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**The self-directed learning process in a selected group of adult
farmers in Michigan**

Quiroz, Consuelo M., Ph.D.

Michigan State University, 1987

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**THE SELF-DIRECTED LEARNING PROCESS IN A SELECTED
GROUP OF ADULT FARMERS IN MICHIGAN**

By

Consuelo M. Quiroz

A DISSERTATION

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

DOCTOR OF PHILOSOPHY

Department of Agricultural Extension and Education

1987

ABSTRACT

THE SELF-DIRECTED LEARNING PROCESS IN A SELECTED GROUP OF ADULT FARMERS

By

Consuelo M. Quiroz

The purpose of this study was to enhance the understanding of the self-directed learning process as a basis for improving extension education programs.

A group of 17 adult farmers was selected among a population of organic farmers in Michigan. The data collection was conducted using open-ended interviews. Four areas of inquiry guided the research process: (a) Who were these learners? (demographic characteristics); (b) How did they perceive learning and how did they perceive themselves as learners? c) How did they learn about organic farming? and (d) What were the main problems/barriers they faced when learning on their own? The analysis of data was based on the multiple comparative method consistent with the grounded theory approach as described by Glaser and Strauss (1967) and Glaser (1978).

The findings of this study resulted in several conclusions. The major conclusions were as follows: First, these learners represented a relatively young and highly educated group of farmers. The majority of them were men who had worked in organic farming for at least five years

Consuelo M. Quiroz

and were working as part-time farmers. Second, they were self-directed learners. Third, their major and preferred method of learning was self-directed. Fourth, they did not learn in isolation. Fifth, learning from experience (learning by doing/learning through mistakes) was perceived as the most important learning method, but not necessarily the most efficient in terms of money and time. Finally, several problems and challenges were identified. Lack of time (self-time) was the major problem/challenge faced when learning on their own. Finding information was not considered a problem; the problem was perceived as "where to find the best and fastest" information and how to relate that information to their own situations.

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DEDICATION

To my parents Senovia and Hector, who gave their children
an appreciation for education greater than they realize,
go love and admiration.

ACKNOWLEDGEMENTS

It would be difficult to adequately express my appreciation to all of the people who made this study possible. To begin with, this dissertation would not have been possible without the participation of the organic growers I interviewed. Their insight, enthusiasm, and generous cooperation reaffirmed my commitment to the use of qualitative data for generating theory.

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CHAPTER I

INTRODUCTION

The purpose of this introductory chapter is to provide the reader with a general overview of the study. It starts by framing the need for the study within the extension education field and it is followed by a description of the background of the study, its purpose, definitions of selected terms, an overview of research methodology, the importance of the study, the assumptions, the delimitations and limitations, a summary, and finally, it ends by giving an overview of the dissertation.

The Problem

Traditionally, agricultural extension has been conceived as a "transference of technology" process from the extensionist to the farmer; however, in recent years, many authors including Freire (1973), Griffith (1984), Tooker (1985), and Lawrence (1985), have claimed that agricultural extension should be concerned with other aspects apart from the "transference of technology", and they agree that extension should be more people-oriented.

Freire (1973), for example, said that agricultural extension involves the relationship between human beings and nature. The extensionists, he continued, usually described the world as natural and have forgotten the important relationship between human beings and culture (human world). Freire (1973) argued that, "It is impossible to dichotomize human beings and the world, since the one cannot exist without the other Agricultural production does not exist in a vacuum" (p. 102).

While the efficient dissemination of research findings is an indispensable part of the job of extension workers, they are increasingly emphasizing their role as adult educators; as professional persons whose primary responsibility is the facilitation of learning, specifically, adult learning. There is general agreement that the main role of the extension agent should be one of an educator, more specifically, an adult educator. As Lawrence (1985) pointed out:

We are not in the business of extension, we are a part of a recently recognized phenomenon known as lifelong learning. Within the totality of lifelong learning, we are in the phase known as adult education. In education there is the need for program development. Program development is what extension is all about. (p. 5)

Given that one of the major roles of the extension agent is program development and that one of the factors

that influence the effectiveness and efficiency of extension programs is the extension worker's knowledge and understanding of how adults learn (Griffith, 1984), there is a clear need for the extension agent to know more about the process of learning and the skills and commitment required to facilitate this process. This need has been recognized by several authors including Sajilan and Martin (1986), Griffith (1984), and Gonzalez (1982).

There are several learning theories in the field of adult education with which the extension worker should be familiar. One of these is the self-directed learning process.

The research done by Tough and others (1968, 1971) on self-directed learning has shown, among other things, that a considerable amount of adult learning is self-planned and occurs outside of formal institutions. People are learning what they want to learn when they want to learn, and they are using a variety of resources in planning and implementing their learning. There is a need to answer questions such as, What are the major implications of these kinds of findings for the extension worker? How can extension workers make use of their abilities as educators and their subject matter resources to facilitate this learning? What additional help could be provided? As extension educators,

it is necessary to be aware that the answers to questions like these are not simple. They need to be approached by building, through research, a more accurate and complete picture of the self-directed learning process (Lawrence, 1985).

The main purpose of this study was to enhance understanding of the self-directed learning process as a basis for improving extension education programs.

Background of the Study

"No concept is more central to what adult education is all about than self-directed learning" (Mezirow, 1985, p.17). The idea of self-directed learning is not a new one. As Kulich (1978) pointed out:

Up to fairly recent times, when most nations accepted a goal of widespread and readily available schooling for everybody, self-education was the prime way for man to cope with the world around him" (p. 310) (cited by Brookfield, 1982a, p. 48).

Only recently has this concept become a very important one in adult education. Many researchers, scholars and practitioners have paid attention to the concept of self-directedness in adult learning (e.g. Houle, 1961; Knowles, 1975; Tough, 1968, 1978; Penland, 1979; Brookfield, 1982a, 1982b, 1985a, 1985b, 1986). There are several explanations for this phenomenon. One of these is the fact

that in current times there is little hope of satisfying all adult learning needs in institutional settings. Alternative ways have to be provided. Ideas like open learning (e.g. open university) have been developed. Furthermore, there is a general belief that self-directedness in learning encourages positive characteristics such as assertion, and skilled and interdependent approaches to learning needed for normal adult development. (Burge and Frewin, 1985)

Research into self-directed learning has represented a growth area in the field of adult education. Work done by authors like Tough (1968, 1971), Luikart (1975), Brookfield (1982a, 1982b), and many others, have shown that the ability and the readiness of many adults to conduct self-directed learning projects is a reality. In particular, the work of Tough (1968, 1971, 1978) has stimulated more than 50 follow-up studies to this initial survey of the self-teaching projects of 40 graduates of the University of Toronto. Self-directed learning has been studied in a variety of adult learning populations. As Brookfield (1986) pointed out:

We have studies of college graduates (Tough, 1967, 1968), professional men (McCatty, 1973), pharmacists (Johns, 1974), teachers (Fair, 1973; Kelley, 1976; Strong, 1977; Miller, 1977), parish ministers (Allerton, 1974) college and university administrators (Benson, 1974), clergy (Morris, 1977), graduate students (Kasworm, 1982; Caffarella and Caffarella, 1983), degreed

engineers (Rymell, 1981) and nurses (Savoies, 1980; Kathrein, 1982). These adults come from educationally advantaged backgrounds, but there have also been studies of working-class adults in America by Armstrong (1971), Johnson, Levine, and Rosenthal (1977), Booth (1979), and Leann and Sico (1981). In Britain Elsey (1974) and Brookfield (1980) have researched the use made of informal learning networks by adults of low educational attainment. . . . The picture that emerges from this body of research is interesting, if not always consistent. . . (p. 149)

It has become apparent for several authors (e.g. Tough, 1978; Cross, 1981) that the research on this area, particularly during the decade of the 70's, did not add very much to the conceptual, theoretical or methodological base originally set down by Tough. In other words, research into this area has mainly documented learning planning tasks, content of their learning, and some of the factors that may influence a learner's choice of self-directed learning. But much work still needs to be done to understand how adults experience self-directed learning (Griffin, 1985). More specifically, there is a need for more in-depth studies (Cross, 1981; Kidd, 1981) and studies made from the learner's perspective (Taylor, 1979).

After almost 25 years of work in the field of self-directed learning, there is a need for reflection on that body of research. As Brookfield (1984) said:

It is important that adult education researchers cease "reinventing the self-directed learning research wheel" and accept that the propensity and

capacity of many adults to conduct learning projects is now well proven. Researchers, should now infuse a spirit of self-critical scrutiny into their developing field of research. (p. 60)

Brookfield (1984) went further and offered suggestions for a shift in the research paradigm governing this field. The criticisms voiced referred to:

1. The emphasis on middle class adults as the sampling frame for studies of this mode of learning.
2. The almost exclusive use of quantitative or quasi-quantitative measures in assessing the extent of learning and the concomitant lack of attention to its quality.
3. The emphasis on the individual dimensions of such learning to the exclusion of any consideration of the social context in which it occurs.
4. The absence of any extended discussion of the considerable implications raised by these studies for questions of social and political change. (p. 60)

Recently, several studies have been conducted having in mind this need for change in the orientation of self-directed learning research. For example, Wenden (1981) used interviews to study the self-directed learning process in adults who were learning another language. Through in-depth case studies, Leean and Sisco (1981) studied the self-directed learning process of a group of undereducated adults. Brookfield (1982a, 1982b) interviewed a group of successful independent learners focusing on the way they had been learning on their own. Dany's and Tremblay (1985)

conducted a similar study, focusing on a comparison of the learning principles suggested by the literature with those suggested by successful self-taught learners.

To the researcher's knowledge, no systematic attempt had been made thus far to find out from adult learners how they experience the self-directed learning process in a farm setting.

Purpose of the Study

The purpose of this study is to enhance the understanding of the self-directed learning process as a basis for improving the extension education programs. In order to accomplish this purpose, the following specific objectives were developed:

1. To explore and describe the self-directed learning process of a selected group of adults by viewing it from the learners' perspective.
2. To propose hypotheses and/or a learning model, that would be an explanatory paradigm emerging from the data which in turn could be tested by other researchers.
3. To analyze and report the findings of this study including an assessment of their implications and recommendations for improving the extension educator's programming and practice.

Definition of Terms

To add to the understanding of the research problem, it was necessary to define selected terms. The following definitions were selected:

Adult Education refers to the institutionalized system that provides the programs, administrative structures, processes, settings, resources, and so on that facilitate adult learning. Learning may be carried out by an individual acting in a one-to-one relationship with another person, and by individuals acting in group settings. (Brundage and Mackeracher, 1980)

Chemical (Conventional) Farming refers to that farming production where chemical products (e.g. chemical fertilizers, pesticides, etc.) are freely used.

Extension Agent or Practitioner refers to the person who works in an extension education related institution (e.g. extension service, ministry of agriculture).

Learning activity refers to those enduring, intellectually planned sequences of behavior undertaken in the service of dominant motives and directed toward specific objects (Scribner, 1984).

Memos are the theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding (Glaser, 1978).

Organic Farming refers to that farming production where mainly natural (organic) products are used.

Qualitative Research refers to those investigations described variously as ethnographic research, case study research, field research, or anthropological research.

Self-directed learning is the attempts of adults to acquire skills, knowledge, and self-insights through educational experiences that they are responsible for arranging (Brookfield, 1986).

Overview of the Research Design

The methodology of this study was based on the grounded theory approach described by Glaser and Strauss (1967) and Glaser (1978). Grounded theory methodology focuses on generating rather than validating theory. This research was designed to generate theory on the process of adult self-directed learning in a farm setting.

The constant comparative method (Glaser and Strauss, 1967) was chosen to analyze the data derived from in-depth interviews, thereby using the data to develop a theory closely related to the phenomena studied. The collection of data for this research was mainly done with in-depth, open-ended, tape-recorded interviews.

In an attempt to define the exploration, several broad areas of inquiry guided the present study. They are as follows:

1. Who are these learners?
(Demographic characteristics)
2. How do they perceive themselves as learners and how do they perceive learning in general?
3. How have they learned on their own about organic farming?
4. What have been the main problems/barriers they have faced when learning on their own?

Importance of the Study

This study was conducted to generate new knowledge which might prove beneficial for both adult self-directed learners and extension educators. For learners, it aims to help them better understand their own process of self-directed learning. This understanding may help them realize their strengths and weaknesses. In this manner, it may help them to overcome difficulties and identify needed resources.

This possibility of adult self-directed learners better understanding their own learning process leads directly to improved possibilities that others, including extension agents, would be able to contribute in providing the necessary conditions for effective self-directed

learning, and, therefore, they would be able to transfer some of the self-directed learning principles into their everyday educational practice.

Finally, this study aims to make distinct contributions, from the perspective of the learner, toward the building of a foundational literature base related to the self-directed learning process.

Assumptions

The first assumption was that the participants in this study, through their involvement in organic farming related activities, represented a good example of active self-directed learners. The second assumption was that the subjects of this study not only experienced the process of self-directed learning, but they also were able to describe the quality of this process to the researcher. Third, the data base of this study included descriptive interpretations of experience, i.e. the formulation was constructed upon language, so cultural similarities were presumed to some extent in the shared meaning of that language.

Delimitations and Limitations

The subjective nature of the research methodology used in this study constitutes an inherent limitation. Qualitative studies are subject to concerns about reliability and

validity. Attempts were made to address both reliability and validity.

Validity is not a problem in the traditional sense when the focus of a study is on generating theory or hypotheses rather than validating them. The specific facts per se are not of primary concern, what is important are the conceptual categories generated from the data. (Glaser and Strauss, 1967).

Another limitation was represented by the fact that the researcher's mother tongue was not English. There were some expressions, especially slang, that the researcher was not familiar with prior to the interviews.

In relation to generalizability, the primary concern of qualitative research is particularizability rather than generalizability. One discovers universals as manifested concretely and specifically, not in abstraction and generality (Erickson, 1986, p. 130). Theories produced in this type of study may serve as a map to guide other adult self-directed learners to explore the richness of their own experience.

This study was not intended to be all inclusive. The study represents an initial attempt at describing the process of self-directed learning as perceived by learners in a farm setting. The group of farmers selected were not

intended to be representative of all farmers. It is expected that many studies will follow and add to the findings of this study.

Summary

The present study was conducted in an attempt to explore the self-directed learning process of a selected group of adult learners in a farm setting. It was noted in the literature that research in the field of extension education, self-directed learning is needed. At the same time, it was noted that research in this area is understudied, especially in the use of qualitative research approaches and looking at the process from the learner's point of view. It is believed that the results of this study will add to what is presently known about the self-directed learning process.

Overview of the Dissertation

Chapter I provides an introduction to the basic study problem. Chapter II contains a review of the literature related to the research topic and to the research methodology, with the intent of establishing the theoretical and conceptual foundations for the study. A review of the methodology and procedures used in this study are presented in Chapter III. In Chapter IV, major findings of this study

and a discussion of the findings are presented. The conclusions, implications and recommendations for further study are presented in Chapter V. Finally, some related appendices are included.

CHAPTER II

REVIEW OF LITERATURE

Self-directed learning, as other areas in the field of adult education, is characterized by lack of a unified theory that serves as a basis for research and development (Cross, 1981; Mocker and Spear, 1982; Brookfield, 1986). This lack of a unified theory is due, among other things, to the diverse nature of the adult as learner. As Brookfield (1986) pointed out, "Learning activities and learning styles vary so much with physiology, culture, and personality that generalized statements about the nature of adult learning have very low predictive power" (p. 25).

Some authors (Dubin and Okun, 1973; Cross, 1981) stated that there will never be a single theory of adult education in general or of self-directed learning in particular. Instead, there will be many theories useful in improving the understanding of adult learning.

There have been some attempts to summarize the growing body of research in the field of self-directed learning into some conceptual framework. For example, Penland (1981) combined neo-behaviorism with social learning theory to establish what he considered to be a theoretical framework

for self-directed learning research. Other authors like Mezirow (1985) and Little (1985) developed a self-directed learning conceptual framework based on Habermas' (1971) work on knowledge. Current literature on self-directed learning shows a mixture of approaches drawn from different perspectives.

For the purpose of this study, and due primarily to the inductive and descriptive nature of this research, it was decided to use a multiple perspective approach. The theoretical foundation or framework of the study was based primarily on the research literature related to self-directed learning. In addition, and in order to better understand the phenomenon under study, other knowledge areas were examined as well. These areas included Social Learning Theory, Experiential Learning, Social Network Theory and Social Time approach. Furthermore, literature related to the facilitation of self-directed learning, and related to qualitative methodology have been included.

After lengthy review, the related literature for this study was divided into four major sections. They will be examined as follows:

1. **Research on Self-Directed Learning:** In this section, previous, current and emerging trends of research in the area of self-directed learning are reviewed. The major emphasis is on summarizing

the findings that have direct implications for this study.

2. **Other Knowledge Areas and Self-Directed Learning:** In this section, several knowledge areas are briefly described. The focus is on their broad relationship and implications for self-directed learning. These areas are as follows: social learning theory, experiential learning, social network theory, and social time approach.
3. **Facilitating Self-Directed Learning:** This section contains a review of the different approaches used to facilitate self-directed learning, with a focus on implications relative to extension education.
4. **Qualitative Research Methodology:** In this section, the use of qualitative research in education is reviewed. Then, an overview of the grounded theory approach is presented followed by a brief description of the use of interviews and a discussion of the issues of reliability and validity in qualitative research.

Self-Directed Learning Research

In this section, research literature on self-directed learning is reviewed. Research in this area is presented in two parts. The first one, previous research, mainly covers research studies on self-directed learning conducted during

the 70's. The second part, current and emerging trends, covers the major areas of interest that are currently being explored and research on self-directed learning that have most recently emerged.

Previous Research

Coolican (1974) conducted a review of research literature related to the area of self-directed learning. She identified seven research studies that used the Tough (1971) approach. She included Tough's (1971) original study, her own dissertation (1973), McCatty's (1973) study of Canadian professional men, Johnson's (1973) study of adult high school and GED graduates, and Peters and Gordon's (1974) research on rural and urban populations in Tennessee. She compared their findings and suggested policy implications for institutions and the field of adult education.

Coolican's (1974) studies showed universal participation by the adult subjects in some type of learning project during any 12-month period. Populations varied considerably in the extent of activities. Self-planned projects were dominant in all the studies.

In one of the studies reviewed by Coolican (1974), specifically the one conducted by McCatty (1973), it was found that the desire for individualized subject matter was an important factor in almost half of all self-planned

projects. It appears that a major advantage of self-directed learning, according to this study, should lie in the freedom to determine what is learned. By definition self-directed learners want to learn enough to solve their rather unique problems, and do want a solution. People turn to other people most frequently for assistance in learning -- first to friends and relatives and then to paid experts. Books and pamphlets rival paid experts as resources. Classes are a distant fourth.

Three methods were most commonly used by the adults in those learning projects: practice, reading and discussion, respectively. Listening, observation, and instructors were also used, but not as often. The most frequently used methods were all active, involving the learner directly; and the least commonly used techniques were passive, watching or listening to someone else do something.

Coolican (1974) recommended, among other things, that adult educators should help adults increase their competencies for self-directed learning by learning how to determine their educational needs, organizing learning experiences, and evaluating the outcomes.

Finally, believing that self-directed learning should be outside the responsibility of adult education, she posed two major questions, "What are the grounds for intervention,

and if the adult educator intervenes in the domain of self-directed learning, what does he influence and how?"

In 1978 Tough published a review of research in self-directed learning. His review included 24 studies in addition to his own. He noted, among other things, that there was a broad consistency of findings across time and the variety of populations used in these studies. Greater differences, he noted, occurred within population groups rather than across groups.

He found, among other things, that approximately 90 percent of all adults conducted at least one learning project a year. Self-planned projects, with the learner assuming major responsibility for selecting the goals and means for learning, were dominant, representing 73 percent of all projects. In relation to "other planner," i.e. the way the projects, which were not self-directed, were planned, Tough's findings showed that groups represented 14 percent, one-to-one planner helpers represented 10 percent, and nonhuman resources represented three percent. Tough further analyzed the planning function and determined that professional planners functioned in 20 percent of all group learning projects, one-to-one consultations, and in the creation of nonhuman programmed resources. Amateurs -- the learner's friends and peer groups -- handled 80 percent of the project planning. One finding was clear, "adults want

additional competent help with planning and guiding their learning projects" (Tough 1978, p. 15).

