding about a place to learn	11	9.17

Table 9

Identified Obstacles to Learning According to Age-groups

Obstacle	Age Range					Total
	50-58	59-67	68-74	74-83.25	83.26-102	
a.	19	14	14	14	5	66
b.	22	18	11	12	5	68
c.	18	16	5	6	0	45
d.	20	8	0	0	1	29
e.	16	7	5	4	0	32
f.	1	1	6	7	12	27
g.	2	1	2	1	1	7
h.	2	0	1	0	0	3
i.	3	0	0	0	0	3
j.	1	0	1	0	0	2
k.	6	2	5	1	0	14
l.	2	2	1	3	1	9
m.	3	0	2	0	7	12
n.	5	2	3	1	0	11
o.	5	2	2	1	0	10
p.	0	0	4	2	4	10
q.	0	0	0	0	0	0
r.	1	1	2	1	0	5
s.	8	5	8	5	3	29
t.	13	13	9	5	2	42

(Table 9 continued)

u.	7	6	7	9	5	34
v.	3	0	2	8	20	33
w.	3	2	2	0	0	7
x.	2	8	7	5	4	26
y.	8	7	1	0	0	16
z.	5	3	1	2	0	11

8. What is the major source of subject matter for the self-directed learning project?

The major source of subject matter for 129 (53.98%) of the learning projects in this study was identified as books, pamphlets, and newspapers. Fifty-six (23.43%) learning projects used a group or group instructor as the major source of subject matter. More than one major source of subject matter was reported in 25 (10.46%) of the learning projects. Books, pamphlets, and newspapers combined with television and radio were the most frequent mixed sources of subject matter. Less used major sources of subject matter included: friend, relative, or neighbor, 13 (5.44%); experts, 7 (2.93%); programmed materials, 4 (1.67%); television, radio, and recordings, 4 (1.67%); and displays, exhibits, museums, or galleries, 1 (0.42%). Data related to the primary source of subject matter in older adult learning projects are presented in Table 7.

9. Are the self-directed learning projects of older adults expressive or instrumental in nature?

Of the 239 self-directed learning projects conducted by the subjects of this study, 180 (75.31%) were expressive in nature and 59 (24.69%) were instrumental in nature. The most frequent expressive topics for learning were: reading (39); sewing and crafts (36);; religious activities (33); games, collections, and hobbies (30); volunteer activities (16); and gardening (12). The most frequent instrumental topics for learning were: health and health promotion (22); word processing and computers (6); economics (6); car and boat repair (5); foreign languages (4); and politics and legal matters (4).

Learning topics of an expressive nature according to age-groups are presented in Table 10. Learning topics of an instrumental nature according age-groups are presented in Table 11.

Table 10

Older Adult Learning Projects: Topics of an Expressive Nature According to Age-groups

Learning topics	Age-Groups					F
	I	II	III	IV	V	
Reading history and current events	6	11	9	6	7	39
Sewing and crafts	3	4	10	14	5	36
Religious activities as Bible study, singing	2	4	7	8	12	33
Games, collections, and hobbies	4	11	8	5	2	30
Volunteer activities	3	4	3	6	0	16
Gardening and horticulture	0	6	3	3	0	12
Music	0	2	1	2	1	6
Travel	0	1	0	2	1	4
Gourmet cooking	1	2	0	1	0	4
Totals	19	45	41	47	28	180

Note: Age-groups: I=50-58 years; II=59-67 years; III=68-74 years; IV=75-83.25 years; and V=83.26-102 years.

Table 11

Older Adult Learning Projects: Topics of an Instrumental Nature According to Age-groups

Learning topics	Age-groups					F
	I	II	III	IV	V	
Health promotion	5	6	5	3	3	22
Word processing and computers	5	1	0	0	0	6
Economics	2	3	0	1	0	6
Car and boat repairs	4	0	1	0	0	5
Foreign languages	2	1	1	0	0	4
Politics, legal	1	2	0	1	0	4
Astronomy, biology, and geology	1	1	0	0	1	3
Genealogy	0	0	1	1	0	2
Metaphysics, philosophy	0	0	1	1	0	2
Photography	2	0	0	0	0	2
Elderhostel class	0	1	0	0	0	1
Mining for minerals	0	0	0	0	1	1
Writing news articles	0	1	0	0	0	1
Totals	22	16	9	7	5	59

Note: Age-groups: I=50-58 years; II=59-67 years; III=68-74 years; IV=75-83.25 years; and V=83.26-102 years.