After summarizing the basic surveys reporting on the frequency, duration, and planning of adult learning projects, Tough (1978) implied, among other things, that while most of these studies provided more information on other aspects, they added more to the breadth rather than the depth of understanding adult learning projects.

In 1979 Penland, in a national probability sample, verified some of the findings of Tough and associates regarding self-initiated and self-planned learning. He found that books were rated "extremely important" resources by 71 percent of his population, exceeded as a preferred resource only by knowledgeable friends and relatives. Similarly, 44 percent of Penland's respondents indicated that reading was the best way for them to learn, exceeded slightly by the more social learning mode of "seeing or observing" which was rated best by 45 percent. Penland (1979) found that those engaged in formal learning were considerably more likely to depend on books as their best source of information than those working on so-called practical projects.

Current and Emerging Trends

The areas of interest that have currently been studied, have focused on such questions or issues as: What are the personal characteristics that facilitate self-directed learning? and Can skills that improve the ability to become a successful self-directed learner be taught or improved? Also, efforts have been made to develop and test new methodology.

In relation to the personal characteristics that facilitate self-directed learning, there have been several works like the one by Guglielmino (1977). She developed an instrument called the "Self-directed Learning Readiness Scale" (SDLRS). This is a self-report instrument of 58 items, using a Likert-type scale, which, according to her, can be used to identify the latent potential of individuals to assume responsibility for their own learning.

In relation to "Improving Skills for Self-directed Learning," it is important to mention the studies done by Reisser (1973), and by Kasworm (1982).

Reisser (1973) proposed a model based on questioning, examining, and reporting that adult educators might follow to facilitate the self-directed learning process. She suggested, among other things, that the facilitator should help the learner to: (a) identify or locate the starting point for a learning project, (b) discern relevant modes of

examination and reporting, and (c) conduct self-assessments regarding achievement without a requirement for objective testing.

Kasworm's (1982) study represents another example. She studied 36 graduate students enrolled in two courses designed to examine the development of cognitive and affective competencies in self-directed learning along with experiential instructional strategies. Participants were given pre- and post-tests with the "Self-Directed Learning Readiness Scale" (Guglielmino, 1977). She found, among other things, that there were significant positive gains in the self-directed learning behavior of the students in both classes, as measured by a t-test. Through content analyses of the observational diaries and the students's final self-assessments she found that there was a positive trend in the development of self-directed knowledge and skills. Based on her findings, she stated that curricular or instructional designs that facilitate and model self-directed learning foster the perceptions and behavior associated with learner independence.

After 25 years of research in the area, there is a recognized need for a shift in the orientation of research on self-directed learning. The need for critically reviewing the existing body of research has been confirmed by several authors. For example, Cross pointed out that the

decade of the 70's, for this research thrust, added little to the conceptual, theoretical, or methodological base originally set down by Tough. The description of adults and their learning projects was expanded, but there were still many questions without answers. "It would be helpful", Cross (1981) continued "to know more about the reasons why learners are dissatisfied with the help they receive, what kinds of problems they experience, and what they think can be done about providing better help for self-directed learning" (p. 199).

Another researcher that has strongly criticized the previous body of research on self-directed learning has been Brookfield (1984). He said, for example, "It is now time to infuse a spirit of self-critical scrutiny into this developing field of research -- to undertake a critical assessment of research to date and to suggest future research priorities" (p. 60). His major criticisms were,

1. The emphasis on middle class adults as the sampling frame for studies of this mode of learning.
2. The almost exclusive use of quantitative or quasi-quantitative measures in assessing the extent of learning and the concomitant lack of attention to its quality.
3. The emphasis on the individual dimensions of such learning to the exclusion of any consideration of the social context in which it occurs.

4. The absence of any extended discussion of the considerable implications raised by these studies for questions of social and political change.
(p. 60)

The following are some examples of studies that could be considered to be part of these emerging orientations. As can be seen, some of the major characteristics of this emerging era are the frequent use of qualitative research, and the study of self-directed learning on different types of adult learner populations.

Wenden

Wenden (1981) conducted a study to find out from learners how they actually direct their own language learning in a variety of social settings. The data were derived from interviews with 25 adult learners who had lived in the United States for no longer than two years. The interview required that they reflect upon language experiences in social situations. Analysis of the data revealed that these adults directed their own learning by engaging in the following assessments and action decisions: coping, designating, discriminating, evaluating, planning, self-analyzing, and theorizing.

Bates

Bates (1979) used a phenomenological approach in his study where he explored, in depth, the experience of adult learners who were participating in a formal educational experience in which, as learners, they were actively

involved with one another in planning, implementing and evaluating the learning experience. The data were collected by means of open-ended interviews which were recorded on audio-tape and later transcribed. In total 12 people were interviewed weekly for 13 weeks. Six themes were identified that characterized the experiences of these learners. The themes were: finding direction, relating to others, issues related to oneself, learning stance, energy, and overall satisfaction with learning.

Taylor

Taylor (1979,1981) did a study using the same population as Bates (1979). She interviewed some adult learners who were participating in a formal educational experience in which, as learners, they were actively involved with one another in planning, implementing, and evaluating the learning experience. Her focus was on the social dimensions of their learning.

Taylor (1979) reported that the analysis of learners' descriptions of their experiences revealed a dynamic relation between "self and other." She explained that while common patterns in the experiences of the learners who were observed for this study include essential periods of solitude, the data suggested that learning would not occur without specific communication events between the learner and those he/she perceives to be associated with the theme

or issue being considered. Finally, Taylor (1979) stated that the assumption that humans can learn independently of other people, Taylor says, appears ill-founded in respect to the development of new understanding. (p. 135)

Leean and Sisco

Leean and Sisco (1981) did a study of under-educated adults in Vermont. This study included both a Tough-like survey of 93 subjects, and in-depth case studies of a 14-person subsample. Subjects were rural adults with less than a 12-year education, and the study focused on their learning in out-of-school settings. The case study phase lasted for six months, with interviewers spending about 15 hours with each subject.

Leean and Sisco (1981) found during the first phase that the Tough-like study tended to confirm earlier research findings; however, the case study approach introduced several new findings. For example, the importance of past experiences and family background was found to be significant in the content and motivation for learning as well as in approaches to learning and problem solving. They argued that self-directed learning may be guided by a rational problem solving mode, but most of the subjects in their study were aware of times when problems were solved through a non-rational or altered state of consciousness. Access to information and resources, was not considered a

problem by the subjects in the case studies. In their discussion, the researchers suggested that in both basic skills and postsecondary education, educators should begin with "assumptions of competence rather than deficiency." The adults have experience and skills in processing information, selecting resources, problem solving, and guiding their own learning.

Spear and Mocker

Spear and Mocker (1981) conducted a qualitative analysis of adults' descriptions of their learning activities to determine those factors that organize nonformal learning but which apparently lie beyond the consciousness of the learner. The concept of "Organizing Circumstance" was introduced in this study as defining those elements in the adult's life space that provide motivation, resources, activities, and overall direction to the planning and conduct of a learning project. The researchers suggested that most of the Tough-like basic surveys assumed or tried to equate the self-planned learning process with the process employed traditionally in planning or organizing formal education. They reasoned that this is a basic error, since the planning of formal education activities is in the hands of a person who already has command of the subject matter. The reverse, they said, is the case with self-planned learning. They continued by saying that the

assumptions of similarity between the two processes have led to faulty understanding of the planning process for self-directed learning. This study, according to the researchers, established the importance of environmental factors in the planning and conducting of self-directed learning projects.

Brookfield

Brookfield (1982a; 1982b) in a research study in England interviewed 25 "successful independent learners." In order to participate in this study, the adults were required to meet two criteria. First, each adult needed a high level of expertise in one specific area -- expertise that had gained the person both local and national recognition. Second, the learner needed to have acquired the knowledge through means other than formal learning. The term "independent learning" was applied to that learning that is independent of external instructional direction and independent of institutional accreditation or recognition.

For data collection, he used a semistructured interview. A grounded theory approach was used for the coding of interviewee comments, the identification of major substantive themes, and the generation of concepts and classifications. He also had a randomly chosen subsample of ten correspondence students (students enrolled in distance education programs, e.g. Open University, National Extension

College, etc.). They were chosen for the purpose of comparison with the independent learners. This was done to see the extent to which the correspondence students exhibited independence and autonomy in their learning. The most relevant findings of Brookfield's (1982, 1985) study as they relate to this study are discussed on the following pages.

Attitude Towards Learning

In this study, three major characteristic attitudes were identified: (a) learning was gradual; it seemed to have no end, (b) the learners were aware of their interest, and (c) Brookfield's subjects had the feeling they belonged to a society of learning. These learners identified themselves as belonging to a larger learning community, a group of enthusiasts sharing the same pleasures, concerns and difficulties. They felt themselves to be members of an intellectual fellowship in which there was no sense of knowledge being privatized. They felt that members were ready to share their knowledge and experience with anyone who asked.

Learning Groups and Networks

The independent learners were gregarious in their learning. As Brookfield (1982a) said, "independence clearly did not mean isolation" (p. 50). The exchange of information was the most frequently mentioned benefit and

this was reported as taking place at the level of individual member contacts. Individual members would come to learn about each other's specialties and exchange ideas on new techniques as well as to offer advice on the solution of problems.

The human resources of accumulated knowledge and expertise contained within these groups were identified repeatedly as the most important source of information, and those group members possessing skills in a specialist area were consulted for assistance in solving problems. Unskilled and relatively skilled enthusiasts were prompted to contact the learner to obtain specific advice or special equipment. In this way, the specially skilled learner came to serve as a resource consultant and skill model for enthusiasts possessing various degrees of expertise.

Problems of Independent Learners

There was evidence to show that the kinds of difficulties a researcher might label as problems were regarded as enjoyable challenges, or interesting diversions, by the independent learners themselves. For example, the problem of finding an effective way of managing bee swarms, the central concern of the apiarist, was not regarded as a difficulty blocking the progress of his learning, but rather as the absorbing focus of his efforts, a source of continuing interest and enjoyment.

Brookfield explained that bearing these considerations in mind, the apparent absence of problems became more understandable. A total of nine subjects did assert, in fact, that dealing with problems encountered during their learning had been outside their experience. The whole concept of problems seemed to be alien to Brookfield's study participants. And at times it became almost impossible for those adults to recall any difficulty they had experienced. The correspondence students showed a much greater awareness of constraints and limitations. They identified three broad categories of difficulty: (a) trying to make sense of multidisciplinary perspectives in course materials, (b) dealing with an intimidating workload in the face of inadequate study time, and working in isolation.

Parallel Educational Universe

These independent learners, according to Brookfield (1982a), represented a submerged dimension of educational activity. On the whole, formal educational provision was regarded by the independent learners as irrelevant to their situations.

Use of Books

The correspondence students in Brookfield's study exhibited a heavy reliance on books, lesson units, and broadcast. The independent learners placed much less emphasis on material resources, declaring instead their

preference for the consultation of peers and learning groups as sources of information. References to library usage were recorded in 10 interviews. Another interesting finding from Brookfield's (1982, 1985) research was the fact that 11 independent learners had assembled extensive private reference libraries.

Danis and Tremblay

The purpose of Danis and Tremblay's (1985) study was to carry out a critical review of the generally current adult learning principles comparing the learning principles suggested by experts in the literature with those suggested by successful, self-taught learners in the description of their own learning experiences.

The 10 subjects in this study met the same criteria as those in Brookfield's (1982) study, i.e. they had been engaged in long-term self-directed learning projects (at least four years), they were socially recognized as experts in their field of learning, they had less than 10 years of schooling, and the knowledge and skills in their field of learning had not been acquired in school.

Their study was divided into three phases. In the first phase, learning principles were identified from the literature. In the second phase, a content analysis of the self-taught adults' learning experiences was carried out. Finally, in the third phase, a comparative analysis of the

principles suggested by the subjects with those suggested by the authors was conducted.

Danis and Tremblay (1985) reported their findings stating them as principles. Listed below are some of these principles that were judged to have direct implications for this study:

Learning Process

Regarding experience as the central dynamic of the learning process: " All self-taught adults' learning approaches consist of a time for action and a time for reflection, both occurring simultaneously or alternatively" (p. 140).

Regarding the learning contents: "The more knowledge or skills the self-taught adults have acquired, the more they will seek assistance from specialists in their field of learning" (p. 140). Another important principle: "Self-taught adults have a tendency to narrow down their learning content to specialized aspects of their field of learning" (p. 140).

Regarding self-teaching methods and the pace of the learning process: "Self-taught adult learners do use a variety of settings, methods and resources in order to learn and emphasize the importance of controlling the pace of their own learning process" (p. 140).

Learning Environment

Regarding the influence of the environment, the subjects of the present research emphasized the two-sided transactions they engaged in with their immediate environment rather than the one-sided support they could receive from that environment.

Regarding the use of learning media: "The use of books or consultations with experts only occur once the self-taught adults have familiarized themselves, in various ways, with their field of learning" (p. 140).

Regarding the use of human resources: "the self-taught adults build up networks or resources which evolve in terms of the level of expertise the learners have acquired in their field of learning" (p. 140).

Adult Learners

Regarding the notion of locus of control: "Throughout their learning process, the self-taught adults assume the monitoring of their own learning, even when consulting an external agent or when participating in a formal educational activity" (p. 141).

Regarding motivation: "The self-taught adults' motivation increases as their competence is recognized and as they are invited to transmit their knowledge or skills to others" (p. 141). The researchers reported that the subjects of this study emphasized the importance of pleasure

linked to the act of learning. There was a tendency of the adults involved to prompt others to engage in learning as a result of the exhilaration that they themselves had experienced.

Regarding the orientation to learning, Danis and Tremblay (1985) stated that there were three main notions that stood out from the findings: immediacy of application, efficiency, and the pragmatic application of adult learning. Self-taught adults did not limit themselves to learning that was to be applied in the immediate future. Most of them seized opportunities to acquire knowledge or skills that might eventually be useful in the long term. Furthermore, the participants in this study seemed to be learning-centered and subject-centered (p. 141).

Other Knowledge Areas and Self-Directed Learning

Social Learning Theory

The concept of social learning theory as set forth by Bandura (1977) suggests that much of human learning is achieved through observing other people performing a role or skills, and from reading and seeing pictures of the skilled behavior. This concept coincides with what many researchers of self-directed learning have found in regards to preferred ways of learning. In other words, many educational researchers including Tough (1968), Brookfield (1982a and

1982b), and Luikart (1975) found that most self-directed learning occurs through reading and observing others.

According to Bandura (1977), social learning theory approaches the explanation of human behavior in terms of a continuous reciprocal interaction between cognitive, behavioral, and environmental determinants. This concept of human functioning then, as Bandura (1977) said, "Neither casts people into the role of powerless objects controlled by environmental forces nor free agents who can become whatever they choose. Both people and their environment are reciprocal determinants of each other" (p. vii).

One of the characteristic features of social learning theory that makes it so relevant for understanding self-directed learning is the prominent role it assigns to self-regulatory capacities. Traditionally, learning theories have emphasized the role played by external rewards and punishments, but have ignored the capacity each individual has to control their behavior, feelings and thoughts. As Bandura (1977) said, "By arranging environmental inducements, generating cognitive supports, and producing consequences for their own actions, people are able to exercise some measure of control over their own behavior" (p. 13).

One of the mechanisms the individual can use to have control over his/her own behavior is self-reinforcement.

Bandura (1977) stated that self-reinforcement, "refers to a process in which individuals enhance and maintain their own behavior by rewarding themselves with rewards that they control whenever they attain self-prescribed standards" (p. 130).

Another important aspect of the social learning theory as it relates to self-directed learning is the role played by modeling. Most human behavior is learned through modeling. From observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action.

One of the advantages of learning by modeling, as stated by the social learning theory, is that it can shorten the process. As Bandura (1977) pointed out, "even when it is possible to establish new behaviors through other means, the process of acquisition can be considerably shortened through modeling" (p. 13). In addition, another important advantage of learning by modeling is that learning by modeling is more efficacious than learning through trial and error because the mistakes produced by trial and error can be costly and even fatal. As Bandura argued,

Coping with the demands of everyday life would be exceedingly trying if one could arrive at solutions to problems only by actually performing possible options and suffering the consequences. Fortunately higher cognitive capacities enable people to conduct most problem solving in thought rather than in action . . . the more costly and

hazardous the possible mistakes, the heavier is the reliance on observational learning. (p. 12)

In relation to learning incentives, social learning theory establishes that direct incentives have greater motivational power than vicarious ones. It also states that people differ in incentive preferences. As Bandura (1977) argued,

People differ in the value they place on approval, money, material possessions, social status, exemption from restrictions, and the like. Values determine behavior in that prized incentives can motivate activities required to secure them, disvalued incentives do not. The higher the incentive value the higher the level of performance. (p. 139)

Knowledge of these preferences is very important when trying to understand the motives that self-directed learners may have to do or not to do a learning activity. Although anticipated benefits of future accomplishment provide some incentive for pursuing self-directed change, "it is self-regulated incentives that serve as continual immediate inducements for change." (Bandura, 1977, p. 150)

Experiential Learning

Throughout their lives, adults accumulate a wide range of experiences that they store in their memories and that they bring with them to every learning situation. Many adult educators have recognized the important role played by experience. Knowles (1980), for example, claimed that, "as people grow they accumulate an increasing reservoir of

experience that becomes an increasingly rich resource for learning" (p. 44). Experience then, is a significant element for many theorists, and experiential learning is seen as a holistic integrative perspective on learning that combines experience, perception, cognition, and behavior (Penland, 1981).

From the experiential perspective, learning always commences with experience. The process of transforming that initial experience is the process of learning. Life is about experience; wherever there is life, there are potential learning experiences (Jarvis, 1987).

Experiential learning can be defined as, "the learning in which the learner is directly in touch with the realities being studied. Experiential learning typically involves not merely observing the phenomenon being studied but also doing something with it" (Keeton and Tate, 1978, p. 2).

There are three major models that explain experiential learning. These three models were developed by Dewey, Lewis and Piaget, and they share many characteristics. A summary of some of those characteristics that were judged to be relevant for this study follows, (Kolb, 1984).

1. Learning is best conceived as a process, not in term of outcomes:

In experiential learning, learning is described as a process whereby concepts are derived from and continuously

modified by experience. As Kolb (1984) said, "no two thoughts are ever the same, since experience always intervenes" (p. 26).

2. Learning is a continuous process grounded in experience:

From the experiential learning view, every new experience is interpreted by the individual and has a meaning given to it which is then integrated into the meaning of past experiences already present in the mind. This results in a body of knowledge that helps the person interpret reality. These new experiences can either facilitate or hinder the learning process. Jarvis (1983) said:

Provided that the new knowledge can either be integrated into the stock of knowledge already stored or answers a specific learning need it presents no problems to the learner. However, if the new knowledge or skill involves unlearning previous experiences, then those previous experiences inhibit the efficiency of the learning. (p. 83)

The fact that learning is a continuous process grounded in experience has important educational implications. It implies, among other things, that all learning is relearning. In other words, everyone, including self-directed learners, enters learning situations with ideas about the topic. So, adult educators have to be aware that their role is not only to provide the learner with new

learning activities, but also to dispose of or modify old ones.

3. The process of learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world:

According to this theory, new knowledge, skills, or attitudes are achieved through confrontation among four modes of experiential learning. In order to be effective, learners need four different kinds of abilities -- concrete experience (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE). They must be able to involve themselves fully, openly, and without bias in new experiences (CE). They must be able to reflect on and observe their experiences from many perspectives (RO). They must be able to create concepts that integrate their observations into logically sound theories (AC), and they must be able to use these theories to make decisions and solve problems (AE). As Kolb (1984) said, "learning requires abilities that are polar opposites, and the learner, as a result, must continually choose which set of learning abilities he or she will bring to bear in any specific learning situation" (p. 30). This conception of differences in learning styles is very useful when trying to understand the different preferences self-directed learners have to approach their learning.

4. Learning is an holistic process of adaptation to the world:

According to this view, learning involves the integrated functioning of the total organism (i.e. thinking, feeling, perceiving, and behaving). Learning, then, is the major process of human adaptation. This concept of learning is broader than that commonly associated with the school classroom. In this way, learning can be conceived as occurring in all human settings and encompassing all life stages. As Kolb (1984) said, "when learning is conceived as a holistic adaptive process, it provides conceptual bridges across life situations such as school and work, portraying learning as a continuous, lifelong process" (p. 33).