10. Is age a mediating variable in self-directed learning activities of older adults?

The 120 adults in this study conducted 239 learning projects in the previous year, an average of 1.99 learning projects per person (s.d.=0.8). They devoted an average of 19.88 days in the previous year to self-directed learning projects. Respondents to the interview reported learning projects extending over many years, such as: collecting stamps for 55 years; gardening and horticulture interests for 30 or more years; and daily reading for learning, 80 or more years for some respondents.

Specific comments during the interviews regarding individual views toward age and learning included:

"I try to learn something new everyday so I can keep my mind young", 80 year old.

"There's always something to learn, especially today, with so much new information", 56 year old.

"I want to learn all I can for as long as I can", 88 year old.

"As long as you stay active, you can learn and as long as you learn, you can stay active", 78 year old.

"I hear old people say they are bored with their lives. I've never been bored because I keep my self busy learning about life", 82 year old.

"You have to read to learn because reading gives you a plan and a fellow who retires without a plan won't

live very long", 92 year old.

Learning through reading was reported as a means of entering discussions and conversations with others. One respondent stated, "I like to talk about all sorts of things, not just the weather. Those people who talk only about the weather just don't know much and people won't talk to you if you don't know much".

Age was a mediating variable in the self-directed learning projects of the older adults in this study. Learning through self-directed activities was an important activity of 95% of the study participants. Subjects of the study reported a great deal of learning occurred in 95.4% or 228 of the learning projects. They also reported being very enthusiastic about 95.4% or 228 of the learning projects.

With age, there was little difference in the average number of learning projects undertaken. During the previous year, subjects, aged 50-64 years, conducted an average of 2.0 learning projects for a total of 461.1 hours of self-directed learning. Subjects aged 65 and more conducted 1.99 learning projects for a total of 486.1 hours devoted to self-directed learning. However, persons aged 65 years and more spent an average of more time engaged in self-directed learning projects than persons aged 50-64 years. Data related to self-directed learning according to age-groups are found in Table 12.

Table 12

Older Adults Learning Projects According to Age-groups

Age group	n=	avg.no. projects	hrs. per effort	total hrs. of learning projects
50-65 years				
Men	14	1.93	185.19	357.42
Women	27	2.04	252.82	515.75
Total	41	2.00	230.55	461.10
66-102 years				
Men	20	1.70	252.65	429.51
Women	59	2.08	241.95	503.26
Total	79	1.99	244.27	486.10

Note: N=120.

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CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

DISCUSSION

This study investigated the number of self-directed learning projects undertaken by 120 older adults and examined the motivational factors and anticipated benefits related to the learning efforts. In addition, obstacles to conducting self-directed learning were identified by the respondents.

The findings in this study related to the self-directed learning efforts of older adults differs from the original findings of Tough (1979) and Hiemstra (1976b) regarding the number of learning efforts conducted and the hours devoted annually to learning. Table 13 presents a comparison summarizing data from Tough (1979), Hiemstra (1976b), and this study.

The findings of this study are similar to Ralston's (1978) findings related to older adult learning activities. She reported the 110 respondents in her study conducted an average of 2.5 learning projects with an average time of 249.9 hours spent in learning. This similarity may be attributed to the finding of Peters and Gordon (1974) that the numbers of hours and conducted learning efforts decreases considerably when a large random sample is used.

The findings of this study support Hiemstra's (1976b) assertion that "minority, less educated, and blue-collar, and lower-class persons were all engaged in many hours of learning" (p. 337).

Since the majority of the respondents in this study were engaged in learning projects of an expressive nature, Hiemstra's (1976a) assertion that older learners prefer learning projects that are instrumental in nature, is not supported. Fisher (1986) states the "older adults appear to choose educational activities for benefits intrinsic to the activities themselves" (p. 209).

The findings of this study support Hiemstra's (1976b) finding that books, pamphlets, and newspapers are the primary source of information for the older adult. Printed resources were used as the major source of information in 53.98% of the learning projects in this study. Tough (1979) suggests that self-directed learners have the ability to locate and use printed materials in self-planned learning projects. Older self-directed adult learners do not differ from younger self-directed adult learners in this respect.

The findings of this study related to the identified obstacles to learning by older adults does not support the assertion (Hiemstra, 1972; Ostwald & Williams, 1985) that transportation problems and educational courses scheduled at a time when the older learner cannot attend limit participation in educational endeavors. The obstacles

identified in this study do, however, support the assertion (Check & Wurzbach, 1984; Ostwald & Williams, 1985) that older learners commonly indicate that being too old to learn, poor health, and difficulty remembering are barriers to learning.