5. Learning involves transaction between the person and the environment:

Traditionally, the psychological view of learning has been to conceive learning as a person-centered phenomenon. In experiential learning theory, learning is conceived as a result of the transaction between the individual and his/her environment. As Jarvis (1987) said, "experience involves the relationship between people and the socio-cultural milieu in which they live, so that learning is also related to that socio-cultural milieu" (p. 164).

Dewey (1963) explained that,

Experience does not occur in a vacuum. There are sources outside an individual which give rise to

experience. An experience is always what it is because of a transaction taking place between an individual and what, at the time, constitutes his environment, whether the latter consists of persons with whom he is talking about some topic or event, the subject talked about being also a part of the situation . . . the book he is reading . . . or the materials of an experiment he is performing. The environment, in other words, is whatever conditions interact with personal needs, desires, purposes, and capacities to create the experience which is had. (p. 40-4)

This view of learning agrees with what has been found by many researchers in self-directed learning -- learning occurs in a social context.

6. Learning is the process of creating knowledge:

According to the experiential learning view, knowledge results from the transaction between objective and subjective experiences in a process called learning. In other words, knowledge is the result of the transaction between social knowledge and personal knowledge.

There are other authors like Jarvis (1987) who discussed the importance of recognizing the difference between types of experiences. According to Jarvis (1987), there are meaningful and meaningless experiences, i.e. "not every experience results in learning, but that experience itself is only a potential basis of learning" (p. 165). In order for that experience to become meaningful, people have to think about it, reflect upon it, and maybe, seek other opinions about it. As Jarvis (1987) pointed out,

Where there is no disjunction between individuals' stock of knowledge and their perception of their socio-cultural-temporal world, then action may be taken for granted and little or no reflection or learning occurs. But when disjunction occurs, reflection may follow and then learning might occur and then self-growth and development. However, there are situations when the relationship between people and their socio-cultural-temporal milieu do not allow for such a straightforward analysis. (p. 169)

He developed a model of learning from experience (see Figure 2.1). According to this model, when people have a new experience, the stock of knowledge acquired through the process of living is not able to provide an automatic response. An awareness of a deficiency in that stock of knowledge has occurred and in this sense individuals have a felt need to learn. In other words, as Jarvis (1987) said, "when there is disjunction between individuals' own biographies and the socio-cultural-temporal world of their experience, then a potential learning experience has occurred. The situation may no longer be taken for granted" (p. 168).

Reflection is an essential phase in the learning process. This is a process whereby people explore their experiences in a conscious manner in order to lead to a new understanding, and perhaps, a new behavior. Other authors have also emphasized the importance of reflection in learning (Boud, Keogh and Walker, 1985). Reflection is a personal process. People reflect in different ways and they

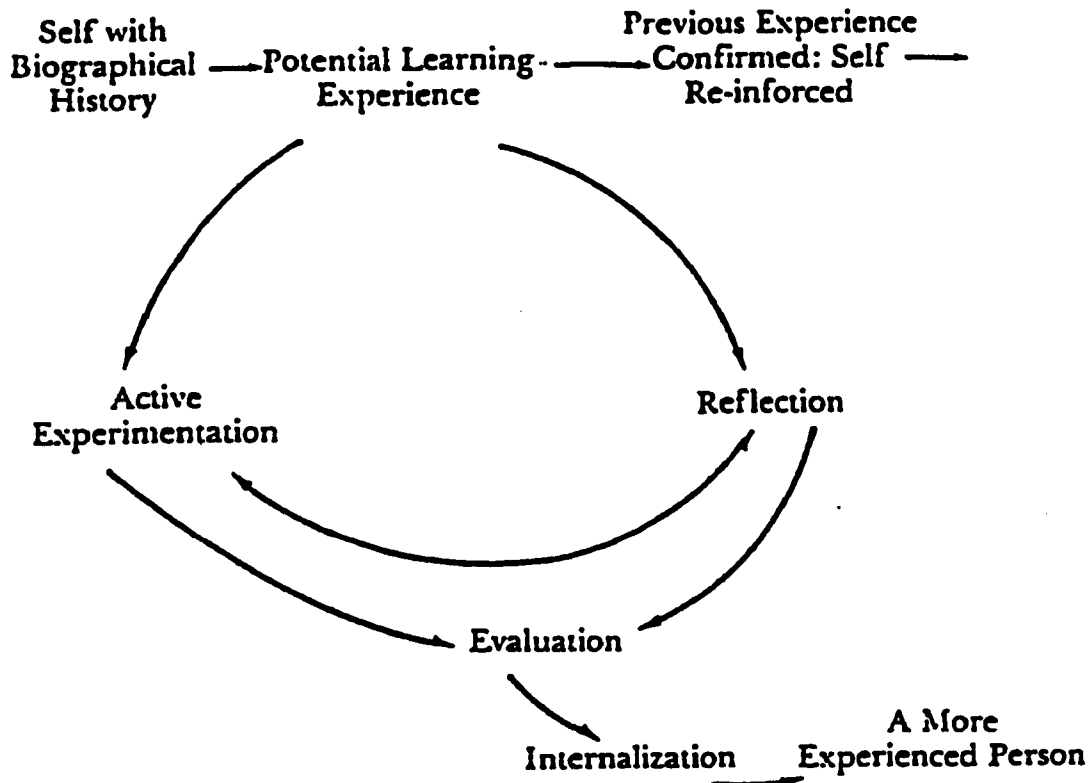


Figure 2.1. A Revised Model of the Learning Process

Source: Jarvis, P. (1987) "Meaningful and Meaningless Experience: Towards an Analysis of Learning from Life," Adult Education Quarterly, Vol. 37, No. 3, Spring, pp. 166.

bring their own personal stock of knowledge to bear on the experience. Not only do individuals bring unique stocks of knowledge to the process of reflection, each may also reflect upon their experiences at one or more different levels. Jarvis (1987) said:

The reflective process is itself personal, private, and individual. Therefore, the meaning that people give to their experience is quite subjective and knowledge is created out of experience by a synthesis of previous knowledge and perception of their present experience. Meaning is both reflective and intentional: meaning acquired as a result of reflection provides a basis for intention in further action. (p. 169)

This notion of reflection is a relevant component in learning as well as self-directed learning, because it is through reflection that each individual can give meaning to the learning experience.

Social Networks

Several researchers including Luikart (1975), Fingeret (1983), Brookfield (1982a and 1982b), and Danis and Tremblay (1985) have demonstrated that for many types of learning problems and situations, the self-directed learner's impulse is to seek out another individual within his or her own social network to acquire assistance about the learning project in question. This process of seeking other people's help is known as "networking." Networking has been a topic of interest to social scientists for the past 30 years

(Fingeret, 1983). There are many different interpretations and definitions of networks and how they function.

One way of understanding networks is to look at them as "exchange networks." This exchange can be considered positive or negative depending upon the kinds of relations among its members. As Cook (1982) explained:

An "exchange network" is a set of two or more connected exchange relations. Exchange relations are defined as connected if exchange in one relation is contingent on exchange or nonexchange in the other relation. The connection is defined as positive to the extent that exchange in one relation increases the likelihood of exchange in the other relation; the connection is negative to the extent that exchange in one relation decreases the likelihood of exchange in the other relation. (p. 180)

The exchange situation may vary where there is competition among the members. This type of exchange occurs less frequently because each member aims to maximize what they obtain of scarce resources. Negatively connected exchange relations represent competition over valued resources within an exchange network.

In relation to the possible reasons that explain why networks are formed, Fisher (1983) explained, "metaphorical networks have evolved in recent years in response to hierarchically organized bureaucracies" (p. 52). Another explanation is the one given by Simon and Belz (1980). "Responding to the developmental needs of modern day adults, groups of individuals with no concrete institutional support

can react in a spirit of cooperative adventure to pool their individual resources and become organized into a relatively formal structure" (p. 24). By its very nature, networking facilitates self-directed learning, generates more participation from the learners and takes the responsibility away from the facilitator as the "be-all" and "end-all" information source.

Social Time

Time as a social phenomenon has been a topic that only a few researchers have studied closely. Most researchers treat time as incidental to other sociological problems rather than including it as a variable in the investigation (Lewis and Weigert, 1981). This situation is also true in the study of self-directed learning. The study of time has seldom if ever been included in the research about self-directed learning.

The importance of the study of time becomes apparent when the role it plays in modern societies is recognized. With the emergence of multiple roles in modern society, many demands compete for one's time, thus making time a scarce resource. From this perspective, it is possible to speak of time as if it were money. It is possible to save time, invest time, waste time, borrow and spend time, or to capitalize upon time. Insofar as there is never enough time

to distribute among these social roles, role strain invariably results. As stated by Lewis and Weigert (1981):

As the complexity of industrial societies grows through increasing rationalization of institutions, the temporal embeddedness of events in organizational, interactional, and personal time structures becomes more complex. Consequently, the synchronization of acts and actors within organizational timetables and individual biographies becomes far more problematic, and often can be resolved only by robbing clock time from some other form of social time. As a result, the stratification of social times becomes more pronounced, leading to social time conflict with ramifications throughout the whole structure of society, profoundly affecting the quality of life of its members. (p. 458)

This situation is also true for self-directed learners because they play several roles that compete for their time.

Human beings experience time both as physical passage and as a social process. According to Lewis and Weigert (1981), there are three different levels or forms of social time: at the individual level, "self-time"; at the group level, "interaction time" for informal interactions; "institutional time" for bureaucracies and other formal organizations; and at the broad, societal-cultural level, "cyclic time" (days, weeks, and seasons) that cuts across the entire society. Institutional time demands precedence over interaction time, and interaction time, in turn, demands precedence over self-time.

When competition between forms of social time arise, it is self-time that is frequently the loser. This is because,

in a sense, self-time is always potentially with the individual, but it is submerged under other types of social time much of the (physical) time (Lewis and Weigert, 1981). This situation becomes very important for understanding the self-directed learning process, because it is generally during this self-time that self-directed learning projects are planned and implemented.

Facilitating Self-Directed Learning

Teaching is an activity generally associated with the world of elementary and secondary schooling. That is one of the main reasons why adult educators usually avoid using the term teacher. The use of the term facilitator has recently become popular to describe the adult educator's role (Hiemstra, 1975; Knowles, 1975; Penland, 1979; Tough, 1979; Brockett, 1983). The facilitator can be described as the one who assists in the student's learning, even to the extent of providing or creating the environment in which that learning may occur. But, he is never one who dictates the outcome of the experience (Jarvis, 1983).

When trying to facilitate learning in general, there are six principles of effective practice that should be kept in mind. According to Brookfield (1986) those principles are "observable in many different settings" (p.11) and have implications for practice. Those principles are briefly summarized below.

Participation in learning is voluntary, so there is no need to expend energy and time dealing with opposition. Adult learners are more likely to accept participatory learning techniques, for example, discussion, games, role playing. Program development has to be based on adults' experiences and there must be an explicit connection between unfamiliar concepts or bodies of knowledge and their current preoccupation or past experience. Therefore, adult learners can easily withdraw if activities do not meet their needs.

Effective practice is characterized by mutual respect. It is important to make participants feel that they are valued as "separate, unique individuals deserving of respect" (Brookfield, 1986, p. 13). It is generally recognized that one of the most difficult tasks of the facilitator is to set this kind of climate, an environment where the individual can feel free to challenge or can feel comfortable with being challenged (Knowles, 1980).

Facilitation is collaborative. At different times and for different purposes, leadership and facilitative roles will be assumed by different members. These collaborative activities are based on the features of voluntary learning and respect for participants.

Praxis (action and reflection). Ideas, skills and knowledge do not exist in a vacuum, but are related to context. There is a need for continuous engagements by

facilitators and learners in explorations, action, and reflection.

Critical reflection. Education should be distinguished from training. As Brookfield (1986) pointed out, "Facilitation aims to foster in adults a spirit of critical reflection . . . education is centrally concerned with the development of a critically aware frame of mind, not with the uncritical assimilation of previously defined skills or bodies of knowledge (as it happens in training)" (p. 17).

Self-direction. Facilitators should assist adults to become self-directed learners.

In relation to facilitating self-directedness in the learner, Shuttenberg and Tracy (1987) stated that since there is not a unified definition of what self-directed learning is, one way of approaching that question would be to group the existent conceptions about self-directed learning (SDL) into three major categories.

1. Those who consider self-directed learning as a set of skills that adult learners must master.
2. Those who consider self-directed learning as an instructional mode or process.
3. Those who conceptualize self-directed learning as an active philosophical and motivational stance towards oneself and society. (p. 4)

These three categories are summarized below (Shuttenberg and Tracy, 1987).

1. Among those who define SDL as a set of skills to be mastered is Knowles (1975). This category

implies that in order to foster self-direction in learning, the instructor should require the learner to propose in writing what will be learned, what resources will be utilized, and how learning results will be evaluated. Such planning or contracting skills, carried out in collaboration with the instructor and other learners, are essential components of adult educational self-direction.

2. Among those who conceive SDL as an instructional mode or process are Brookfield (1985a) and Brockett and Hiemstra (1985). This category implies that adult education in general is a collaborative effort. So in order to foster self-direction, the adult educator should engage in continuous negotiation and evaluation of learning priorities and activities. According to this category, the adult educator is conceptualized as a co-learner whose role is a resource provider rather than an expert.
3. Among those who conceptualize SDL as an active philosophical and motivational stance are Mezirow (1981) and Brookfield (1985a). This category is concerned with learner autonomy and freedom to make changes. This implies that in order to foster SDL, the adult educator should present alternative ways of interpreting the world and should assist learners to reflect on ways in which values, beliefs, and behaviors, could be critically analyzed and changed. The self-directed learner can express their felt needs, but those needs can be viewed from a narrow perspective. As adult educators, it is necessary to present the learner with alternatives, even if that process is a painful one.

As Brookfield (1986) said:

The teacher of adults, then, is not always engaged in a warm and wholly satisfying attempt to assist adults in their innate drive to achieve self-actualization. A facilitator who accepts adults' definitions of need can avoid this pain and be involved in an apparently creative, unthreatening, and satisfying encounter. But teaching involves presenting alternatives, questioning givens, and scrutinizing the self. (p. 125)

Shuttenberg and Tracy (1987) developed a facilitation model based on those three categories (see Figure 2.2). They explained the model as follows:

On the horizontal axis of the model are the three conceptions of SDL mentioned earlier and their corresponding levels of change. The first conception is that SDL is a set of skills. Change at this level is in behavior. . . . The second conception is that SDL is characterized by certain instructional processes, and the corresponding mode of change is interaction. . . . The third conception is that SDL is a philosophical and motivational stance. At this level change is in learner's values. . . . The vertical axis lists the three roles of adult educators mentioned before (leader, collaborator and colleague) and their three corresponding teaching/learning processes (directing, coaching and modeling). . . . This model then assumes stages of growth in self-directedness. . . . And it allows for the likelihood that some adult learners may desire a lesser degree of self-directedness than others. (p. 5-6)

The model presented by Shuttenberg and Tracy (1987) is a very useful tool in understanding the different modes of facilitation possible in extension education because this model is based upon the belief that adults have the potential of attaining various degrees of self-direction in learning. This is usually the situation that the extension educator has to face. In general, the extension educator and the adult educator has to deal with adult learners who may be at different stages of self-directedness, and so the extension educator has not only to be aware of this fact, but also has to be ready to deal with these situations in different ways. As Brockett and Hiemstra (1985) said, "it

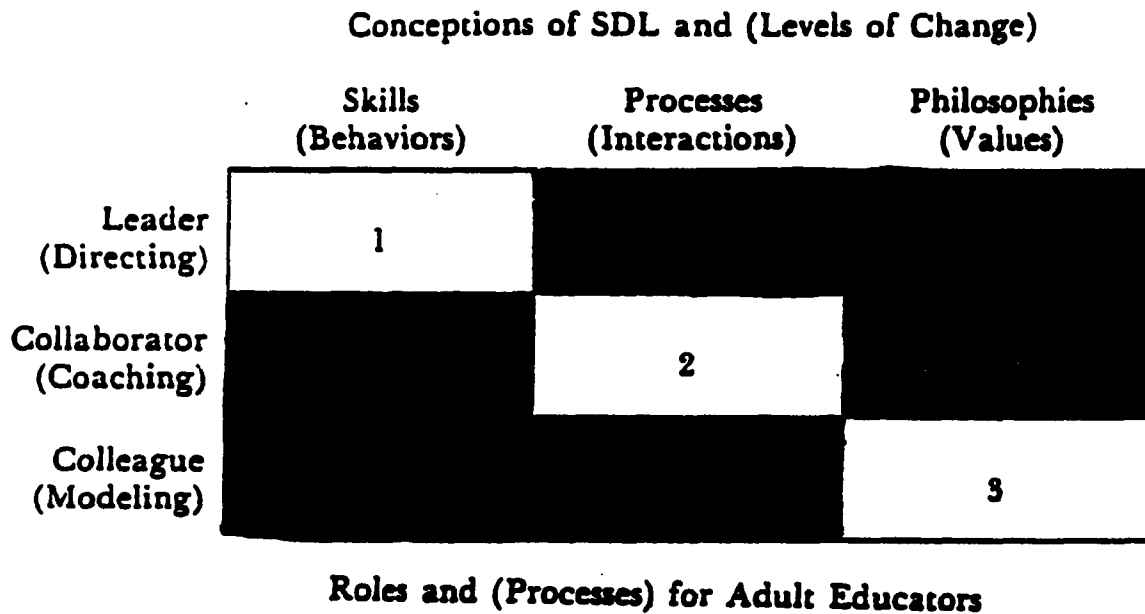


Figure 2.2. A Model for Fostering SDL.

Source: Shuttenberg, E.M. and Tracy, S.J. (1987) "The Role of the Adult Educator in Fostering Self-directed Learning," *Lifelong Learning: An Omnibus of Practice and Research*, Vol. 10, No. 5, Feb/March, p. 5.

is important for facilitators of adult learning to understand that they may have to assist some learners to become more self-directed" (p. 33).

Another very important point to keep in mind when trying to facilitate self-directed learning is the need of adult educators to be aware that self-directed learning is not necessarily the best way to learn. As Brockett and Hiemstra (1985) stated:

With the great diversity that exists both in learning styles and in reasons for learning, it is extremely shortsighted to advance such an argument. Perhaps, it is more appropriate to think of self-directed learning as an ideal mode of learning for certain individuals and for certain situations. (p. 33)

Qualitative Methods in Educational Research

Research in education, including extension education, has been dominated by the natural science paradigm of hypothetico-deductive (positivist) methodology. This dominant paradigm assumes, "quantitative measurement, experimental design, and multivariate, parametric statistical analysis to be the epitome of good science" (Patton, 1980, p. 19). This basic model for conducting research comes from the tradition of experimentation in agriculture, from which have originated many of the basic statistical and experimental techniques most widely used in social science research.

In recent years several educational researchers, including Erickson (1986), Taft (1985), Bogdan and Biklen (1983) and specifically researchers in the field of agricultural education (e.g., Peuse, 1981) have advocated the adoption of alternative methods of research by promoting the use of qualitative research methods.

Major Characteristics

The following is a summary of the major characteristics of qualitative research as given by Bogdan and Biklen (1982), Erickson (1986), Patton (1980), Taft (1985), and Smith (1983).

The natural setting is the direct source of data and the researcher's insight is the key instrument for analysis in qualitative research .

Descriptive research. The purpose of the description is to take the reader into the setting. Qualitative data consists of detailed descriptions of situations, events, people, interactions, and observed behaviors; direct quotations from people about their experiences, attitudes, beliefs, and thoughts; and excerpts or entire passages from documents, correspondence, records, and case histories. The detailed descriptions, direct quotations, and case documentation of qualitative measurement are raw data from the empirical world. The data are collected as open-ended

narratives without attempting to fit program activities or people's experiences into predetermined, standardized categories such as the response choices that comprise typical questionnaires or tests. Qualitative data provide depth and detail. Depth and detail emerge through direct quotation and careful description.

Holistic research. Researchers using qualitative methods strive to understand phenomena and situations as a whole. The researcher strives to understand the totality, and the unifying nature of particular settings. This holistic approach assumes that the whole is greater than the sum of its parts. Thus, it is insufficient to simply study and measure the parts of a situation by gathering data about isolated variables or dimensions. In contrast to experimental designs which manipulate and measure the relationships among a few carefully selected and narrowly defined variables, the holistic approach to research design is open to gathering data on any number of aspects of the setting under study in order to put together a complete picture of the social dynamic of a particular situation.

Inductive research tends to analyze the data inductively. A qualitative research strategy is inductive in that the researcher attempts to make sense of the situation without imposing preexisting expectations on the

research setting. Qualitative designs begin with specific observations and build towards general patterns. This contrasts with the hypothetic-deductive approach of experimental designs that require the specification of main variables and the statement of specific research hypotheses before data collection. The researcher must then decide in advance what variables are important and what relationships among those variables are expected. The strategy in qualitative designs is to allow the important dimensions to emerge from analysis of the cases under study without presupposing in advance what those important dimensions will be.

One can argue that,

There are no pure inductions. We always bring to experience frames of interpretation, or schemata. From this point of view the task of fieldworker is to become more and more reflectively aware of the frames of interpretation of those we observe, and of our own culturally learned frames of interpretation we brought with us to the setting. (Erickson, 1986, p. 140).

Naturalistic. Qualitative designs are naturalistic in that the researcher does not attempt to manipulate the research setting. Rather, the point of using qualitative methods is to understand naturally occurring phenomena in their naturally occurring states. Naturalistic inquiry is contrasted to experimental research where ideally the investigator attempts to completely control conditions of

the study by manipulating, changing, or holding constant external influences and where a very limited set of outcome variables are measured.

Undertaking investigations of the social and educational world from a quantitative perspective appears to be different from doing so from an interpretive perspective. Each approach sponsors different procedures and has different epistemological implications. One approach takes a subject-object position on the relationship to subject-matter, the other takes a subject-subject position. One separates facts and values, while the other perceives them as mixed. One searches for laws, and the other seeks understanding (Smith, 1983).

Educational researchers in general have recently devoted increasing amounts of time and energy to the issue of one method versus the other. But as Patton (1980) pointed out:

The issues of selecting methods should no longer be one of the dominant paradigm versus the alternative paradigm, of experimental designs with quantitative measurement versus holistic-inductive designs based on qualitative measurement. The debate and competition between paradigms should be replaced by a new paradigm -- a paradigm of choices. The paradigm of choices recognizes that different methods are appropriate for different situations. (p. 20)

Grounded Theory Methodology

Although the use of the grounded theory approach in social research has been advocated by many authors, Glaser and Strauss (1967) have been considered the main promoters of this approach, especially since the publication of their book, The Discovery of Grounded Theory: Strategies for Qualitative Research, and also since the publication of the book by Glaser's (1978) titled, Theoretical Sensitivity.

The grounded theory method (Glaser and Strauss, 1967; Glaser, 1978) stresses discovery and theory development rather than logical deductive reasoning that relies on prior theoretical frameworks. These two aspects of the methods lead the grounded theorist to certain distinctive strategies.

First, data collection and analysis proceed simultaneously. Grounded theorists shape their data collection from their analytic interpretations and discoveries and, therefore, sharpen their observations. Additionally, they check and fill out emerging ideas by collecting further data.

Second, both the process and products of research are shaped from the data rather than from preconceived logically deduced theoretical frameworks. Grounded theorists rely heavily on studying their data and reading in other fields

during the initial stages of research. They do not rely directly on the literature to shape their ideas since they believe that they should develop their own analyses independently.

Third, grounded theorists do not follow the traditional quantitative cannons of verification. They do, however, check their developing ideas with further specific observations, and make systematic comparisons between observations.

Fourth, not only do grounded theorists study process, but they also assume that making theoretical sense of social life is itself a process.

Glaser and Strauss (1967) contended that theory based on data rarely can be completely refuted by more data or replaced by another theory. To be practical, according to Glaser and Strauss (1967) and Glaser (1978) a theory must have fit and relevance. It must work and should also be modifiable. The categories or conceptual elements of the theory emerging from the data refer to a theory's fit. Relevance refers to the value of the research. The importance of the study is based on the data supporting and serving as the source for identifying problem areas. A theory's ability to explain what happened, predict what will happen, and interpret what is happening refers to the

criterion of the work. A theory can be modifiable if it changes and evolves based on a better understanding of a problem (Glaser, 1978).

The grounded theory approach (Glaser, 1978) is transcending in nature. The scope of grounded theory extends beyond the major areas of study and the existing theories related to the focus of the study. Theory grounded in data integrates relevant variables from any source from which they emerge. This quality of grounded theory facilitates the expansion of a theory into a broader, more comprehensive one.

Grounded theory has been criticized by some researchers on a number of counts, and it has also been dealt with in similar way as if it were quantitative research. Unfortunately, as Charmaz (1983) said,

Several features of the grounded theory method have contributed to such misinterpretation. First, the language of the grounded theory method relies on terms commonly used in quantitative research and, this language lags behind actual development of the method. For example, the terms such as coding, comparison groups, and theoretical sampling reflect the language of quantitative research and often elicit images of logical deductive quantitative procedures. (p. 109)

The following is a brief review of grounded theory methodology (Glaser and Strauss (1967), Glaser (1978; Charmaz, 1983)).

Coding and Analysis of the Data

Coding, the initial phase of the analytic method, is the process of categorizing and sorting data. Codes then serve as shorthand devices to label, separate, compile, and organize data. They also help to summarize, synthesize, and sort many observations made about the data. Researchers make the codes fit the data, rather than forcing the data into the codes.

In a particular study, a researcher may identify several major processes. If so, then grounded theorists code for all of them and may decide later which ones to pursue. Importantly, a grounded theorist sticks with his or her interpretations of the data and follows leads from them, even when they lead to surprising new research problems.

Coding is a two-phase process: an initial searching phase precedes a later phase of focused coding. In the initial phase, researchers look for what they can define and discover in the data. They then look for leads, ideas, and issues in the data themselves. In focused coding, the researcher takes a limited set of codes that were developed in the initial phase and applies them to large amounts of data. The process is selective because the researcher has already weeded through the materials to develop a useful set of categories. It is conceptual because the codes employed

raise the sorting of data to an analytic level rather than one that is used to summarize large amounts of information. Focused coding forces the researcher to develop categories rather than simply to label topics.

Since the grounded theory approach heavily emphasizes process, the categories developed are not treated separately as single topics; rather, grounded theorists weave them together into a processual analysis through which they can abstract and explicate experience.

Writing Memos

Memos are written elaborations of ideas about the data and the coded categories. Memos represent the development of codes from which they are derived. By making memos systematically while coding, the researcher fills out and builds the categories. Memo writing takes place throughout the research process starting with the first interviews or observations. Novices frequently discover that writing many memos helps to expand their theoretical grasp of the materials, keeps their analyses flexible, and provides sharper, clearer guidelines for data collection.

The first step in writing memos is to take codes and treat them as topics or categories. Grounded theorists also explain how the code is related to other previously developed categories and codes. Spelling out the

connections between categories assists in creating an integrated "whole," helps to reduce rambling, and aids in identifying implicit links, all of which tighten the work considerably.

Sorting and Integrating Memos

Sorting memos simply means putting those that elucidate the same category together in order to clarify their dimensions and to distinguish them from other categories. Grounded theorists sort for both the content of the memos and the ordering of them. By integrating memos the researcher reveals the relationships between categories.

Theoretical Sampling

Theoretical sampling means sampling aimed toward the development of the emerging theory. As researchers analyze their materials and develop theoretical categories, they frequently discover that they need to sample more data to elaborate a category. As an inductive technique, theoretical sampling exemplifies the inductive logic of the grounded theory approach.

Data Display

The most frequent form of display for qualitative data in the past has been narrative text. But there are many other displays that can be successfully used. Some of them are matrices, graphs, networks, and charts. One major flow

of analysis is data display. Miles and Huberman (1984) defined display as "an organized assembly of information that permits conclusion drawing and action taking" (p. 21).

The creation and use of displays is not something separate from analysis. It is not just data reduction, but part of the analysis itself. Designing the rows and columns of a matrix for qualitative data and deciding which data, in which form, should be entered in the cells are analytic activities (Miles and Huberman, 1984).

Basically, in referring to the use of grounded theory methodology, Charmaz (1983) concluded:

Any researcher who claims to use the grounded theory approach endorses the following fundamental strategies: First, discovering and analyzing social and social psychological processes structures inquiry. Second, data collection and analysis phases of research proceed simultaneously. Third, analytic processes prompt discovery and theory development rather than verification of preexisting theories. Fourth, theoretical sampling refines, elaborates, and exhausts conceptual categories. And last, systematic application of grounded theory analytic methods progressively leads to more abstract analytic levels. (p. 126)

Interviews

Interviews are considered an appropriate tool of investigation for qualitative inquiries. As Brookfield (1981) pointed out:

Interviews are a particularly appropriate tool of investigation for those inquiries which have an

idiographic rather than a nomothetic rationale; that is, those which are concerned with depicting the highly specific nature of individual experience rather than advancing broad generalisations. Such inquiries are located within the phenomenological tradition and rest on the assumption that one person's formulation of a problem, or presentation of a dilemma, can encapsulate a wider reality. (p. 17)

When comparing the use of interviews with the use of questionnaires as research tools, it is possible to see the following advantages in favor of the interviews.

1. The Interview provides more opportunity to motivate the respondent to supply accurate and complete information immediately.
2. Provides more opportunity to guide the respondent in his interpretation of the questions.
3. Allows greater flexibility in questioning the respondent. The more exploratory the purpose, the greater the need for flexibility in determining the wording of the question, the sequence of the questions, and the direction and amount of probing used.
4. Allows greater control over the interview situation.
5. The interview provides a greater opportunity to evaluate the validity of the information by observing the respondent's nonverbal manifestations of his attitude toward supplying the information. (Gorden, 1980)

Interview Site

Specifically regarding the setting of the interview, it is recommended that wherever possible the interviews should be conducted in subjects' homes. The reason for this is that the interviewee would regard himself as being on

familiar territory and would be less likely to feel intimidated than if he were expected to visit a researcher's office site (Brookfield, 1981).

Interview Stages

There are three interview stages: the pre-interview or interview opening, the interview, and the postinterview or interview closing. These stages have been summarized by Werner and Schoepfle (1987) as follows:

1. Preinterview or Interview Opening: This is one of the most important aspects of an interview. It is important because this phase sets the stage for the interview. During the preinterview, introductions are made, possible relationships are negotiated, and if compensation is involved, the amount or kind of compensation is established. Permission to tape record or take notes is also discussed. This phase could also be called the negotiating phase of the interview.
2. Interview: There are at least three levels of control: formal, informal, and casual interviews.

Formal Interviews. In formal interviews, the commencement of the interview is obvious. If recording is permitted, turning on the recording equipment marks

the formal beginning. The formal interview ends with the turning off of the tape recorder.

Informal Interview. The actual beginning and end of an informal or casual interview is much less clear. An informal interview may just happen as part of a personal encounter. Tape recording may happen if the equipment is handy at the time.

Casual Interview. They result from casual encounters, and so preclude recording.

Interview's Probing. A probe can be defined as "a form of verbal or nonverbal behavior used by the interviewer when the respondent's reply to the question is not relevant, clear, and complete (to meet the objectives of the interview)" (Gorden, 1980, p. 368).

There are several types of probing:

- a. **Silent probe:** It is the most neutral of all possible probes because it neither designates the area of the discussion nor structures the answer in any way.
- b. **Encouragement:** It can be verbal and nonverbal, the interviewer accepts what has been said and wishes the respondent to continue speaking without saying what the respondent should talk about.
- c. **Immediate elaboration/clarification:** eg. would you please elaborate on that? During clarification, the interviewer not only asks for more information but he also specifies the kind of additional information that is needed.

- d. Retrospective elaboration/clarification: It refers to the interviewer asking for elaboration or clarification about a topic mentioned by the respondent some time previous to the immediate preceding response.
- e. Mutation: Introduces a new topic that cannot be construed to be an elaboration or clarification of any preceding response. (Gorden, 1980, p. 368)

It is necessary for the interviewer to always have some control over the topic because, as Gorden (1980) argued,

Though low topic control may be useful in building rapport, it also may fail to obtain all the relevant information. In some cases low topic control may make the respondent feel insecure because he is not sure what information is wanted. This insecurity can grow into hostility when the respondent feels that the interviewer has no clear objectives and is merely wasting time in chitchat. (p. 374)

- 3. Postinterview or Interview Closing: The postinterview contains both a business and a personal element. The business element consists of thanking the participant, and picking up the equipment (if any). And the personal part of an interview often resembles a visit with friends rather than a business transaction. It usually involves casual exchanges. A lot of important information, even unexpected, may be exchanged during this postinterview.

Reliability and Validity

In all fields that engage in scientific inquiry, reliability and validity of findings are important. A common criticism directed at qualitative investigation is that it fails to adhere to canons of reliability and validity (LeCompte and Goetz, 1982; Katz, 1983). Qualitative research is by its very nature subjective but it still can be made susceptible to reliability checks and it is still possible for the investigation to follow rules that can increase the validity of the conclusions (Taft, 1985).

Reliability, Kirk and Miller (1986) said, "is the degree to which the finding is independent of accidental circumstances of the research," and validity, they continue saying, "is the degree to which the finding is interpreted in a correct way" (p. 20).

The main thrust of methodological development in qualitative research during recent years has been toward greater validity. In contrast to the concerns of many nonqualitative traditions, issues of reliability have received little attention (Kirk and Miller, 1986).

Reliability

As mentioned before, establishing the reliability of qualitative research design is complicated by the nature of the data and the research process, by conventions in the

presentation of findings, and by traditional modes of training researchers. External and internal reliability should be addressed by the researcher.

External reliability. External reliability addresses the issue of whether independent researchers would discover the same phenomena or generate the same constructs in the same or similar settings. Because of factors such as the uniqueness or complexity of phenomena and the individualistic and personalistic nature of the qualitative research process, this kind of research may approach rather than attain external reliability (LeCompte and Goetz, 1982).

The following is a summary of the five most common ways used by qualitative researchers to enhance reliability as given by LeCompte and Goetz (1982).

Researcher status position: To what extent are researchers members of the studied groups and what position do they hold? In some ways, it can be said that no qualitative researcher can replicate the findings of another because the flow of information is dependent on the social role held by the researcher within the studied group and the knowledge deemed appropriate for incumbents of that role to possess.

Informant choices: Closely related to the role the researcher plays is the problem of identifying the informant

who provide data. Different informants represent different groups of constituents; they provide researchers with access to some people, but preclude access to others. This problem can be handled by careful description of those who provided the data.

Social situations and conditions: What informants feel to be appropriate to reveal in some contexts and circumstances may be inappropriate under other conditions. This problem can be handled by delineating the physical, social, and interpersonal contexts within which data were gathered.

Analytic constructs and premises: Replication may be facilitated by explicit identification of the theoretical premises and by defining constructs that inform and shape the research.

Methods of data collection and analysis: This is necessary in the identification and description of the strategies used to collect data.

Internal Reliability. Internal reliability refers to the degree to which other researchers, given a set of previously generated constructs, would match them with data in the same way as did the original researcher (LeCompte and Goetz, 1982).

The following is a summary of the four most common strategies used to reduce threats to internal reliability as given by LeCompte and Goetz (1982).

Low inference descriptors: Low-inference descriptors include verbatim accounts of what people say as well as narratives of behavior and activity.

Multiple researchers: In some cases, investigation takes place within a team. In these cases, one way of approaching reliability is by discussing among themselves, the meaning of what has been observed until agreement is achieved.

Participant researchers: This refers to the involvement of local people to confirm that what the observer has seen and recorded is being viewed identically and consistently by both subjects and researchers.

Mechanically recorded data: This refers to the use of video and audio tape recorders, cameras, and moving-picture cameras.

Validity

While reliability is concerned with the replicability of scientific findings, validity is concerned with the accuracy of scientific findings (LeCompte and Goetz, 1982).

Both internal and external validity should be considered by the researcher.

Internal validity. "Refers to the extent to which scientific observations and measurements are authentic representations of some reality" (LeCompte and Goetz, 1982, p. 32).

One way of reducing the threats of validity is through member validation. With this approach, it is suggested that qualitative findings are validated to the extent that collectively, members recognize and endorse the researcher's account of their social world. Since direct comparison is not feasible, as Bloor (1983) said, "the task of member validation procedures is not to elicit comparable members' accounts, but rather to discover if the members recognize, understand, and accept one's description of the setting" (p. 157).

The following is a summary of five of the ways used by qualitative researchers to try to reduce the threats of internal validity as stated by LeCompte and Goetz (1982).

History and maturation: Changes that occur in the overall social scene are what experimenters designate as history; changes that involve progressive development in individuals are considered to be maturation. Qualitative researchers assume that history affects the nature of the

data collected and that phenomena rarely remain constant. The task is then to establish which baseline data remain stable over time and which data change.

Observer effects: When data are being gathered through participant observation and informal informant interviewing, reactivity must be assessed. Possible and probable effects of the researcher's presence on the nature of the data gathered must be considered.

Selection and regression: Although qualitative researchers rarely are faced with the problem of isolating treatment effects, they do cope with distortions in their data and conclusions created by the selection of participants to observe and informants to interview. Glaser and Strauss's (1967) use of theoretical sampling--collecting data chosen for relevance to emerging theoretical constructs -- is one purposive strategy for implementing this process systematically.

Mortality: Qualitative researchers assume that the naturalistic approach precludes the interchangeability of human informants and participants. Loss and replacement as they naturally occur become topics of study in themselves. Growth and attrition are assumed to be normal processes in most group settings, so the task becomes the identification of their effects.

Spurious conclusions: In qualitative studies, all plausible causes are delineated by examination of collected data and through discussion with informants. Postulating associations among phenomena depends on elimination of alternative explanations. Although no research design can identify the precise cause of an observed datum, qualitative data may be quite effective in delineating the most probable causes and in specifying an array of those most plausible.

External validity. This addresses the degree to which scientific observations and measurements may be compared across groups (LeCompte and Goetz, 1982).

The problems of external validity most frequently are ignored by qualitative researchers. Due to the nature of this kind of research, the problems of generalizability in qualitative research are approached from a different perspective than the hypothetic-deductive one. As Erickson (1986) pointed out:

This is not to say that qualitative research is not interested in the discovery of universals, but that it takes a different route. The search is not for abstract universals arrived at by statistical generalization from a sample to a population, but for concrete universals, arrived at by studying a specific case in great detail and then comparing it with other cases studied in equally great detail. The task of the analyst is to uncover the different layers of universality and particularity that are confronted in the specific case at hand -- what is broadly universal, what generalizes to other similar situations, what is unique to the given instance.

This can only be done by attending to the details of the concrete case at hand. Thus the primary concern of qualitative research is particularizability, rather than generalizability. One discovers universals as manifested concretely and specifically, not in abstraction and generality. (p. 130)

Summary

This review started with the research literature on self-directed learning. This literature was separated into two sections: previous research and current and emerging research. Then other knowledge areas (social learning theory, experiential learning, and social networks, social time) were briefly described. The emphasis was on their broad relationship and implications for self-directed learning. This was followed by a discussion on different approaches to facilitate self-directed learning. Finally, an overview of qualitative research methodology was presented.

The purpose of the review was to introduce the reader to the general field of self-directed learning before narrowing the literature review down to those citations most directly related to the specific research problem and research methodology.

The literature presented convincing evidence that self-directed learning is a widespread methodology used by adults. It became clear that little research has been

conducted using qualitative research methods, and viewing the process from the learner's perspective. Even though several authors have recognized the need for research which investigates the relevancy of self-directed learning for the extension education field, very little research has been done in this area. Furthermore, no research had been done using adult farmers as the population. It is the intention of this researcher to make a contribution to build the literature base in this area.

CHAPTER III

METHODOLOGY

The major purpose of this chapter is to provide a comprehensive view of the procedures used to study the self-directed learning process within a selected group of adults. Attention has been given to both the theoretical base for the methodology and to an explanation of the principles used for collecting and analyzing the information.

This chapter has been divided into seven sections that provide an overview of the methods and procedures used in this study. The first section gives the rationale for the use of the grounded theory approach; the next four sections contain a description of the study participants: the selection procedure, the study site, the initial contacts, and the nature of the interview; and the final two sections describe the coding and analysis of the data, and the measures taken to address the issues of validity and reliability in this study.

Use of Grounded Theory

This research was designed to generate theory on the process of self-directed learning. It was chosen by what Glaser and Strauss (1967) called "the constant comparative

method" of deriving grounded theory using the data to develop a theory closely related to the phenomena studied.

Open-ended, in-depth interviews were chosen as the tool for data collection for several reasons. First, interviews are a satisfactory way to get at peoples's understanding of their own behavior, or their definitions of the situation. The researcher was interested in elucidating adult farmers' perceptions of their own process of self-directed learning, not in determining whether or not these situations had actually occurred. Neither observations nor laboratory experiments could show this dimension.