Table 13

A Comparison of Summary Data from Studies of Adult Learning
Projects

Data Description	Tough ^a	Hiemstra ^b	Sears ^c
Number of learning projects (annually)			
Mean	8.3	3.3	1.99
Range	0-20	1-9	0-4
Number of hours of participation (annually)			
Mean	816.0	325.0	477.13
Percent of participation in learning activities(%)			
	98.0	83.5	95.00
Current status of projects			
Active(%)	66.0	75.2	92.05
Inactive/completed(%)	34.0	45.8	7.95

(Table 13 continued)

Credit Status of the Project

For Credit(%)	1.0	3.8	2.93
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Non-credit(%)	99.0	96.2	97.13
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Type of Planner^d

Self-planned(%)	68.0	55.2	70.29
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Group/Instructor(%)	12.0	20.5	16.32
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Mixed planning(%)	9.0	10.2	7.11
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One-to-one(%)	8.0	10.3	5.44
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Resource planned(%)	3.0	4.0	0.84
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^aTough (1979) N=66, seven young-adult and middle-aged adult populations.

^bHiemstra (1975), N=214, adults aged 55 to 98.

^cSears (1989), N=120, adults aged 50 to 102.

^dSome totals do not equal 100% because numbers have been rounded off.

Conclusions

The following conclusions are based on the findings of this study:

1. Older adults engaging in self-directed learning projects perceive that a large amount of learning takes place during their learning activities.

2. Older adults engaged in self-directed learning efforts perceive their learning to be of significant benefit to others.

3. Older adults value self-directed learning as an important activity in their lives.

4. Older adults are motivated to develop new knowledge and skills through self-planned, self-directed learning projects.

5. Older adults undertake self-directed learning projects for the primary reason of self-enjoyment.

6. Older adults do not conduct self-directed learning projects in traditional educational settings.

Recommendations

1. The results of this study indicate that 16 of the learning efforts undertaken were for the purpose of providing volunteer service to a community agency. It is recommended that community service agencies should investigate ways in which older adults can share prior

experiences and expert knowledge in volunteer roles.

2. The results of this study indicate that the majority of older adults use printed materials as the primary information source for learning. It is recommended that further study should be conducted to determine how these resources are selected and evaluated in the self-directed learning project.

3. The results of this study indicate that few adults past age 75 engage in health promotion learning projects, although 28 of 48 persons, aged 75 or more, identified poor health as an obstacle to their learning. It is recommended that further study be conducted for the purpose of incorporating health promotion practices in self-directed learning projects of older adults.

4. The results of this study indicate that a majority of the respondents consider the knowledge or skill they gain from the learning project to be beneficial to others. It is recommended that further study be conducted exploring who is considered to be the beneficiary of the knowledge or skill and how the benefits are transferred from the learner.

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APPENDIX A

COVER LETTER

February 13, 1989

Name
Address

Dear Name

My name is Jo Sears and I am a doctoral student at the University of North Texas in Denton, completing my doctorate in the field of gerontology, the study of the process of aging. As very few sources in educational literature address the self-directed learning activities of adults during the middle and later adult years, I have chosen to examine this topic for my dissertation study. Specifically, I am interested in examining self-directed learning activities selected by the adult in order to gain some information or knowledge--or gain a new skill or improve an old one--or to increase understanding in some area of learning. Because you are a resident of Tom Green County, I would like to request your personal participation in my study.

Basically, my study is designed to investigate in Tom Green County: (1) the types and content of adult self-directed learning activities; (2) major obstacles and problems encountered by adult learners; and (3) educational needs of adult learners. I plan to collect the data from personal interviews of participants. Data from the interviews will provide me with a collective description of the learning activities of about 400 adults in Tom Green County. The interview questions will ask you to relate about self-directed learning experiences and activities that you have undertaken in the past 12 months, and will take one to two hours to complete.

The risks involved by participating in this study are negligible. It will not be possible to identify you personally from the interview answers. By participating, you will provide information which I anticipate will make a contribution towards understanding the needs of adult learners in Tom Green County.

If you will take part in my study, please fill out the back of the addressed postcard provided and mail it to me by March 1. I will then contact you and set a convenient time to administer the interview questions. If you have questions you would like to ask, please feel free to call me at my home. You have the right to withdraw from the study before or during the interview process. If you should prefer not to participate, please send the postcard appropriately marked. This will allow for me to account, by number only, of all persons who were chosen to participate in the study.

I would appreciate the prompt return of the completed postcard to me. I am hopeful that the topic of my study is of interest to you and that you will seriously consider assisting me in my dissertation project.