Second, the non-standardized, open-ended nature of the interview was intended to maximize the potential for discovering the important aspects of self-directed learning by allowing the farmers to freely discuss their perceptions of their own learning in their own terms. This open, relatively unstructured interview method allowed the researcher to reformulate the problem and modify questions and categories as more was learned during the course of the investigation.

Other researchers in the adult education field (Houle, 1961; Bates, 1979; Taylor, 1979; Brookfield, 1982a and 1982b; Fingeret, 1983; Dany's and Tremblay, 1985) have made use of this tool for data collection in their studies. One strength of these studies was their in-depth focus on a very

small number of subjects. This is an approach that, as qualitative researchers say, allows patterns to emerge that might be cancelled out in a survey format.

Selection of the Study Participants

The issues involved in selecting the study participants for this research raised important theoretical and practical concerns. Given the paucity of research on this emerging topic, little theoretical basis existed for identifying significant variables (e.g. sex, educational background). Since the intention of the research was exploratory, no effort was made to select a representative sample which could be used to test specific hypotheses. The selection of the participants was based on the theoretical sampling procedure outlined by Glaser and Strauss (1967) in which the researcher gathers material, analyses it for patterns, formulates new questions, and seeks out new sources of information based on the knowledge already acquired.

Glaser and Strauss (1967) recommended selecting the population as a group of people who seem to be the most likely to provide data related to the problem area. For this particular study, the most obvious group to seek data from was people who at the time of the study were engaged in self-directed learning activities. Some decisions were made based on these recommendations. Those decisions reflected

both the practical and theoretical concerns of the researcher.

Originally, the population for this project was to include three families (six adults) who were participants in a farm family research project conducted by researchers at a midwestern university. It was assumed that these people were actively involved in self-directed learning activities because the moment they joined that project, they were faced with many challenges not only related to farming, but also related to their new rural life style. Furthermore, no formal training program had been developed to help these people cope with these challenges.

Several months later, the original plan to include them as the population, had to be abandoned due to several reasons. First of all, immediately after the necessary contacts to initiate the study had been made, one of the families left the project leaving the study with only two families (four subjects) from whom to seek data. Regardless of that fact, the collection of data was initiated as had been planned. The data collection process included individual and group interviews as well as observations (see Appendix A).

During the process of doing the field work, the researcher began to realize that to continue with such a small number of subjects (four) would have meant big changes

in the original plan (proposal). In other words, in order to accumulate enough information to draw patterns and conclusions, it would have required an increase in the number of visits (observations and interviews) to these families. The researcher carefully analyzed and weighed these possible changes and concluded that an increase in the number of visits to these two families was going to be impractical not only for the researcher, but also for the families, who had already been studied by other research groups from the same university.

After three months of field work, it was decided to look for an alternative population for this study. So, rather than discarding the notes produced from that field work, it became the pilot study. This period was very useful for the researcher, especially in improving her interviewing skills.

On the practical level, there are limitations which may heavily complicate the selection of study participants in any study. One of these problems is usually gaining access to any given group. When looking for an alternative population, this problem was overcome through one of the two families from the pilot study who belonged to the Organization of Organic Growers. This family served as the initial bridge between the researcher and the new group. Then, after carefully studying several options, it was decided that the

participants for this study would be some of the members of the Organization of Organic growers.

The first reason, then, to choose this group as the population for this study was the assumption that they, as a group, represented as Glaser and Strauss (1967) said, a likely group to provide data related to the problem area, because this type of farmers had been traditionally isolated from the mainstream of the agricultural research and education system. So, through the years, they had been pushed to develop their own learning system.

The second, and perhaps the most important practical reason was the fact that this group, as was mentioned before, could be relatively easily reached by the researcher.

The exploratory nature of the study dictated the broadly defined selection criteria used. The criteria used to define the study participants was that to be a participant in this study, the adult learner had to:

1. Belong to the Organization of Organic Growers, i.e. his/her name had to appear in that organization's roster.
2. Be farming organically and be active at the time of the interview (i.e. he/she had to have some crops and/or animals grown organically at the time of the interview).

3. Be willing to participate.

In keeping with the theory-generating focus of this research, beyond the three characteristics already mentioned, the definition of the group was kept broad. Thus, it was possible to make use of variations such as educational background, age, and so on.

Originally, the researcher had assumed that all of the people whose names appeared in the organization's roster were active farmers; however, soon after the data collection started, it became clear that this was not necessarily true. So, these three criteria were met with all but two of the people, who during the interview stated that they were not actively farming. The researcher decided to withdraw their interviews from the data.

Number of Study Participants

Thirteen farm households were visited with a total of 17 people interviewed. In four of the farm households visited, the partners were present and so the researcher decided to interview them as well.

Study Site

This organization of Organic Growers was divided into chapters. Each of the four chapters represented a geographical region: Raisin Valley, Thornapple, Thumb Area, and Southwest Chapter.

The participants for this study belonged to one or the other of the first three Chapters listed (i.e. Raisin Valley, Thornapple, or Thumb Area) (Appendix B). No farmers were chosen from the Southwest Chapter because, according to the information obtained by the researcher, the farmers in this chapter did not consider themselves to be organic--due, among other things, to the fact that they had to spray many chemicals on their fruit plantations. As a result, this situation might have complicated the selection criteria.

Initial Contacts

Entrance to this group was gained through one of the families in the pilot study. This family introduced the researcher to other members of the organization. One of the two people was chairperson of one of the chapters at that time. This person was considered the key contact. Among other things, the key contact facilitated access to the organization's roster and prepared a cover letter which was used to introduce the researcher and the research to the farmers in the three different chapters (Appendix C). Furthermore, the key contact provided the researcher with most of the needed information about the organization.

The contacts for interviews with farmer-members in the first chapter (Thumb area) were made as follows: The researcher had the opportunity to attend a "farm day

demonstration" at one of the farms in this area. During that visit, contacts were made with four of the farmers who attended. The researcher explained to each of them the purpose of the research, and all but one volunteered to participate. One of the farmers contacted did not want to participate because, at that time, he did not have any crop in his farm; he was not an active farmer. Several days later, those three farmers were called by phone and appointments were made to visit each of them at a time and date convenient for them.

The contacts for the other two chapters were made in a slightly different way. Each farmer was first contacted by mail. Two letters were sent to each of them. One of those letters, written by the researcher, explained the purpose of the study. The other one was prepared by the key contact and in it the researcher and the research were introduced to the Organic farmers (Appendix C).

One week later, a follow-up call was made to each of the farmers who received a letter. The main purpose of that phone call was to check their willingness to participate in the study. The phone conversation began with salutations, and these were followed by:

I am calling you about the study I plan to conduct for my doctoral dissertation. As you may remember from reading the letters I sent last week, the topic of my research is self-directed learning. I am trying to find out how people learn on their own. I would like to know whether you would be

willing to spend some of your time (approximately one hour) talking with me about that topic. . .

Routinely, the person pondered for a moment. Some of them asked more detailed questions about the research. The researcher then tried to answer them. If the person agreed to participate in the study, a time and a date most convenient for the respondent was immediately scheduled. They were told the interviews would focus on the different ways they had been learning on-their-own about organic farming. They were also told that the interviews would be tape recorded, and that it would take approximately one hour of their time.

A couple of days before the appointment date, a confirmation call was made. During each of these calls, the researcher asked for directions how to get to each of the farms (two of the participants mailed a map).

Nature of the Interview

The interviews were conducted in the farmers' homes. Only one person preferred to be interviewed in a different place -- that person chose to be interviewed in the researcher's car. It was decided to interview them in their homes because as Brookfield (1981) pointed out:

By conducting the interviews in subject's homes . . . the interviewee would regard himself as being on familiar territory and would be less likely to feel intimidated than if he were expected to visit a researcher's office site. (p. 14)

Most of the interviews lasted from one to one and one-half hours, (some lasted as little as 50 minutes and others as long as two and one-half hours). In none of the cases was an interview terminated because a farmer did not want to continue. In fact, most of them reported enjoying the experience, and were pleased that a researcher was finally looking at them. Some of them appreciated what the researcher was doing because, as one of the interviewees said, "all of us can take advantage of it."

The interviews were in-depth and open-ended. The non-standardized, open-ended nature of the interviews, as mentioned before, was used to maximize the potential for discovering the important aspects of self-directed learning by allowing the farmers to freely discuss their perceptions of learning in their own terms. This open, relatively unstructured interview method allowed the researcher to reformulate the problem and modify questions and categories as more was learned during the course of the investigation.

All interviews were tape-recorded with the farmers' permission. Only two farmers showed themselves somehow cautious. In other words, they preferred not to say some things during the interview, because their conversations were being recorded.

Interview Stages and Follow-up

The interview stages or interview proper, as Werner and Schoepfle (1987) called it, consisted of three phases: the interview opening or preinterview, the interview, and the interview closing or postinterview.

Interview Opening or Preinterview

Since the researcher was aware that this was one the most important aspects of any interview, extreme care was taken to try to keep this phase as informal as possible. At the beginning of each interview, the study participant was put at ease with casual conversation, i.e. all interviews were preceded by a short period of conversation about the weather, work, or whatever interested the farmer at that moment. So, a friendly comfortable climate was established. Following this, the researcher's opening comments served:

1. To review the purpose of the study with the study participant.
2. To prepare the study participant for the interview format.
3. To inform them the tape recorder was being turned on.

Formal Interview

The initiation of this phase was marked by the researcher turning on the tape recorder. The interview

began with questions that were clearly related to the topic of the research, and that were easy for the respondent to answer. Questions were usually presented in a "funnel sequence," in which very broad questions were initially posed in order to give the respondent control over the discussion of their experiences without imposing the researcher's frame of reference. Broad questions were followed by more specific ones (open-ended probing questions) in order to stimulate memory or to clarify the particular types of relevant experiences. The "funnel sequence," according to Gorden (1980), elicits the respondents' own understanding of their experiences rather than separated fragments of data.

Each interview started by explaining purpose of the study by the researcher in the following manner:

Let me start explaining about what I am doing. I have been here in Michigan for three years, with my husband and my five-year old daughter. I am a Ph.D. candidate in Agricultural Extension. We came from Venezuela, and my job there is an Agricultural Extension teacher in a large University. My dissertation topic is self-directed Learning, I am interested in this topic because this is really the way most learning occurs. I found out about your group of organic growers and I thought that your group would be a very interesting group to talk with, especially because as far as I know most of the things that you have been learning have been on your own. (At that moment the farmer usually agreed with the researcher by saying that that assumption was correct.)

Following this explanation, there was an initial series of questions where participants were asked specific things about their farms and farm background (e.g., how large is your farm? What do you grow? How long have you been farming? How long have you been an organic farmer?). These questions put the participants at ease by getting them to talk about their farms and their own backgrounds. At the same time, this background information gave the researcher specific examples of farm activities. This information could be used during the course of the interview, specifically when trying to focus.

For all of the interviewees, the interview continued as follows, "I will continue the interview by asking you a very general question. I would like you to talk to me about the different ways you have been learning on your own about Organic farming."

The researcher attempted to keep this question as general and as non-directive as possible to allow the study participants to begin this topic where they felt comfortable. This also allowed them to respond spontaneously, and to share what they considered important.

The interviewer used the generally accepted interview technique of "silent probe" (pausing) after statements were made by the study participants, to allow them to add more to their responses. Frequently, the study participants needed

just a few quiet moments to reflect or to collect their thoughts before proceeding. If it was judged, by the study participant's comments or pauses, that he/she had nothing further to add, the researcher restated part of his/her previous response and pursued either the same area of inquiry or another by asking a probing question.

Throughout the interview, the interviewer used restatements that were brief repetitions of the study participants' responses to ensure perceiving the study participants' responses and intents as they intended them. This technique helped to ensure some degree of validity of the findings.

As is the case in this type of study, the researcher expected the later interviews to be more polished and more productive. The interviewer expected to profit from the interview experiences and analysis over time. So, after having interviewed 12 people when most of the patterns had already emerged, the researcher then developed a guide based on these findings. This guide (Appendix D) was used to focus later interviews.

Table 3.1 shows how the themes were emerging and how they were incorporated progressively into the interviews. While this procedure may be perceived by some people as an area of concern, this inductive process really represented one of the strengths of this methodology.

Table 3.1

Major Emerging Themes Based on Interviews

Interview #	Other People	Extensionist	Consultants	Salesperson	Seminar Conferences	Withholding Information	Learning Through Experience	Courses
1	+	+	+	+	+	-	+	-
2	+	+	+	+	+	-	+	+
3	+	+	+	+	+	-	+	+
4	+	Q	+	+	+	-	+	+
5	+	Q	Q	Q	Q	+	+	Q
6	+	Q	Q	Q	Q	Q	+	Q
7-8*	Q	Q	Q	Q	Q	Q	Q	Q
9	Q	Q	Q	Q	Q	Q	Q	Q
10-11*	Q	Q	Q	Q	Q	Q	Q	Q
12	Q	Q	Q	Q	Q	Q	Q	Q
13	Q	Q	Q	Q	Q	Q	Q	Q
14-15*	Q	Q	Q	Q	Q	Q	Q	Q
16-17*	Q	Q	Q	Q	Q	Q	Q	Q

+ = Those that emerged in the interview content.

- = Not present in the interview content.

Q = Interview question.

* = Farmer and partner interviewed.

Interview Closing or Post Interview

The beginning of this stage, as Werner and Schoepfle pointed out, was marked by turning off the tape recorder. This section of the interview usually involved casual exchanges. It called the researcher's attention to the interviewee, and in several cases this portion lasted as long as the interview itself.

At the close of each interview, the researcher reiterated from previous conversations how the interview content was to be handled. Each study participant was told that they would receive a summary of the results, if they so wished, at the completion of the study and research report. The study participant was thanked and the interview session ended.

Follow Up

Letters of thanks were sent to each of the study participants several days after the interview (Appendix E).

Coding and Analysis

As mentioned before, the main goal in analyzing the data was to generate grounded theory that would be, as Glaser and Strauss (1967) said, "a bridge between the theoretical thinking of sociologists and the practical thinking of people concerned with the substantive area" (p. 241).

The strategy used for analysis was similar to what Glaser and Strauss (1967) described as the constant comparative method. This method:

Is not designed (as methods of quantitative analysis are) to guarantee that two analysts working independently with the same data will achieve the same results; it is designed to allow, with discipline, for some of the vagueness and flexibility that aid the creative generation of theory. (p. 103)

Coding and analysis of the data began with writing the initial summaries immediately following each interview. Immediately after each interview, the researcher prepared a summary of the major themes, and a description of the context of the interview (e.g., setting, people around).

Memos were written at a variety of times during the data collection and subsequently up to and during the writing of the dissertation. Memos were written whenever a thought, idea or impression related to the study came to mind.

Analysis did not proceed in as structured a fashion as originally anticipated. In planning this study, the researcher expected to finish each of the transcriptions before doing the next interview, but this step (transcription of tapes) became more time consuming than expected, especially during the first three transcriptions since they were done word by word. From these transcriptions, it was possible to determine which parts of an

interview were relevant to the topic and which parts could be left out. In later transcriptions some parts of the interviews were not transcribed such as pure technical information about organic farming, conversations related to weather, politics in USA, etc.

As subsequent interviews were conducted, and after re-reading the transcripts many times, main themes began to emerge. The transcriptions were coded and sorted according to the main emerging themes and these cut-outs were filed in a folder under each category. This process, although a tedious one, assured a close correspondence between the emerging themes and the farmers' actual perception of their self-directed learning process. In developing the analysis, the themes were continuously rearranged and related to each other. The researcher tried to search for the best way to express the similarities and differences.

Sorting the data provided the basis for developing Chapter IV, Discussion and Presentation of Findings.

Validity and Reliability

The study was designed to maintain some degree of rigor for supporting the validity and reliability of the derived data. A most critical index for validity in this research was what Bloor (1983) called member validity. With this purpose in mind, the researcher prepared a summary of findings resulting from the first 13 interviews (Appendix

F). This written summary was read to the four last interviewees by the researcher. The researcher introduced the summary of findings to the interviewees after their own interviews were finished as follows:

I am going to do one more thing with you, if you allow me, that I have not done before. I have made a summary that I want to read. It is my interpretation from the first 13 interviews I have conducted. I would like to hear your feedback. The summary does not necessarily have to represent you, but it is the way I perceive this group and their learning.

Their feedback covered the major points presented in the summary. Most of these comments were incorporated into the findings section. The common opinion among the study participants who listened to the summary and gave feedback, was that the researcher was "on the right track."

Another way the researcher addressed the issue of validity was through the use of restatements during the interview. It is believed that through the confirmation of meaning (restatements and member validation) used in this research as an index of subjective adequacy, the accuracy of the data derived was greatly increased.

In relation to the issue of generalizability, it is not believed that the framework and the range of experience from this study is generalizable in the strict sense of the word as each and every learner will experience an event in a different and unique way. However, it is believed that the themes that were identified, and the range of experience

within them, may resonate with the experience of other adult learners and serve as a map to guide other learners in exploring the richness of their own experience. As Erickson (1986) argued, "the major concern of qualitative research is particularizability rather than generalizability" (p. 130).

The researcher addressed the issue of reliability in this study in several ways. First, all of the interviews were conducted by a single, experienced interviewer. Second, all of the interviews began with similar questions. Third, the audio-recording provided a permanent record of the interview session. Finally, careful documentation was made of all aspects of the methodology used, including a detailed description of the steps followed during the analysis and coding of the data.

Summary

This chapter contained an overview of the methods and procedures utilized in conducting this study. First, a rationale for the use of the grounded theory approach, and the use of interviews was presented. Then, the study participants' selection criteria was explained. Next, the study site, the initial contact procedure, and the nature of the interviews were outlined. Finally, the last two sections contained an introduction to the coding and analysis procedures that were utilized as well as a description of the measures taken to address the issues of validity and reliability in this study.

CHAPTER IV

FINDINGS AND DISCUSSION

Introduction

In the following major sections, the findings are presented under each of the four areas of inquiry that guided this research.

Area of Inquiry #1: Who are these learners?

This section contains a brief description and summary of the major demographic characteristics of each of the 17 interviewees.

Area of Inquiry #2: How do they perceive themselves as learners and how do they perceive learning in general?

This section contains the description of how they perceived themselves as learners and the nature of their learning. It includes how they conceptualize learning. In addition, responses to the question, "Why self-directed learning as opposed to formal courses?" are presented.

Area of Inquiry #3: How have they learned on their own about organic farming?

The findings corresponding to this area of inquiry are presented and discussed following the major patterns that emerged from the data analysis, as follows:

Learning Process in General: the major components of this learning process are presented emphasizing their role played in learning as perceived by the study participants. Discussion of these findings follows each of the major learning components. These major learning components are the following:

- Learning from reading refers to learning from books and magazines.

- Learning network refers to the learners' social environment, in other words, the people they learned from. This network is ranked in order of perceived importance as follows:

1. Other farmers
2. Formal network
3. Cooperative Extension Service
4. Consultants
5. Salespersons

Sharing of Information: this refers to the phenomenon of exchanging information between the study participants and their learning network.

Learning Through Experience: this refers to learning by doing and/or learning from mistakes.

Area of Inquiry #4: What have been the main problems/challenges faced when learning on their own?

This section contains the findings related to the major problems/challenges mentioned by the respondents in relation to their learning.

AREA OF INQUIRY #1: Who are these learners?

Demographic Characteristics

The data show that the people interviewed represent a young group of adult farmers (Table 4.1). The majority, 13 out of 17 were men, and all but one had at least a high school diploma (Table 4.2). The majority of them, 11 out of 17, had been organic farmers for at least five years (Table 4.3); and most of them, 14 out of 17, were working as part-time farmers. They had other non-agriculture related off farm jobs; however, one had an agriculture related job.