Sincerely,

Jo Sears, RN, MSN

(Back of postcard)

Name _____

Phone Number _____

Please call during the hours:

Morning: 9AM to Noon _____

Afternoon: Noon to 4PM _____

Evening: 6PM to 9PM _____

(If times inconvenient, please insert
a convenient time for you)

I prefer not to participate _____

APPENDIX B

INTERVIEW SCHEDULE FOR STUDYING SOME BASIC
CHARACTERISTICS OF LEARNING PROJECTS

APPENDIX B

INTERVIEW SCHEDULE FOR STUDYING SOME BASIC

CHARACTERISTICS OF LEARNING PROJECTS*

(Introduce yourself. If necessary, check that this person meets the criteria for this particular sample.)

My research is about people and the sorts of things they learn. Everyone learns, but different people learn different things--and in different ways. I'm interested in discovering your learning efforts in the past year and your potential learning needs. During the interview, I will be listing the things you have tried to learn during the past year.

ID_____

What is your age? (1) Gender: (2) Marital status? (3)

How many years of formal education? (4) _____

Other training? (5) _____

Profession or occupation: (6) _____

Are you currently retired? (7) How many years? (8) _____

City/Community of residence (9) _____

*Refined by Allen Tough and Associates, The Ontario Institute for Studies in Education, Toronto, Canada, 1975.

Revised for use with older adults by Roger Hiemstra in 1975, Nebraska University, Lincoln, Nebraska.

Now, I'm interested in listing the things that you have tried to learn during the past year. When I say "learn" I don't just mean learning the sorts of things that people learn in schools and colleges. I mean any sort of 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.)

 (10)

Try to think back over all of the past twelve months--right back to (month) of 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, highbrow or lowbrow. (Pause and record.) It doesn't matter when your effort started, as long as you have spent at least a few hours at it sometime since last (month). (Pause and record any response.)

I want to get as complete a list as possible, because it is thought that people make far more attempts to learn than anyone realizes. We can include any sort of information--knowledge--skill or understanding at all that you have tried to gain--just as long as you spent at least a few hours at it sometime during the past twelve months. What else do you recall? (Pause and record.)

Can you recall any other efforts to learn that were related to your home or your family? Anything related to your hobbies or recreation? Your job? Your responsibilities in various organizations, or clubs, or in a church or synagogue, or on a committee, or some other responsibilities? Anything related to some teaching, writing, or research that you do outside of your job?

Going back over the past twelve months, can you recall any other times that you tried to learn something by reading a book? When you read newspapers or magazines, do you read certain topics or sections because you want to remember the content? Have you tried to learn anything else from booklets, pamphlets, or brochures? From memos, letters, instructions, or plans? From technical or professional

literature? From an encyclopedia or other reference work?

Have you learned anything at all from a medical doctor? From a lawyer? From a counselor or therapist? From a financial or tax advisor? From a social worker? From a private teacher? From a specialist or expert? From individual lessons?

Have you learned anything from documentaries or courses on television? From TV news or some other TV programs? From radio? In a theatre? Have you tried to learn from conversations? Or from asking questions: that is, have there been any topics or areas that you have tried to learn about from your friends or other people? Have you deliberately sought to learn by seeking out stimulating individuals? Have you tried to learn anything from your spouse (if applicable)? From other relatives? From a neighbor?

Perhaps you learned something in some group or other? Perhaps in some meeting or discussion group? From attending a conference? From a retreat or weekend meeting? From an institute or short course or workshop? From a committee or staff meeting? From taking a course? From attending evening classes or lectures, or a speech? From a correspondence course? From attending a club or group meeting?

Perhaps tape recordings or phonograph records or a "language lab" helped you learn something during the past year? Have you learned in a church or synagogue? In a college, university, or school? In some community organization: In a company or factory or office? In a government program? In an exhibition, museum, or art gallery? In some vacation spot?

Now I have a list of some of the things people learn (Sheet One). It may remind you of other things that you have tried to learn during the past twelve months. Take as long as you want to read each word, and to think about whether you have tried to learn something similar. (Give him or her Sheet One, or read it aloud if necessary.)

OK, thank you. That gives us a fairly complete list. If you suddenly think of something else you have learned, though, please tell me.

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 efforts to learn _____. This will help me to learn more about your learning and estimate the number of hours that you spent learning this, and the number of hours spent at planning and preparing for that learning.

(If possible, pin down and record just what the learning segments were. For example, you could ask, "How did you go about learning this? How was it learned? What did you do? Was there anything else you did to learn _____?" Examples that you might record to help understand the total effort are: Watched an expert, listened to a record, read, practiced, attended a meeting, etc. This list of activities is primarily for your benefit in helping the person estimate his or her time accurately: you do not need the data for any specific purpose other than it might help you later in determining the subject matter source. In other words, don't make any special effort to get it or record it carefully, but on the other hand don't discard it either.)

I need your best guess about the total amount of time that you spent at all aspects of this particular learning effort during the past twelve months. Please include the time you spent reading, listening, observing or learning in some other way--if your main purpose during that activity was to gain and retain certain knowledge or skill. In other words, we will include all the times during which at least half of your total motivation was to gain certain knowledge or skill, and to retain it until at least two days later.

In addition to the time you spent at the actual learning itself, please include all the hours that you spent, during the past twelve months, at deciding about the learning, planning the learning, and preparing and arranging for it. This can include any time spent at deciding whether to proceed with the learning, deciding what to learn, deciding how to learn, deciding where to get help, seeking advice about these decisions (from other people or from printed materials), traveling to some of the learning activities, such as a meeting or practice session or a library, arranging appropriate conditions for learning, choosing the right book or person for the actual learning--obtaining that book or reaching that person.

Of course, you cannot remember exactly how many hours, so just give your best guess. If you wish, just choose the closest number from the following list:

1 3 6 10 20 40 70 100 120 140 more

(Ask for a time estimate in total number of hours and record in __ (11) __.)

Which of these two following answers best describes this particular learning effort at the present time:

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

OR

(B) 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.
(Ask then to select whether they have been active or not active. Record in __ (12) __.)

Please think for a moment about how much knowledge, information, and understanding you gained as a result of this one learning project--or think about how much your skills and habits improved--or how much your attitudes or sensitivity changed.

Would you say that altogether:

- (A) you learned a large amount or changed a great deal;
- (B) you changed or learned very little;
- (C) you were about halfway between (A) and (B).

(Record A, B, or C in __ (13) __.)

How enthusiastic have you been about having this new knowledge and skill?

- (A) very enthusiastic;
- (B) quite enthusiastic or fairly enthusiastic;
- (C) not especially enthusiastic.

(Record A, B, or C in __ (14) __.)

Let's set aside your own benefits for a moment, and look at any benefits for other people. Your new knowledge and skill might have been of some benefit to your family, your friends or relatives, or even to people who live in other places.

To what extent did the knowledge or skill you gained provide some benefit to people other than yourself?

- (A) to a fairly large extent;
- (B) only to a small extent;
- (C) medium (about halfway between A and B).

(Record A, B, or C in __ (15) __.)

To determine their reason for undertaking the project ask: "In any of your learning efforts listed so far, was credit any part of your motivation? That is, did you hope to use any of your learning efforts for academic credit--towards some degree or certificate or diploma, or passing a test, examination, or course--or towards some license or a driving test? (PAUSE) Or was it toward some requirement or examination or upgrading related to a job? (PAUSE) Or did you undertake the learning activity for your own enjoyment or self-improvement?" **NOTE:** You will

need to determine the primary reason. (Record in ___(16)___).

Now think about your learning effort and try to decide who or what was the director or the leader. That is, who decided what you would learn--and how you would learn--whenever you spent some time trying to learn? The first learning effort in our list is _____. Does it fit into one of the four types on this sheet? (Give Sheet Two and sufficient time to read through. Read aloud if necessary). (Record response in ___(17)___.)

(If no one resource was primarily (51%) responsible, classify it as mixed. If he or she does not seem to understand, or if you feel doubtful about the response, ask who the particular director or leader was. If the learner asks, or if you anticipate difficulty, say that you are interested in who the planner was for the past twelve months rather than earlier.)

Finally, determine the major source of subject matter. That is, what resource provided most of the content--a book, a pro ski instructor, a discussion group, a television broadcast, etc. (Record major source of subject matter in ___(18)___.)

For other identified learning projects repeat the following; recording the appropriate data on Card 2.

- (10) type of learning project
- (11) number of hours devoted to learning project;
- (12) current activity status of the learning project;
- (13) amount of learning from the learning project;
- (14) amount of enthusiasm related to new knowledge or skill;
- (15) benefits of new knowledge or skill to others;
- (16) primary reason for the learning project;
- (17) primary director or leader of the learning; and,
- (18) the major source of the subject matter.

Many things stop people from taking a course of study, learning a skill, or following a topic of interest. Which of the following do you feel are important in keeping you from learning what you want to learn? I'll read them to you and you may select as many as you would like by indicating yes or no. (Record responses in 19).