When compared with the general population of small farmers in Michigan, the participants in this study represented a relatively young and more highly educated group of farmers. The statistical data about the small farmer in Michigan showed that the majority of farmers (men) were older than 45 years. In relation to their formal educational background, it showed that the majority of them

Table 4.1

Respondent's Ages

<u>Age</u>	<u>Number</u>
Less than 30	1
30 - 45	12
45 - 60	3
60 and over	<u>1</u>
<u>Total</u>	<u>17</u>

Table 4.2

Educational Background

<u>Highest Level Attained</u>	<u>Number</u>
Primary School	1
High School	4
BS (Non-Ag-related)	9
BS (Ag-related)	2
Master's (Non-Ag-rel)	<u>1</u>
<u>Total</u>	<u>17</u>

Table 4.3

Time as an Organic Farmer

<u>Number of Years</u>	<u>Number</u>
0 - 5	6
5 - 10	8
10 - 15	2
15 or more	<u>1</u>
<u>Total</u>	<u>17</u>

had received high school diplomas (Thompson and Hepp, 1974; U.S. Department of Commerce, 1983). A brief description of the major characteristics of each of the 17 interviewees follows.

Interviewee Description

Interviewee #1

Male, 65 years old, married, and a full-time farmer with a ninth grade education. He has been farming all of his life and has been farming organically for 25 years. He has a 265 acre organic farm. He grows beans, wheat, alfalfa, and some beef cows. He likes to interact with many people and is very religious. He has hired consultants.

Interviewee #2

Male, 36 years old, and married with three children. He has been living on a farm all of his life, his dad had milking cows. He has been farming organically for two years. He has a 1000 acre farm with wheat, oats, corn and beans. Fifty acres are farmed organically. He is a part-time farmer and his off-the-farm job is as a Vocational Education teacher. He holds a BS in Industrial arts automotive. Several years ago he wanted to quit farming because the debts were too big, however, his family made him to reanalyze his life. So, he decided to farm again, this time doing it jointly with his father.

Interviewee #3

Male, 48 years old, and married with two children. He has a 160 acre organic farm. He grows wheat, corn, oats, soya and has some organic beef cows. He has been farming all of his life and has been growing organically for 11 years. He is part-time farmer and his off-the-farm job is selling organic products. He holds a BS in engineering. He has been one of the promoters of the his organic growers organization chapter.

Interviewee #4

Male, 44 years old, and married with one child. He has a 2.6 acre organic farm. He grows vegetables. He does not have a farming background, and he has been farming organically for four years. He holds two MS degrees, one of them in music. He is a part-time farmer and he works off-the-farm as a businessman. He believes farming is a private profession.

Interviewee #5

Male, 46 years old, and married with one child. He has an 87 acre farm where he organically grows vegetables. He has been a farmer all of his life and has been growing organically for the last eight to 10 years. He holds a BS in mechanical engineering. He is a part-time farmer and he works off-the-farm as a computer specialist. He has been

chairperson of the organic organization chapter several times.

Interviewee #6

Male, 45 years old, and single. He works with a partner; however his partner was not interviewed because he was not present that day. He has an 80 acre farm where he organically grows some grains and keep some organic beef cattle. He has been a farmer all of his life and has been growing organically for 12 years. He is a full-time farmer who finished high school. He is not very outgoing, and he considers himself an expert in his field.

Interviewees #7 and #8

#7: Male, 42 years old, and married with four children. # 8: Male and 40 years old. They work as partners in a 10 acre organic farm where grow mixed vegetables. They do not have farming backgrounds and they have been growing organic products for 14 years. They are full-time farmers who finished high school. They consider themselves experts in their field.

Interviewee #9

Male, 42 years old, and married with three children. He has a 18 acre farm where he grows organic alfalfa and vegetables. He also has some chickens and goats. He does not have a farming background. He has been farming

organically for six years. He started as a part-time farmer and did so for four years, the last two years he has been working full-time as a farmer. He holds a BS in math. He is very outgoing and for him, the best way to learn is from people.

Interviewee #10

Female, 36 years old, and married with two children. She has an 80 acre farm where she organically grows oats. She has been living on a farm all her life. Her father had dairy cows, and has had this organic farm for four years. She is a full-time farmer. Her husband works out of their house. She holds a BS in physical education. She perceives herself as being at a disadvantage because she is a woman and because she lives in relative isolation from other members of the organization.

Interviewees #11 and #12

#11: Male, 48 years old, and married with two children.
#12: Female, 42 years old. They are husband and wife and work as partners on a 40 acre farm where they grow organic vegetables. They did not have a farming background, but they have had their organic farm for 10 years. Each of them has a BS. They are part-time farmers, and their off-the-farm jobs are not related to agriculture. He believes that one of his major barriers to learning is not being outgoing,

so he prefers to learn alone. She believes that they are learning so other people will not make the same mistakes.

Interviewee #13

Male, 26 years old, and single. Works with her sister as a partner, she was not present at that time, so she was not interviewed. He has been a farmer all his life. His family has been farming organically for 14 years and he has been in charge of the farm for the last eight years. They have an 80 acre farm where they organically grow berries and vegetables. He finished high school and is a full-time farmer. He is a very shy person. He does not perceive himself as being at a disadvantage because he is younger than the other members of the organization; on the contrary, he feels that being young helps him to get more information from other people.

Interviewees #14 and #15

#14: Male, 36 years old. #15: Female, 32 years old. They are husband and wife who work as partners. They have a 40 acre farm where they organically raise some chickens and goats. They are part-time farmers. Each of them holds a BS. He works off-the-farm as a woodcraftsman and she works as a school teacher. They considered that they had some indirect farming background, i.e. his dad and her grandfather were farmers. They are very outgoing. He is

the chairperson of one of the organic farmer's organization chapters.

Interviewees #16 and #17

#16: Male, 35 years old. #17: Female, 34 years old. They are husband and wife who work as partners. They have a 75 acre farm where they have woods and sheep. They have been farming organically for two years. They are part-time farmers and their off-the-farm jobs are agriculture related. Each of them holds a degree in agriculture related fields.

AREA OF INQUIRY #2: How do they perceive themselves as learners and how do they perceive learning in general?

Nature of Their Learning

Perception of Learning

This section contains the presentation of findings related to the ways the study participants perceived learning in general, as well as how they perceived themselves as learners. In addition, the main reasons why they preferred self-directed learning over formal learning are presented.

This group of adult learners conceptualized learning as a continuous process, i.e a process that never ends. The following are some examples from the interviews.

I believe that throughout eternity we will continue to learn. I do not think we are going to stop learning here on this earth. (#1)

Learning is an endless cycle, and until I take my last breath I will be learning. I think that there is no question about that. The older I get, and I am 36 now, the more I find I do not know, and the more I find I do like to learn. . . . I have learned that every time I learn something new, the less I know, even though I have learned more knowledge. I just find out that there is more knowledge out there that I do not have. I am finding that as I get older and I put my mind to it, I learn just about anything. (#2)

I do not think that learning ever ends. I think that there are always new things that you are figuring out. From little pieces of information that you are relating, we make the isolated facts go forth. (#14)

Self-Perception of Learners

The majority of the adult learners defined themselves as good learners, curious, interested, always looking for new things, and enjoying what they were doing, as shown in the following excerpts.

I am a good learner (laughing), good, and eager. I am very interested and motivated, I have felt very proud of everything I have learned as far as growing. I have taught myself. I have felt very good about it. So, ever since I left college, I realized I was going to have to teach myself everything that I was to learn, and I feel good about it. (#12)

I think I am pretty good learner. I have not had much of a problem learning things. (#16)

I am a person that learns things very quickly. I generally learn things a lot faster than most people and dig into things a lot deeper than many people do. If I get into a new area, which I frequently do, I do not generally think of myself in these terms. I very quickly become an "expert" because I dig into it in great depth and details. So, I learn very quickly, very much more so than perhaps the average person. I guess I am almost

always doing something a little new, just thinking about how can I do something better, and trying it and seeing how it works. (#5)

I am constantly looking at new ways of doing things better and that's why I keep learning. . . I am a very motivated learner. I am very curious about information whether it is information about growing things or whatever. I am constantly looking for something that I do not know, some new little angle, or new territory, a new piece of information. (#4)

I have been a kind of innovator, and even when I farmed conventionally before, I was always looking for new ideas, or something that would interest me, that sort of thing. I am curious, introspective, and interested. In other words, I like what I do, and I like about everything connected with it. (#6)

(How do you perceive yourself as a learner?) Open-minded. (#7) Definitely. You have to be open-minded, and I am looking for new answers to questions that you had before. We are always viewing ourselves as learners, every year. (#8)

A very small group of them, four out of 17, described themselves as slow-learners. It is interesting to mention that three of these people had a BS. In this group, the low perception of themselves as learners did not seem to be related to low educational level.

I like to read, but I can only go so far there. I am not very good. I am a little bit slow. (#3)

(I am an) interested learner, a little bit of a slow learner. It has to be kind of hammered into me. I can not necessarily just read a book and pick up 50 percent of the information that I read. And I do learn better from experience and talking to people than I do from books. But if I am interested in the subject, I like to learn. (#9)

I am a slow learner, because I take a particular paragraph and some particular subject, and then I

will dig in and I do not do anything about it, so my reading is very slow. I am not a speedy reader. I think I am quick putting into practice, as compared to digesting the material. (#14)

(I am a) slow learner (laughing). Maybe this is the case with everybody, but it seems that I have to actually make the mistakes before. I suppose some people can figure out the mistakes before they have ever made them, and know that there are certain problems here they have to fix before they are even going to do it; whereas, I seem to actually make the mistakes before I can fix them (smiling). It just seems that what I hate to do is to change anything until I know it does not work. I guess some things you hear that you have got to do this or you have got to make this change because that does not work, well I usually do it anyway. I just have got to know. I have to do it. I do not like studying about. I think that is why I have to make the mistakes. I do not like studying things before they happen. I like doing it, having it happen and then fixing it. (#13)

Some of them saw themselves as teachers. They felt that one of their roles as learners was to be able to teach others. They even talked about teaching knowledge. What follows are some examples from the interviews.

We look at ourselves as though we are people who are learning for other people. We have always done that, because we knew there was not that much known about organic methods and that is always being an experiment that we have done. (#10)

It's kind of an Indian custom. I suppose that with education comes responsibility, that once you learn something you also have the responsibility as a teacher. (#14)

I do miss having other people around. The excitement of learning, I do miss that. It is teaching. You have to be able to teach, and then it is frustrating that there are not more outlets to share and to teach through. (#12))

Just like for me, I have got a basic knowledge how a lot of things work, but I have not got a teaching knowledge of it yet. And as I told my students, unless you can teach it, you really do not know it. I do not believe that they have (referring to his students) really learned it until they can teach it themselves. When they can teach it themselves, then that means that they have learned the subject well, and I do not feel anywhere close to being capable of teaching the subject of organic farming by any means. But I think I have learned enough to understand the basics of it, and in a couple of years down the road I think I could. (#2)

Why Self-Directed Learning?

As suggested earlier, the majority of the study participants learned about organic farming through self-directed methods. In other words, the majority of them have not had formal training in that area. Their opinions about formal courses varied. It is possible to differentiate three groups of opinions. Each group will be illustrated below.

1. Those who did not like formal learning. The majority of the people interviewed fell into this category. For example,

I prefer learning on my own. I am not sure why. I guess, it is because it allows my curiosity to grow. More classes are pretty oriented towards one subject and I do not need the expertise that comes from one subject, even if the whole thing is about broccoli. (#13)

As far as the classroom situation, for me the classroom is very tough right now. When you get out of it, you may have a great specific information, but when you go out to the field what have you got? It does not help that much. (#4)

(Formal courses related to agriculture) do not appeal to me very much. As far as something the college sponsors, I could not get too excited about it. (#6)

I disagree with going to a course where someone want to charge me \$75, I would rather learn it out of ACRES USA (a newspaper), and then cultivate, or hoeing or whatever I am doing in my quiet time to think back over those articles. (#1)

2. Those who were willing to attend if relevant courses were offered.

It (the course) was interesting. What it proved to me, at that point I thought, I was in that point in my learning process. I was thinking that somebody out there knew all the answers and if I could just find them everything will be "duddy," and of course what I have learned in the course is that is up to you to learn. It was very informative for me, and it gave me more sources of information. (#11)

It would be nice if maybe some of the local colleges had courses that you could take so that I could take some formal training. It would be nice. Even after I have learned, I would have actually appreciated more now than when I originally started. Now I could absorb an awful lot. If I went to a course with somebody with a lot of experience, I would know which questions to ask. I would like something like that now, but it is not really that available. (#9)

Self-directed learning was chosen by all of the subjects as their preferred way of learning. Among the major reasons why they preferred learning on their own as their way of learning, were the following: "you can learn at your own pace," and "you can develop your own interest."

The biggest thing is that in independent (self-directed learning), you do not have rigid courses. If you take a class on sheep, I am sure you have

to learn all the breeds of sheep. I learn what I need to know, what I think I need to know, or what I want to know. You take it at your pace, as fast as you can handle it. You are not held up by anybody else. (#16)

You can also get into your own interests that way too. That is the nice thing when you are doing it in your own. (#17)

The part of being able to do it by myself, you have just to do it (smiling). I enjoy growing. I enjoy everything about working with the ground, so it is healing too. It makes me feel good. (#12)

Yes (smiling) that (learning on his own) is about the only way. I do not like to be told what to do. I like to find out for myself. (#13)

Well I much prefer it. That is the way I work. Classroom somehow? No, I do not know. I find it confining there. I do not know why. I prefer learning on my own. I am not sure why. I guess it is because it allows my curiosity to grow. (#4)

For some people, this situation of being on their own was also perceived as having its negative sides. For example, it allowed them to be lazy, so they did not always do the things they were supposed to do.

Sometimes, when something is wrong, I do not want to fix it. You get into a certain way of doing things and you do not want to change. I think that is my major problem, because being on your own you are in charge, and you just kind of be lazy, (that is the word), and not change it. (#13)

Nature of Their Learning -- Discussion

This group of learners conceptualized learning as a continuous process, a process that never ends, and a cumulative process (stock of knowledge). This view of conceptualizing learning agrees with what the experiential

theory advocates have written. According to this view, learning is seen as a process whereby concepts are derived from and continuously modified by experience (Kolb, 1984).

These learners preferred self-directed learning over formal courses. The major reason stated was that learning on their own allowed them to learn what they wanted at their own pace. These findings are similar to what was found by other authors. Penland (1979) found that one of the major reasons why the adults in his research preferred to learn on their own instead of taking courses was, a positive desire to have more control over the learning situation.

AREA OF INQUIRY #3: How have they learned on their own about organic farming?

How They Learned About Organic Farming

Only two of the people interviewed had a formal background in agriculture related fields at the college level (Table 4.2), and only a few had taken some courses related to agriculture. The data suggest that the majority of the people interviewed, 11 out of 17, had not been farmers before. Most of them started farming with their organic farms. The time they had been farming using organic methods varied from less than five years to more than 15 years (Table 4.3). Some of them had some informal background in farming before starting their organic farms. This informal background was obtained either directly by

having been farmers all their lives, six out of 17, but not necessarily organic farmers, or by being in contact with some of their relatives' farms. In all cases they recognized that they had learned a lot through informal means. The following quotes from the interviews illustrate this.

My father was a farmer and so I learned a lot of things about growing up on a farm which is probably the best way to learn about it. There are many advantages to growing up on a farm. You can not learn farming from a book. The way you learn farming is by doing it. (#5)

There was a certain amount (of knowledge about organic farming) that I had to draw from too. It was being third generation type of thing and having the contact with some of my grandfather's principles. I just had it. I just got the end of it. But anybody younger than me, the odds are that they did not have it or actually saw it. Some people may have talked about it but they did not see it. (#3)

You can read about how to grow corn or whatever, but if you have not been raised up to see weeds, or if you have to rely on a book or somebody to tell you that, it is not going to work. (#6)

I was raised on a dairy farm in the 50's. It was organic until commercial fertilizers started to come in. (Do you remember some of the things you did there?) Yeah, just basic farming. (#12)

Both my grandparents were farmers. (Did you learn some things from them?) Yes, we take that for granted. I grew up around pigs and sheep and cattle and stuff, but when we came to the farm I realized there was a whole lot of stuff I had not seen before. I knew it was going on but I did not pay attention. (#15)

The data show that this group of adult learners learned about organic farming mainly on their own. They were self-directed learners. These results showed, once more, that a

big proportion of adult learning is self-directed, as many authors (Tough, 1968); Brookfield, 1982a and 1982b) found.

Learning Process in General

The data suggest that the learning process followed by these learners was as follows. They first got their ideas about organic farming activities by reading about and/or listening to other people. Then they took some time to make decisions. They went through a personal process in their minds (reflection). Afterwards, if still interested in the ideas, they tried them in their own situation. If something went wrong (problem), they first tried to do what they could to solve it by themselves (usually by checking into their books and/or by relating the situation to their past experiences -- reflection). Then, after narrowing the different options, they either tried it again in their own fields and/or if there were still some doubts they usually consulted other people (e.g. an expert in that area such as a Veterinarian). Some people called this whole process a "round about" process.

I guess what I tend to do is to read a lot of information, and I try to utilize that in my own situation. If it looks like if it is going to succeed or it is not going to succeed, then I may question somebody else. It is a kind of round about process. (#10)

Well, I generally read the books first, and then try it. A lot of times the books say, like this is the type of diet you should look for, so that gives you the basis of where to go, and then I try

it. I guess that is the normal personal way, reading the book, then try it, and if it does not turn out the way it is supposed to go, then I talk to someone else. (#16)

I listen to other people and I guess, I do a lot of reading. I get different information and do not get what everybody says as a Godspell sort of speak, what is absolutely true. I take what they have to say and put it in my little book of knowledge. In my head I say, well this may work, so that might be something good that I can try. Then, every piece of information that I get from someone else, whether it is through a book, a set of tapes, or through talking with a bunch of farmers, I will pick what they have and let that run through my head and say that is a good piece of information. Then I can take that piece of information. If I feel it is good and worthwhile, I can take that and then put it in my book of knowledge, possibly through something that I thought was good before. (#2)

The following are some specific examples from the interviews related to the process they followed when facing a problem.

When I run into a problem, my first tendency would be to consult the books we have and then weigh the information I had drawn about the situation and then, I kind of narrow it down and then if I still did not feel really comfortable with what I thought I was doing, then I call the vet and say this is what I have got. I have checked in this, this and this. What do you think? (#15)

Usually if I have some kind of problem I just wait and see, and sooner and right away I start looking through my books, to see whether I can figure it out. (#8)

We read and just plant it again next year moving into a new location and trying something different. A couple of years we lost half of our melons. It just took us two years to figure out that we just could not grow them in there. (#7)
(How did you figure it out?) It was just through experience. (#8)

In the short term, I just try to do what I can myself, and in some cases that may involve making some decisions. (#5)

I usually more or less rely on myself. I guess you will have to say, I would probably rely on myself or the books to try to figure it out. (#12)

From this general description, it is possible to differentiate several components in their learning process. These components are the following: learning from reading, learning network, and learning from experience. Each of them will be described in more detail in the following sections.

Learning from Reading

The word reading was usually referred to as reading from books and magazines. The subjects of this research made use of different types of reading. For example, they subscribed to several magazines and sometimes they borrowed some from other farmers. They had their own books, new or secondhand, as well as those they borrowed from the library. Other types of publications that were mentioned were the ones they received by mail, e.g. newsletters from the extension service and/or from some other farmer organizations. Several of these farmers developed a relatively big library in their own homes.

They did not limit themselves to reading only organic related materials, because they stated that they could even get useful information from the chemical related ones.

I subscribe to other farm magazines apart from the organic, they have good ideas, from time to time that I try to adapt to my particular environment, so my input is not just organic. (#14))

I joined the Fruit and Vegetable Growers Organization and I get the newspaper from them. They are conventional agriculture. (#10)

And they also tell you an awful lot, especially in the area of marketing, not how to grow but part of making your money is marketing. That is a conventional source of information but it is a very valuable source. (#11)

The longer they were in the organic farming business, the more specialized they seemed to get in relation to the information they sought from their reading.

Initially, I just took anything I could get that said organic. Then I got this Encyclopedia (showing it to the researcher). It is something that is not as in-depth as something else, but it tells you just about almost anything. (So, do you use this book a lot?) Not necessarily. If I really have to know about something in particular, that is going to be really important in my farm, I would go other sources, but this would give you a good guide to get started. (#9)

Reading was considered by the majority to be the most common, and a very important way of learning on their own. However, reading was not perceived as the most important. Learning from experience and learning from other people, in that order, were considered to be the most important ways of learning.

One of the main roles reading played was "getting them interested" in the topic and/or "providing them with new ideas."