- _____ THE COST OF THE LEARNING ACTIVITY
- _____ FINDING THE TIME FOR THE LEARNING ACTIVITY
- _____ HOME RESPONSIBILITIES
- _____ JOB RESPONSIBILITIES
- _____ AMOUNT OF TIME REQUIRED TO COMPLETE A COURSE OR PROGRAM OF LEARNING
- _____ I FEEL THAT I'M TOO OLD TO BEGIN LEARNING
- _____ DIFFICULTY OBTAINING RESOURCES OR INFORMATION
- _____ THE COURSES I WANT AREN'T SCHEDULED WHEN I CAN ATTEND
- _____ STRICT ATTENDANCE REQUIREMENTS FOR COURSES
- _____ POOR PERFORMANCE OR GRADES IN THE PAST
- _____ DEALING WITH THE DIFFICULT PARTS OF LEARNING
- _____ TOO MUCH RED TAPE IN GETTING ENROLLED
- _____ I DON'T HAVE ENOUGH ENERGY AND STAMINA
- _____ I DON'T ENJOY STUDYING
- _____ COURSES OR SUBJECTS OFTEN ARE NOT INTERESTING
- _____ NO TRANSPORTATION AVAILABLE
- _____ I'M TIRED OF SCHOOL AND CLASSROOMS
- _____ I DON'T MEET REQUIREMENTS TO BEGIN A LEARNING PROGRAM
- _____ DIFFICULTY UNDERSTANDING NEW MATERIAL OR INFORMATION
- _____ DIFFICULTY DECIDING WHAT KNOWLEDGE OR SKILL I WANT TO LEARN
- _____ DIFFICULTY REMEMBERING NEW MATERIAL OR INFORMATION
- _____ MY HEALTH IS NOT GOOD ENOUGH FOR ME TO LEARN
- _____ LACK OF DESIRE TO COMPLETE A LEARNING ACTIVITY
- _____ NOT CONFIDENT OF MY PRESENT ABILITY TO LEARN
- _____ DECIDING WHETHER TO CONTINUE A LEARNING ACTIVITY
- _____ DECIDING ABOUT A PLACE TO LEARN

This now completes the interview. Thank you very much for your time and assistance. I think your efforts will help to make education more meaningful in the lives of many adults.

SHEET ONE

SOME THINGS THAT PEOPLE LEARN ABOUT

1. A sport or game; swimming; dancing; bridge
2. Current events; public affairs; politics; peace; biography
3. Sewing; cooking; homemaking; entertaining
4. Driving a car
5. Home repairs; woodworking; home improvement project; decorating and furniture
6. A hobby or craft; collecting something; photography
7. Raising a child; discipline; infant care; child's education
8. Nature; agriculture; birds
9. Mathematics; statistics; arithmetic
10. Speed reading; effective writing; public speaking; vocabulary; literature
11. Science; astronomy; man in space
12. Health; physical fitness; posture; clothes; appearance
13. History; geography; travel; some region or city or neighborhood
14. Personal finances; savings; insurance; investing; purchasing something
15. Psychology; effective relationships with other people; groups; leadership; social skills
16. Typing; data processing; mechanical skill
17. Some personal problem; mental health; an emotional problem; an illness or medical condition
18. Various careers; choosing an occupation; finding a job
19. Gardening; landscaping
20. Something related to a job or responsibility or decision
21. Musical instrument; singing; musical appreciation
22. Professional or technical competence; sales skills; how to teach or supervise
23. Some aspect of religion; ethics; philosophy; moral behavior
24. Current changes in society; the future; problems in cities; pollution; sociology
25. Dating; relationships with the opposite sex; manners; marriage; relationships with the family
26. Art; painting; architecture
27. Business management; economics; business
28. Sensory awareness; human potential; communication; understanding oneself; efficiency
29. New techniques; a new way of doing something; an innovation
30. English; Spanish; French; some other language

SHEET TWO

PLANNERS

There are four different sorts of learning efforts, according to who plans them. That is, a person's efforts to learn can be classified according to who was responsible for the day-to-day planning. I would like to look at who planned or decided exactly what or how you would learn at each session. For example, who decided what you would read or hear, or what else you should do in order to learn?

1. Group-planned learning

Some learners decide to attend a group or class or conference, and to 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, with a minimum of five persons. Examples might be lectures, study groups, workshops, small informal groups, or conferences.

2. One-to-one learning

In some learning projects, the planning and deciding of what to learn and in what order 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 there is one learner. These two persons interact usually face-to-face, although it could be by telephone or by correspondence. Examples might be private music lessons, individual golf lessons, and being taught to drive a car by a friend. If two or more learners receive individualized attention from one other person at the same time, it would be included here.

3. Material resource learning

In some learning projects, most of the detailed planning regarding what to learn and do at each session resides in some object (some nonhuman resource). Examples of these are: a set of recordings, a series of television programs, a set of programmed instruction materials, a workbook or other printed materials, and a language lab. The learner follows the program or materials: they tell him or her what to do next.

4. Self-planned learning

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 detailed subject matter to learn next, and what activities and resources to use next. Instead of turning the job planning over to someone else, the learner makes these day-to-day decisions alone.

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 or 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 your insight and questioning skill in order to understand just what the real focus was. Try to become precise about just what the person was trying to learn. Especially 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 by Allen Tough. In particular, see Chapter 2 and Appendix A, and portions of Chapters 7 and 8.

APPENDIX C

DATA SHEETS

APPENDIX C

ID _____

Learning project (#1) _____

How was it learned? _____

Number of hours? _____

Definitely active now _____ or not very active now _____

Reason for the project _____

Director of learning _____

Source of the subject matter _____

Learning project (#2) _____

How was it learned? _____

Number of hours? _____

Definitely active now _____ or not very active now _____

Reason for the project _____

Director of learning _____

Source of the subject matter _____

Learning project (#3) _____

How was it learned? _____

Number of hours? _____

Definitely active now _____ or not very active now _____

Reason for the project _____

Director of learning _____

Source of the subject matter _____

ID _____

Learning project (#4) _____

How was it learned? _____

Number of hours? _____

Definitely active now _____ or not very active now _____

Reason for the project _____

Director of learning _____

Source of the subject matter _____

Learning project (#5) _____

How was it learned? _____

Number of hours? _____

Definitely active now _____ or not very active now _____

Reason for the project _____

Director of learning _____

Source of the subject matter _____

Learning project (#6) _____

How was it learned? _____

Number of hours? _____

Definitely active now _____ or not very active now _____

Reason for the project _____

Director of learning _____

Source of the subject matter _____

DATA SHEET

SELF-DIRECTED LEARNING PROJECTS OF OLDER ADULTS

INTERVIEW ID _____

1. Age: (actual years) _____

2. Gender: 1=Male 2=Female _____

3. Marital status: 1=Married 2=Widowed
3=Single 4=Divorced _____

4. Years of formal education: 1=Under 8th gr 2=8-11th gr
3=H.S. grad 4=Some college
5=College grad 6=Graduate school _____

5. Other training: 1=Vocational/technical school
2=On the job training
3=Correspondence courses
4=Business school
5=Other _____

6. Profession or occupation: 1=Executive/Major professional
2=Business manager
3=Administrative personnel
4=Clerical, sales, technicians
5=Skilled manual employee
6=Machine operator/semi-skilled
7=Unskilled
8=No outside employment/homemaker _____

7. Retired: 1=Yes 2=No _____

8. If retired, number of years (Record 0 if not retired) _____

9. City/Community of residence: 1=San Angelo 2=Carlsbad
3=Christoval 4=Eola
5=Knickerbocker 6=Mereta
7=Miles 8=Vancourt
9=Veribest 10=Wall
11=Water Valley _____

10. Learning Project (): _____
 1=occupational, vocational
 2=personal, family
 3=social, civic
 4=learning for self-fulfillment _____
11. Estimated number of hours for project/activity: _____
12. How active? _____
 1=definitely active now
 2=not very active now _____
13. Amount of learning from learning project: _____
 1=large amount of learning
 2=little learning
 3=medium, between 1 and 2 _____
14. Amount of enthusiasm related to learning: _____
 1=very enthusiastic
 2=quite or fairly enthusiastic
 3=not especially enthusiastic _____
15. Benefits of new knowledge or skill to others: _____
 1=large extent of benefits
 2=small extent of benefits
 3=medium, between 1 and 2 _____
16. Primary reason for the learning: _____
 1=credit 2=test, exam
 3=job 4=self-enjoyment
 5=mixed _____
17. Primary director of the learning: _____
 1=group
 2=one-to-one
 3=material resource
 4=self-planned learning
 5=mixed _____
18. Source of the subject matter: _____
 1=group, group instructor
 2=friend, relative, neighbor
 3=expert
 4=books, pamphlets, newspapers
 5=programmed materials
 6=TV, radio, recording cassettes
 7=displays, exhibits, museums, or
 galleries _____

19. Obstacles to learning: 1=yes 2=no
- a. The cost of the learning activity _____
 - b. Finding the time for the learning activity _____
 - c. Home responsibilities _____
 - d. Job responsibilities _____
 - e. Amount of time required to complete a course or program of learning _____
 - f. I feel that I'm too old to begin learning _____
 - g. Difficulty obtaining resources or information _____
 - h. The courses I want aren't scheduled when I can attend _____
 - i. Strict attendance requirements for courses _____
 - J. Poor performance or grades in the past _____
 - k. Dealing with the difficult part of learning _____
 - l. Too much red tape in getting enrolled _____
 - m. I don't have enough energy and stamina _____
 - n. I don't enjoy studying _____
 - o. Courses or subjects often are not interesting _____
 - p. No transportation available _____
 - q. I'm tired of school and classrooms _____
 - r. I don't meet requirements to begin a learning program _____
 - s. Difficulty understanding new material or information _____
 - t. Difficulty deciding what knowledge or skill I want to learn _____
 - u. Difficulty remembering new material or information _____
 - v. My health is not good enough for me to learn _____
 - w. Lack of desire to complete a learning activity _____
 - x. Not confident of my present ability to learn _____
 - y. Deciding whether to continue a learning activity _____
 - z. Deciding about a place to learn _____