Reading is the most common way how I have been learning. I might have learned, but I would not have the information and the ideas to try things and observe things. Without that, I would be at a level of success but it would be nothing like. I think I can do what I want to do. I guess you have to say is it is being exposed to other ideas. (#6)

Reading was considered the place to start, and the best place to find what questions to ask to other people:

Reading books, I think, is the most important thing you can do first because you cannot get anything from somebody who knows a lot if you do not know what questions to ask. So you first have to get in and follow through those beginning books and start, and then you do a little bit, and then you go and ask somebody -- Why did this not work for me? What did you do to control this? With all these things working together, things start clicking after a couple of years. (#9)

The amount (depth) of reading that they did before initiating a learning activity about organic farming, varied among individuals. There were two main tendencies:

1. Those who wanted to know as much as they could about the subject before starting a learning activity in organic farming. The majority of the people in this study fell into this category:

Before buying the farm, we both read as much farm literature as we had time to read because we realized that the more you knew before you went into something, the better chance you had to do it properly. And I think that is true in any phase in life. (#14)

We have the tendency to check everything else that we can perceive before we jump into something. Just knowing that eliminates a lot of problems. (#15)

I read more (comparing herself with her husband), before I do something. I do a lot of reading and sometimes the reading gets me ideas of what I want to do or something new that I want to try. I like to read, that is what I do more. (#17)

2. Those who did not like to do much previous reading:

Usually I do not do a lot of reading beforehand other than what I know about it. Like this year, I did a lot of broccoli, and I read about it. I just read about it, and went out and did it, and did a lot of things wrong. (#13)

I generally just read what I need, I just read that and talk with somebody else or something. I do not mind reading but there is a lot of garbage that you have to clean. (#16)

The main advantage of reading as perceived by them was related to the availability of reading at any time: "books are always there."

If you have got a book, it is always there, whether it is four o'clock in the morning or whether it is right after dinner. Whether there are other sources of information, you have got to schedule appointments for, or go down and see somebody. So I would think it is real good, someone who is knowledgeable, then try to cover as many basis as possible. (#16)

The main disadvantage mentioned about reading in general as a way of learning was the fact that reading was not always a reliable source -- "It was not always like the book said."

The books, I get kind of disappointed from the books after a while because they give you some information, but they make you feel like, that is the way it is going to be, and it never turns out that way. It is never the way it says in the books. (#16)

I realize with the books that they cannot come with every possible scenario, and that is why I say it seems to me that they give you a basis to go from. I would not take any one book to be the Bible in any situation. (#17)

Learning from Reading -- Discussion

In this study, reading was considered a very important source of their learning. These findings agree with the results of other studies. For example, Penland (1979) found that books were rated as extremely important resources by 71 percent of active learners. Books are exceeded as a preferred resource only by knowledgeable friends and relatives (p. 46). Similar kinds of findings were found in the studies about self-directed learning reviewed by Coolican (1974).

In relation to the use of the library, the participants in this study stated that they made frequent use of this learning source, and most of them had developed their own private libraries in their homes. These findings agree with what has been found by other authors. For example, Brookfield (1982a and 1982b) found that 10 (out of 25) successful independent learners made frequent use of the library, and six out of these 10 relied heavily on this

source for their learning; 11 (out of 25) had assembled their own private libraries (p. 29).

Learning Network

The data show that this group of adult learners did not learn in isolation. Most of their learning occurred in a social environment. In other words, this group of adult self-directed learners have developed, through the years, their own learning network.

This learning network was considered to be a very important component for their learning. Learning from other people, together with reading, was one of the most common ways of learning.

There are some techniques that I could not have learned without learning them from someone. It is interesting, it is really, it is almost a network type, you do not find it in books. (#4)

Really to me, it was nice to read about that. But, to talk to somebody who has been through the process, I can eliminate a lot. They will give you 10 possible things you can do, and now, I know which ones are the best to try. (#9)

Learning from other people, together with reading, was usually considered the first source of ideas when starting a learning activity.

I always consult with somebody when I am starting something new. (#4)

Talking to other people and seeing what they are doing and reading is a source of ideas that gets you thinking about how you might do things, and that adapt to your own particular environment. (#5)

This social environment or learning network can be ranked, in order of perceived importance, as follows:

1. Other farmers
2. Formal Network
3. Cooperative Extension Service
4. Consultants
5. Salespersons

The following sections contain a presentation of the findings related to each of those categories.

1. Other Farmers

The term "other farmers" usually referred to other organic farmers. (It could include their partners, if they had any.) When learning from other people, the other people's experience (i.e. the length of time they had been in farming) became a major criteria for credibility.

Some of those tests (referring to other farmers' test plots), to me are reliable. I look at these farmers, and if they have farmed a long time, and as you walk through their fields, and as he tells you certain things, and if it gets so, that it has been several years that way too, that could have substantiated what he said. (#1)

You find a person who has been doing it for 20 years and you learn more from that one person than anybody else, and that is what I have found. (#4)

The xxx, they also grew strawberries, and have done it for longer than anybody else as far as I know, and so they could tell us their methods, and everything. That one was a very nice blue print. (#11)

These adult learners did not limit themselves to talking only with organic farmers but they also shared ideas with chemical (conventional) farmers.

Local farmers are a good source of information. They know the reasons. They know what to expect. They know the local soil, the weather. We help each other too. (#7)

Some of these farmers who are not organic farmers, that does not mean that they are not smart to know how to build up their soils. I will never ask him when is the right time to spray this chemical in here, but he does know when to put cover crops on, because besides putting chemical fertilizers and sprays on, he also knows what is good for your soil. So talking to other farmers, especially when they are right in the neighborhood is much easier. (#9)

Sometimes, however, they said it was difficult to communicate with chemical farmers.

I talk very little with other farmers about what I do. I do not know. I guess, I do not have to justify it anymore, and they are not really going to listen what you are saying. (#6)

(Do you visit the farmers around here?) A little bit, but we do not want to use chemicals. There are not many (farmers), most of them are large farmers, and going out of business at this point. They consider us to be sort of silly here anyways, with what we are trying to do. (#12)

(Do you contact other farmers apart from the ones in the chapter?) Not very much. It is mostly from other organic farmers in the organization. I talk to them (the neighbors) and you get information from them. But usually, it does not pertain to me. A lot of the information is only, from the chemical farming and it does not apply to me at all. So I would not say I get a whole lot of information. If they knew something (about organic), they do not actually have to be that (organic), but a lot of the farmers I know do not even try to know what organic is about. So if

they do not know anything about it, you cannot really get any ideas. (#13)

The perceived importance of learning from other farmers varied among the people interviewed. These tendencies were grouped as follows.

1. Those who liked this way of learning. The majority of people interviewed fell into this category. In this category, there were three sub-categories.

- a. Those who considered learning from other people to be one of their preferred ways of learning.

Talking to people. I still think that is the best learning process. (#9)

My most reliable source of information, I think is from other people who are doing it. Where I get most of my information is from two or three sheep breeders in the area that are very good and nationally known. So I go to them more often than even going to the books, because I have not found a book whether it is breeding sheep chemically or organically that has that information, first of all is never the way it says in the book. (#16)

- b. Those who, despite of the fact they were outgoing and enjoyed sharing with other people, had become isolated because of some negative responses they had received from their neighbors.

I do miss having other people around. The excitements of learning, I do miss that. It is teaching, you have to be able to teach, and then it is frustrating that there are not more outlets to share and to teach. Usually, I more or less rely on myself. I guess you have to say, I would

probably rely on myself or the books to try to figure it out. (#12)

- c. There was one interesting case where a farmer initially, during the interview, perceived himself as working alone, but during the course of the interview it became clear that he really usually learned by sharing with other people, including his partner and a consultant.

I think farming is, first of all, it is almost a private profession. What you are doing (referring to the researcher) is unusual. You are getting information from very private people who learn a lot of things on their own, and do not share those things. It is hard to pin down (the different learning sources) I feel like it is just me out and it is not (both laughed). (#4)

- 2. Those who preferred other ways of learning. Among this group there are two subgroups.

- a. Those whose personality was not really outgoing.

He is very independent (referring to her husband) in everything he does. He does not seek help from other people. I believe we have made a lot of mistakes that we did not have to make, but for him, I suppose he had to make, because that is how he operates. (#11)

(What about other people?) Not too many (smiling). One good reason (smiling) is that I am not a real outgoing person. That is probably the main reason, but I do try to get others, like the farmers around here, but I do not really go out. (#13)

- b. Those who have become some kind of "expert" in their field. These people become a source of learning for other people.

I do not know hardly anybody who is really into growing a lot of vegetables. (#8) We are a sort of on the cutting edge, people come to us for information. (#7) We probably are the only real large scale growers that I know of around here (#8) So we have a vast storehouse of knowledge from the 10 years we have been growing, so we pretty much people come to us. (#7)

(In relation to the fruit orchard) I have to be relying more on books now and less on people, because my organic gardening friends have limited experience. Nobody has an orchard. There are some that have fruit trees and they are doing it organically, so they have tried some things and I may have some questions about that, but it becomes more of a problem. A tree or two here and there, is less acceptable to insects attacks as when you start putting them all together, I am going to become, through my leaning process, more of a source of information, either good or bad. I will find out what problems I have and what things are successful. (#9)

One of the advantages of learning from other people, as this group of adult learners perceived them, was the fact that it allowed them to save their own resources -- time and money.

We have been watching this (something new the neighbors have been trying to do) for several years. We do not necessarily say that we agree with all of this, but it has some possibilities. But rather than going out and expend some \$15,000 to convert over to ridge tillage, we want to watch them for a couple of years, and in exchange, they watch us and we explain some of the things that we are doing. That is how we try to work with some of our neighbors. (#2)

They will be doing things wrong (their neighbors) that we learn from. Just as we learn from our mistakes. Then they will do something right. We might jump on too. It is not like they are totally (wrong). Their own experience we can learn from too. (#7)

Working with a Partner

Six of the people interviewed worked their farm in conjunction with a partner. In the majority of the cases, four out of six, the partner was a farmer's relative -- the spouse in three cases and a sister in one. In the other two cases, the partner was a friend.

The partner played a very important role. The farmer shared with his/her partner many of the activities, not only physical work, but activities related to learning. The partners' major roles were to complement each other.

He has been reading (referring to the partner) every night. He reads and he has a bunch of ideas about organic farming. It is kind of interesting. He tells me something and I think, yeah, I have noticed it too. Then, we should be doing it. (#4)

It really makes a difference to have two of us out there, because it is always, one of us can be doing one thing, or cover one thing better than the other one, and it makes a more balanced effort. We have learned through the years that he is better at one thing and I may be better in another thing. (#8)

(We complement each other.) I do not look for the depth of things very much. He is very in-depth (referring to her husband) so I depend on him. I am in charge of marketing. He can sit and read for hours, he likes to do that. I like to hear what he has got to say about it, but I do not want to sit and read it. It is not that interesting to me. We compensate. We work very well together. (#11)

We do not have time to read the same materials, so I read different magazines on a regular basis, and she will read certain magazines and newspapers or, stuff she teaches at school, and we come home and we talk about that. (#14) We share. (#15)

2. Formal Networks

All of the farmers interviewed belonged to one voluntary organic farming organization. In addition, some of them belonged to at least one other farmer organization, like the Horticulture Society and the Fruit and Vegetables Organization.

Through the Organic Farmers Organization, these adult learners were able to participate in a variety of activities like farm tours (i.e. visiting other people's farms), open forum (i.e. the formal and informal exchange of ideas during the organization's meetings), and seminars and conferences (either organized or promoted by the organization). The following are some examples of their opinions about these activities.

Farm tours were considered one of the best things.

Visiting the farms has been one of the best things for me because I could see. For me, visiting was the big thing, and then having a group, the organic growers group, it kept me in contact with people that I could talk to and visit once in a while. It is pretty easy to share some things. (#3)

The open forum was described as good for sharing information.

Usually somewhere during the meetings there will be an open forum, and someone will say if they have a problem with this, and if anybody got information on it they will speak out, and say this is what I would do. (#8)

These meetings that we have once a month are good. At that point I do not feel that I am bothering somebody. We get together. We have our meeting and at that point you can interact, either during the meeting or after or before the meeting, to say, oh yeah this happened to me, what is your experience? (#9)

Seminars/conferences: There were two groups of opinions. Some of the people thought that seminars/conferences were very important, especially for increasing the network, but difficult to go to because of time. The majority of the people thought this way.

I guess between the books and the conferences, the conferences seem to be a big thing. (#3)

We have had chances (to go to conferences). Usually what has happened a lot of times we are too busy to go, but someone usually goes out of the chapter, so we get the information about what is going on. Some of the topics, if you go to one of those things, it might be only 1/2 or one hour out of the whole day. (#7)

There were some people who thought that going to seminars/conferences was not really worth the money.

No, I have not (gone to seminars). I could have, but I have not been to a lot of them that I could have gone. They have met in motels or whatever and they charge \$70. I have never been to one, and I have never heard of anybody saying that it is really that great to be worth \$70. Why this is the thinking, I am not sure, it may be worth the \$70 to some people but I do not think it will be worth it to me, or whatever the price they charge. (#13)

The data suggest that they generally had a bad impression about the seminars organized by the land grant college of the region. They considered these seminars to be irrelevant to them.

(And some of the seminars at x university) have been totally unrelated. Actually it would have been nice to hear them saying at least some things that even if you already knew them. (#13)

He (her husband) had already gone to farmers week and come back shaking his head. What level of intelligence do they think they are talking to? He wasted the whole day because there was no meat there. It is really disappointing to think that that is what they are bringing to the general public. His intellect was really insulted, because everything was just so general. There was nothing there. If you are going to spend the whole day in driving up there, it is something you invest. Even if you are not paying, you expect to get something. (#15)

The role of the formal network was perceived in different ways by different people. These different perceptions were grouped into two categories:

1. Those who perceived the formal network as being a very important component of their learning. The general feeling of the group was that the organization played a supportive role.

Network. Ten years ago we did not have that. It was so hard to be the only one. We made these other stops because people did not want to be the only ones. That is something that at this stage is really moving along, networking. (#3)

Yeah. It is useful (the organization). We go to the meetings. It creates an awareness of other

growers, and you do not feel so all alone growing (laughing). (#7)

(What is the role played in your learning?) There is a minimum role; it is more of a support. (#16) We want to keep active with people (in the group), mainly because they have the same mind set. (#17) They are a good support group. We have been in contact with the people periodically. We have not attended any meetings (this year), but . . . (So its role is mainly support?) Yeah. (#16)

Talking to people. I still think that is the best learning process, to be in an organization like this, and talk to people who have been through this before, rather than trying to read it out of books. I am not saying . . . I still have read quite a few books and I subscribe to Organic Gardening magazine and a couple of other ones. You do learn from there. But to me talking to somebody who has had to solve certain problems before. . . . Really to me it was nice to read about that (how to control some 'bugs'). But to talk to somebody who has been through the process, I can eliminate a lot of the possibilities. They will give you 10 possible things you can do, and now I know which ones are the best to try. (#9)

They (other farmers in the organization) are a good source of information, especially if they have similar crops. It tends to be more a case of crop by crop basis. (#10)

It is kind of social (the organization), but I do get information. It is not a lot of information. You get a few things out of it. Every month you get one or two things out of it. Yeah, we share information. If somebody had an experience, if something really worked for him, or if something did not work for him, we tell the other members, and we discussed the stuff so they would not have to have the same experience. If we find like a bad product, or a good product, things like that. (#13)

2. Some of them, six out of 17, did not perceive the organization as an important learning source.

I had some contacts though with the Organic Growers and I was never really moved or impressed by what was going on in these meetings except that every once in a while somebody would come down and really had a lot to say. (#4)

For me the organic growers. . . I do not find that outlet. It is not that exciting because it is mostly trying to get things taken care of, and you are not with each other. They are trying to do that, but there is nobody else around here really close. I do not find it (the organization) to be as much of a learning thing as I would like, even with the farm visits. I do not know how they could be more constructive. They are not at all really constructive. We do not get much advice on what to do. There is a little bit, but not that much. I guess I feel really bad. (#12)

(What is the role played in your learning?) It has been very little. I do not believe we have learned that much from the organic group. I have tried to ask them, What do you have to do to have organic sheep? and they did not know. Most of the people in our group here are into the crops. They do not have sheep. (#16)

It is probably a real good thing (the organization). I went to all the meetings, met all the people, and listened to them but I guess, I am kind of going a head with new ideas and I get the feeling that they are not. They found their own level where they are happy with, and I am not. I can almost predict what they (the members of the group) are going to say about anything, and if they do not have anything new, to answer whatever, I guess I am not that interested. I think my ideas have kind of surpassed theirs a little. So I do not really discuss what I do with them. I am getting to a point in the technology of it that I branched off even of my own ideas about this, about how to do things. (#6)

In my own mind, if the organization was more of a cooperative type system, although its educational purposes are important, it was more of a farming organization set up, so it would be interaction on purchasing, and interaction of selling goods through similar outlets and contacts. We spend at least 1/2 of our meetings, if not more, may be

3/4 of it, on sharing farming. What happened in your farm last month? This crop will sell this year or not. But I believe it is just because the other part of it has not been developed. The organization is definitely one of our sources of learning, but we have not had to use it as much, that is why our group has not grown because people have not thought of us. There are other places they can get that information. A lot of organic growers do not belong to our group because they would rather pay \$15 and buy New Farm magazine, than spend two to three hours once a month in our meetings. (#14)

Some people stated that the major reason they did not interact with other organization members more often was because they were geographically located too far from each other.

Most of our members, at least in our group, are so far away from each other that it is not easy. (#11) In this immediate area there are not very many organic growers. I am sure that if in a five mile radius two or three others were organic growers, there would probably be more sources of information for the rest of our group. It is so spread out. I guess I just do not think about going to them for information unless there is an immediate problem because we are at such a distance. (#10)

The fact that we are so far out from everybody else causes the distance problem. And that is basically the problem. There use to be one (chapter) out here, but it disbanded, so that is why we go all the way to Grand Rapids. But it is really just too far. I guess that is the frustration I have felt with it. It is just too far for us, and yet there are not enough people around here to have an organization like that. (#12)

The data suggest that it was more than a problem of distance, it was a problem of motivation. In other words,

their attendance at the meetings depended on whether or not they found it worthwhile to go to the meetings.

I am always down here in the farm, I am busy the whole summer long, and in the wintertime I do not feel like driving up in the dark to some meeting of organic growers once a month. So I do not really get to tell them very much and you cannot tell them very much either in one meeting. Anyway, you really have kind of do things over alone. (#4)

Well, I went once (to the meetings) the first time. The second time it was just the case of not having the time, it was a long drive, and the two girls, we just did not want to take them and that was it. (#12)

The following is an example of a case where a person found it worthwhile to go to the meetings regardless of the distance.

The biggest problem is farmers are always busy. And so, there are a lot of times where I choose not to go. I ask somebody unless it is really important, because I do not like to bother. Maybe I am too much that way, but I know how busy I am and sometimes I go out. I do not want to bother somebody, but these meetings take that away, and sometimes it is even hard to get away to these meetings. But I have found they are valuable enough to make it, if I find time to go to them. (#9)

3. Cooperative Extension Service

The data suggest that the majority of the respondents rarely used the Cooperative Extension Service as a source for learning.

In this group of adult self-directed learners' interviews, several degrees of involvement with Extension service were found.

1. Those who did not perceive Extension as a source for learning. The majority of people interviewed fell into this category. Among this group there were two subgroups:

a. Those who had direct negative experiences with Extension.

I went the last time and that was the last time I went. I mentioned the words "organic farming" one day and after that I will never mention it again. He (the extension agent) made it sound like witchcraft or hocus-pocus. He is close to the age of retirement. I understand where he is coming from, so I do not get mad at the man because he does not have the knowledge. (#2)

I certainly will not ask for advice about what I am doing because I already know what they will say. I would not ask his advice in anything. He is behind the times. Well, it is his job. If he starts putting this type of information, there is a big fertilizer, two to three distributors around that area and if they got a hold of that and called the university saying this guy here, he is not using too much fertilizer or something, we cannot have that, he will be washed or something. When you start talking about organic on the farm, that is a tremendous tabu subject. (#6)

In my mind they (the extension service) are not a source of information for organic growers, because from listening to the experience of other people with their extension office, and from what I have seen they are so far behind than the rest of us who are above in organic. It is almost like if it is not really a useful source. It is more like they have to come to us (smiling) to find out. I usually do not pursue it, but I will pursue them for what I know they can do. For instance, if I need to identify diseases, I know the extension office can do that, but when they have identified them, then I will try to find my own answer so as to how solve the problem.