CARD 2--DATA SHEET

SELF-DIRECTED LEARNING PROJECTS OF OLDER ADULTS

10. Learning Project (): _____
(Use for #2 or 1=occupational, vocational
more learning 2=personal, family
projects) 3=social, civic
 4=learning for self-fulfillment _____
11. Estimated number of hours for project/activity: _____
12. How active? 1=definitely active now _____
 2=not very active now _____
13. Amount of learning from learning project: _____
 1=large amount of learning
 2=little learning
 3=medium, between 1 and 2 _____
14. Amount of enthusiasm related to learning: _____
 1=very enthusiastic
 2=quite or fairly enthusiastic
 3=not especially enthusiastic _____
15. Benefits of new knowledge or skill to others: _____
 1=large extent of benefits
 2=small extent of benefits
 3=medium, between 1 and 2 _____
16. Primary reason for the learning: _____
 1=credit 2=test, exam
 3=job 4=self-enjoyment
 5=mixed _____
17. Primary director of the learning: _____
 1=group
 2=one-to-one
 3=material resource
 4=self-planned learning
 5=mixed _____
18. Source of the subject matter: _____
 1=group, group instructor
 2=friend, relative, neighbor
 3=expert
 4=books, pamphlets, newspapers
 5=programmed materials
 6=TV, radio, recording cassettes
 7=displays, exhibits, museums, or
 galleries _____

APPENDIX D

ESTIMATES OF POPULATION BY AGE AND GENDER
FOR TOM GREEN COUNTY, TEXAS

Table 14
Estimates of the Population by Age and Gender for Tom Green
County, Texas, July 1, 1987

Age	Total	Total	
		Male	Female
All ages	98587	47128	51459
50 years	939	445	494
51 years	975	468	507
52 years	979	475	504
53 years	942	468	474
54 years	947	456	491
55 years	880	407	473
56 years	908	428	480
57 years	938	446	492
58 years	923	417	506
59 years	918	419	499
60 years	885	387	498
61 years	925	397	528
62 years	951	416	535
63 years	904	397	507
64 years	887	408	479
65 years	873	407	466
66 years	904	394	510
67 years	854	373	481
68 years	796	353	443
69 years	738	339	399
70 years	742	331	411
71 years	747	328	419
72 years	730	321	409
73 years	745	314	413
74 years	674	280	394
75 years +	6000	2127	3873
Totals	27704	12001	15703

Note: From The Texas State Population Estimates and Projections Program, Texas Department of Commerce.

Table 15

Estimates of the Population by Age and Gender for Tom Green
County, Texas, July 1, 1987

Age	Anglo		Black		Spanish		Other	
	Male	Female	Male	Female	Male	Female	Male	Female
50	347	368	16	26	74	91	8	9
51	374	388	9	18	80	92	5	9
52	370	385	21	16	80	95	4	8
53	354	366	28	13	81	92	5	3
54	350	383	23	16	78	89	5	3
55	320	367	8	19	75	84	4	3
56	341	377	11	10	73	90	3	3
57	349	379	19	18	73	92	5	3
58	335	392	9	16	72	95	1	3
59	331	390	10	14	74	90	4	5
60	303	390	13	19	71	87	0	2
61	318	422	6	25	73	79	0	2
62	335	436	12	19	65	76	4	4
63	325	402	11	28	61	74	0	3
64	335	383	15	23	58	71	0	2
65	332	402	13	12	59	51	3	1
66	333	430	9	22	50	53	2	5
67	318	402	13	23	42	54	0	2
68	305	373	13	11	33	57	2	2
69	294	343	12	13	33	41	0	2
70	283	362	9	8	38	37	1	4
71	279	359	5	19	44	41	0	0
72	275	359	5	12	41	49	0	0
73	268	373	9	14	37	44	0	0
74	235	334	9	14	35	44	1	2
75+	1747	3359	98	173	275	334	7	7
Totals	9756	12913	406	601	1775	2102	64	87

Note: From The Texas State Population Estimates and Projections Program, Texas Department of Commerce.

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