(How about the bad information that you have got from the guy that you asked about frost

control?) Ok, that was in the extension office. He gave an answer that was so ridiculous that I did not even bother to argue with him or anything else. I just decided that that was the end of it because I could not understand why people in the extension office could not give an answer. I have not really pursued them as a source of any kind of organic information. What I usually do is take samples of the soil to see what is missing. And, I got the information back, so I knew what problem was, but then I did not pursue them for a solution, because I am sure they would have given a chemical solution.

I certainly have no animosity type of feeling toward these areas. They have got a lot of good information and particularly in areas where there are identification problems, or in marketing areas, or in areas other than the actual process of growing. Concerned with the identification process, the extension service is a very good valuable resource. (#10)

No, not really knowledgeable about organic farming (referring to the extension agent). He did not really know much about it. He knew what diseases there were. The only thing that he could, recommend was the chemical treatment. (#7)

- b. Those who have not had any contact at all with Extension, either because they do not perceive that service useful to them, or because they do not really know about the service,

(Any contact with extension?) Not that I know of. The only real contact I have had in the formal basis has been finding where the sheep shearer was. I have not gone so much as an organic grower. I go as a sheep breeder, so I come across some of their stuff that is very useful. That has been basically my experience. When I was in college, I ran into that attitude (negative) then at the university. That was pretty much their attitude, and being now with the university, I know what the attitude is. So I do not bother. I

guess that is why I have not tried more. There is really not much need. (#16)

(Any contact with extension?) A little bit. I had some contacts with them, but not very much. (He did not really know very much about the philosophy of the extension service. When the researcher explained to him, he looked kind of surprised, and then he said things like that service would be much cheaper than the consultants, and that he had never thought about that.) (#4)

2. There were some who perceived extension as a learning source. Among these there were two subgroups.

a. Those who had negative experiences with extension, but stated that "things are changing."

I do not think the extension service played a big role in the past. Our contacts are evolving. We are trying to deal with the local extension. They are open to us. They are trying to do something to be able to talk with us. He is a new (local director) younger man, just getting started in MSU. It seems to me that there is a big percentage of extension agents at the retiring age. There is a new generation coming. (#3)

I find that they are not knowledgeable in the organic area, but they always seem willing to help the best that they can on certain subjects. I think we need (extension) as much as the other people (regular commercial farmers). Maybe I do have a network with people, but like I said, I would be reluctant to everyday or even once a week give them a call and ask about specific things. If I knew that there was somebody that his full time job was to sit there and answer questions and they were also trained in organic techniques I would use them. I think it would be valuable, as valuable to us as it is to the other farmers. (#9)

I think we get a good response (from extension) because do not give up. (We) are very specific about what we want. You build your relationship. You get to know him, and you get back and forth in things. (#14) I think that is a two way street. I think it is a matter of educating them. I see the extension agent. If they have a separation of farmers at all, it is not for being organic or not organic. It is more that they have a different way. They deal with the large farmer as opposed to the small farmer. We fit into the small farmer scale. I guess I see them (extension) somewhat too as a facilitator of our learning. Not that they are going to tell us all the answers, but they more or less can point us in some different directions that we have not explored. (#15)

- b. Those who recognized that they were negatively influenced against Extension by their peers.

Like I said, I have not used it very much, and the reason why I have not is because I figured they would not help me out much. . . . I would say I have been influenced to certain point that the extension is not useful to me. When I contacted him myself, I think he did a fairly good job, but before that definitely I had been influenced. (Extension) that is one place where I would like to do more. (#13)

As mentioned before, the data suggest that the majority of this group did not really use the Extension Service as a learning source. One opinion that came repeatedly in the interviews was the feeling that the Extension Service has traditionally had a negative attitude towards organic farmers in general.

Frequently they are an insult to us. So, when you come away, the attitude that Extension gives us is that we are "funny old people." Well, "nut hippies," who are going backwards in time to where we are going to farm with horses, and it is going

to be old fashion days, and these kids or hippies or whatever they think of us, that we are just laughable is the attitude we come away with, and we do not feel that way. We feel like, that we are experimenting and looking for natural ways to do commercial farming and what is being done currently is damaging. And that is why a lot of people who do not want to go through a whole bunch of confrontation. They just avoid it and say, well Extension, you go your way and we go our way. If you decide to put something out, we will listen, but we are not going to sit there and fight a big institution that decided that we are laughable. (#11)

Extension has not been on any help at all. I guess I have not really pushed. May be we have not talked with them enough. I guess for the longest time, it was like you did not exist, and I think in just about the past two to three years, they are starting to realize that organic farming does exist. But we are not considered farmers (by Extension) because we have only 40 acres. (#12)

The majority of them thought that one of the main reasons why Extension was not interested in organic farming was because they, the organic farmers, did not represent a powerful sector. In other words, they did not give money to the land grant colleges (LGC) to push the development of research in this area, as the big chemical companies did.

These people at the LGC are just pulling their hair out trying to solve some of these problems that could have been solved 10-15 years ago when they first began. But, they are not. As I see it, unless we can change the thinking of these people, it is going to get worse and worse. The grants that our colleges and universities receive from the chemical corporations prove that this works, and so they go ahead and test it and then put the information back out. It might be underhanded, or under the table, to make favorable something that is not really as favorable as it should be. (#1)

(This university) really pushes the old use of chemicals, because the bucks are there. All of the testing, that is where they are getting all of their money from. If I had enough money to go in there and give them \$100,000 to prove that organic farming, or a certain portion of it was right, that is the next thing they would come out with. (#2)

This university and many other LGC's, as far as I am concerned, are 10 years behind. After we have done it for 10 years and proved that it works, then the university will come out and say, "Well, this is the greatest thing that ever happened to farming, try this new method." And we have already done that for 10 years. What that proves is how far behind they are. (#2)

One thing that I would take a kind of dig at, not the Extension Service as such, but the whole educational system of the country. It is kind of under the control of people who have something to sell. (#6)

There is nobody, there is no industry that makes money out of organic. Nothing. So, there is no money there to push. In talking with people at (this university), there are people in the agriculture departments down there that would like to do organic research. They can see the problems with the chemicals, that research should be done, but they cannot do it either, because, unless there is someone there pushing with the bucks, it does not happen. (#10)

4. Consultants

The word Consultant was used to refer to people who were paid to visit the farm and give advice about a particular subject. This type of service has rarely been used by this group of adult self-directed learners. Only two out of 17 said that they had ever hired a consultant.

The majority of the farmers interviewed were really reluctant to hire a consultant. The major reason stated was that they -- the farmers -- knew more about their own farms than any consultant might know.

To have a consultant come in, I guess I just, I feel that I do not want somebody else to come in and tell me. I feel that I can know more about my farm than any consultant can tell me. I am the one who can know more about it. I have been here 10 years, and I am going to know more about what is going on here than what they can do. The farmer does not need somebody else to take money from him (smiling). I guess I am leery about consultants. I tend to stay away from them. (#10)

I believe that I do not want to pay anybody. I cannot understand why farmers cannot ask each other. I am not going to pay somebody to come out and, who may not even be a farmer and may not help me. You do not know. It is not that it works or it does not work, I am just against it. (#13)

Some people believed that the use of consultants would become more important in the future because farmers are getting busier and busier.

It is not common now, but it may be common in a few years, because time is so limited and this person (the consultant) has been reading in some general subjects that you and I would not have time to read. I think it is worth it. (#14)

The main reason mentioned by the people who had hired a consultant was the following, "farmers are always too busy on the farm to go out and look for specific information."

I am busy the whole summer long, and in the winter I do not feel like driving up in the dark to some of the meetings. You really have to kind of do things alone. That is why I hired a consultant. That was probably the biggest turning experience I

had. He was my consultant and he taught me a lot of techniques. (#4)

5. Salespersons

The word "salesperson" was used to refer to people who sold farm related products and who usually gave technical advice to the farmers.

All of the adult learners interviewed felt that these salespersons could not be trusted. The salesperson's main purpose was, according to this group, "to sell a product," and "it is very difficult to sort out what is good and what is not" from the information given by the salesperson.

My particular opinion is that I am suspicious of anybody that sells any product. Salesmen have a fairly bad reputation in the organic movement. Not that they are not necessary, and they might not have some truth, but again the truth might get pushed aside by the profits. I am very leery of any salesperson. (#14)

Sometimes it is hard to sort out what is the good information and what is not. They are frequently motivated by what would make them the most money and that is oftentimes contrary to what is in the long range best interest to their customers. (#5)

I think the information that you get from those people would be fairly biased, because they are selling the products. They may have some useful information, but it takes so long to decide what it is that they are giving you, some story about their product, or actually giving you some useful information. I would rather go right to the farmer, who has had experience, who knows, and they are not as nearly as likely to tell you some product is good, which is not. (#13)

You have got to be a little leery of some of them because they are in the business to sell. If I hear something from one of my organic gardening friends, I know they are most interested in the soil and how things are growing and not what they are selling. I still say, the prime source is the people who have done it. (#9)

Sharing of Information

The word sharing usually referred to the exchange of information among the members of this group, and among other people in or out the Organic Farmers' Organization. The data suggest that the information was not always freely shared. In other words, the interviews showed clear examples when information had been withheld. The information withheld was usually that which might keep the farmer on the "cutting edge." That is to say, it was "hot" information that could make other farmers competitive.

This phenomenon of withholding information was experienced at different degrees by these adult self-directed learners. These degrees were grouped into three categories.

1. Those who were aware of this phenomenon. The majority of respondents fell into this category.

I find there is definitely a lot of withholding of the important stuff (smiling). The everyday stuff you will find out, but the real information you cannot really get. (#12)

The only constraint is talking with people. Nobody that spent a lot of time and money learning something is going to hand it over to you. I do ask a tremendous amount of questions, but I have

to be a little bit careful about it. That may be well if I know that somebody is not going to tell me what I want to know. I would not ask him. There are secrets in all this sort of thing in the business, but people are not going to give them out to you. I have already discovered that. So I am not giving mine out either. Well I am in a partnership with a man, a retailer in this business. That has influenced me too. I might be more open than I am if I was not in a partnership with another person. Naturally he has given the benefit of his knowledge and he does not give this away to other people either. (#6)

They (some neighbors) have seen some of the things we do and say all right, that is pretty simple I can go out and do it. So they are doing it and they take our ideas. We are just finding them, and they go use them, but some are things which we were on the edge of bringing out. (#8) Yeah, certain varieties, or certain cultivating mixup that give us the "cutting edge" in the market. We give them information, but we might leave out a clue and let them find it out themselves because a couple of them actually compete against us. We have taught them how to do it. They do not search out their own market. They come after our market too. (If I go and ask), they will tell me unless they have something "hot." They knew they could make a lot of money on it. It is competitive. (#7) But it is ok. (#8) It is ok. It is fun actually. You cannot really stop them by saying no. I would do it too. If they have something smarter going than we are doing, we jump on it too (laughing). (#7)

I think that that (withholding of some information) is true. I feel it will be something like that for myself and I know that is true with other people too, some to more degrees than others. You get some information that you worked really hard to obtain that you do not want to just tell this other person in five minutes even though you like the person. You do not want to give them all the secrets out at once. I think that is human nature. (#9)

I would say yes. Some people do it (withhold information). They kind of give you just half the story. There is no doubt about it, but I would

say that most of the people in our farmers' organization are willing to tell you everything. You are not a threat to them (smiling). You are not right in local competition. I think that if there were more a lot of us, close together, I would think that at least some of them, they would not tell you everything (smiling). I have never had that experience. No, but it could happen. (#13)

2. There were some people who perceived the phenomena from a different perspective. They considered the phenomena to mainly be a case of old farmers being skeptical of new ones, and not really a case of withholding but not giving all of the information because these experienced farmers considered that information too obvious to be given.

I think it is more of this. People I have talked to have been raising sheep 20, 30, 40 years, and they have probably forgotten more than I know, and it is so obvious to them. I think a lot of times they are skeptical of a new person coming. I know the more I know them, the more I talk to them. The more serious, the more information I get from them, but I do not think they are withholding. I just think they are skeptical in the first place and some of the things are probably obvious. (#16)

3. There was a very small group who did not perceive that phenomenon at all.

No ,I have not felt, (some people do not share the whole information). Maybe varieties to some extent. Not even that. I think the whole process in organic farming is that we do not need less organic farmers. We need many many more, so it is not a case of (withholding). (#10) As a matter of fact, I am glad to share my information. I am very glad to share all we know, tell everybody our big mistakes we have learned (all laughed). (#11)

Learning Network -- Discussion

The findings from this study showed that these learners do not learn in isolation; they are surrounded by a rich social network. A major amount of their learning occurs through observation of other people's behavior. This vicarious learning, as Bandura (1977) said, "enables people to acquire large, integrated patterns of behavior without having to form them gradually by tedious trial and error" (p. 117).

The fact that the self-directed learner does not learn in isolation has been reported by many researchers including Tough (1968, 1971), Elsy (1974), Luikart (1975), Taylor (1981), Fingeret (1983), and Brookfield (1985a and 1985b). Tough (1968, 1971) for example, repeatedly highlighted the strong reliance on external resources. He found that while most of the self-directed learners he studied decided to maintain complete control over the direction of their learning project, this did not mean that they worked alone. He also found that much self-planned learning does involve more human interaction than classroom learning does (p. 4).

In relation to the kind of people who provide assistance to the self-directed learners, it was found in this study that the adult learners first went to their relatives and friends. Only in limited occasions did they go to paid experts. Similar kinds of findings were obtained

by other authors. For example, in the series of studies reviewed by Coolican (1974) it was found that when people get more knowledgeable in an area they become "experts" and so they serve as a resource consultant and skill model for others. Similar findings were found by other authors such as Brookfield (1985a and 1985b).

Regarding the sharing of information among the study participants and other people, it was found that there was some information that was not freely shared. There was some "hot" information that was kept secret by the farmers, especially that information that could make other farmers competitive. These types of exchanges can be considered "negative connections" (Cook, 1982, p. 180). These findings disagree with the findings from other authors (e.g. Fingeret 1983; Brookfield, 1985a). For example, Brookfield's (1985a) research showed that the people in that study felt themselves to be members of an "intellectual fellowship in which there was no sense of knowledge being privatized. Members were ready to share their knowledge and experience with any who asked" (p. 50).

Learning Through Experience

Experience was conceptualized as the knowledge produced by their own observations and ideas. (Experience was usually referred to as learning by doing, trial and error or learning by mistakes). The knowledge produced through their

observations and ideas was accumulated and stored in their minds and could be modified or rejected as new learning experiences were faced.

I try to have some simple basics that I stick with and then we modify it slightly each year rather than throwing out the old book and starting with a new one, because that is when you run into trouble. (#2)

I am getting better. I have learned more. I am accumulating knowledge, and so each year I am running into less problems that I cannot solve. There are still some problems that I have each year, and I probably will have some, but I know pretty much more how to attack certain problems like how to know what my soil needs. It is kind of a real accumulative type thing. (#9)

You know some things. You know certain basics that you can define, you go from there and you are always learning what should I do about this? or maybe I will try this this year. You still know the basics. (#8)

The data show that learning from experience included diverse types of activities. These activities were grouped into two categories.

1. Those activities that were consciously prepared as trial and error from the beginning. The first characteristic of the trial and error method was that they chose it because it took little time (usually less than one year) to see the results.

If it was not broccoli, I would probably have to do something different. With broccoli you have different plantings all through the year, but with some things that take more than a year I could not take several years to figure that out (smiling). I would have to find out (through other sources like Extension, etc). With the broccoli, it did

work ot since you can get many plantings in one year. (#13)

The second characteristic of trial and error activities is that they are usually done on a small scale.

I start out small, and just gradually get bigger. I do not jump into it. (#13)

Natural instinct tells me that if I go in any adventure, to go about it carefully. When we are experimenting, we would try something new, but only to the extent that it would not jeopardize the whole operation. For example, when we decided to grow strawberries for cashcrops, we did not tear off all the hay fields. We did it small, like one-third of an acre. (#14)

I am working with pretty small pieces. I think that I change year to year. I will try like a whole area and if it does not work, I figure the next year I am going to change it. (#12)

I do not generally do anything in large scale, so if I have something that it is worth trying, I would probably try on the whole farm. (#5)

Third, these activities were usually kept under relatively close supervision by the farmer.

Every experiment that I do on the field I try to control all things that I do not normally have control over. I have to realize the weather, the sun, if we had not too much rain, what type of soil I am starting with, etc. I have got to try to keep this in mind and not say, just because I have got a great yield in this field this year, it was because I put this on it. We record very closely every year, what we put in each piece of land. I have a book in the tractor with me, so I do not worry about the book. Any time I am stopped and something comes to my head, I am writing in there. (#2)

2. Those activities that were done without thinking of them as being trial and error (they were

represented by routine activities and/or generally accepted practices). But that is because for one reason or another, they became learning experiences. They called them learning from mistakes.

I will give you an example of reading on chickens. How many chickens should you have per square foot of area, so they do not have troubles of cannibalism etc.? What I did was to read the statistics that the department of agriculture put out. I just accepted them as fact and went along with it, and had no problem with it. If it does not work out for me, then I am going to have to experiment, but there is a lot of this information that I just accept. (#14) Like why try to reinvent the wheel if someone else has already done 50 studies on that. I do not need to do that. (another example) We read that comfrey is good to feed the goats and the livestock, so we started feeding it to the cows, and found that it was fine, except that there was one who had little problems. I called the vet and found out that it was the comfrey. We gave her comfrey again just as an experiment and the same thing happened. I do not think we thought of that as an experiment. (#15)

We usually try, start small, unless it is something I know that is a generally accepted practice. I find out about it, then I go ahead and do that with everybody (e.g. vaccination against one of the sheep diseases). I usually start with just a little bit. (#16)

The data indicate that the most important source of learning, as perceived by this group of adult self-directed learners, was learning from experience, because "without it you are not going to make it work in your farm." Everything else, they said, "gave you the background," but it was not until you "did it" that you really "learned it."

(The major source of learning) is my own ideas, trying them out. I would say that by far it is the most. Of course, the thing is the trial and error. You do get a lot of information from all over, and you have got to make it work for your farm. You get it from all different sources, and you just do not remember. (#13)

A lot has been from experience, more so, that is the real learning, that is the hard core. I would say that we can learn from you or from your neighbor. But when it comes down to it maybe what fits in their life style does not fit in ours. I guess in a sense I am kind of experience oriented. I draw out all my information from reading. But, as I am reading it, I am always trying to relate to something that I have experienced. (#14)

Experience (is the main way how I learn) (#7). Yeah, it has to be experience. We have learned that every year we are going to loose some crop for something. We do not know why, and we hope that through that you learn something and we have in some things that there is no way you can beat them. (#8) Experience, like I said before is the chief. (#7)

All ways (reading, talking to other people, trial and error) are interrelated. All form part of a puzzle but the one you cannot get along without is your own observation because without that, no matter how many good ideas you get, you are not going to be able to make them work for you in your farm. (#5)

I think experience is definitely the major way to learn. Everything else gives you a background, but you do not know until you do it. (#16) Until you see it, like the sheep in labor, you can see that she is in labor because she acts in certain ways. (#17) And you can see it several times and still not be certain. That is the thing. It is your experience. Experience to me is the best teacher, because once you make a mistake you know what to do next time. Or if something did not come out that well, you can improve on that. So, I count experience as being better than any book. I have learned a lot from my mistakes. (#16)

I would say our biggest source of real education has been our own mistakes. He is always experimenting (referring to her husband). Never do it like somebody else (smiling). (#11) I guess maybe the process is not more important than the end product to me (smiling). I guess I have to know what I am doing at a little deeper level to understand what I am doing. And the best I could do, I just do it to see what happens. I probably learn more from the mistakes that I do than from the ones that work (smiling). If it works, all I know is that it works and I am not sure exactly why it works. Usually if something does not work, you can evaluate at least why it did not work. (#10)

Learning through experience was not perceived to be the most efficient way to learn by all of those interviewed. Some believed it was the slowest way to learn and that it could be expensive in terms of time and money.

Probably the doing is the most important, but that takes the longest time. Your feedback is not very good. Doing it is the best way to learn, but it is the slowest. (#9)

We have learned the hard way (he laughed). We learned when about \$1,000 of plants went down the drain the first summer because of our inexperience. We were not smart enough (laughing). (#11)

(The major way of learning) mostly trial and error, I am sorry to say. (#12)

Learning Through Experience -- Discussion

The data from this research suggest that learning through experience represented the most important learning method for this group of self-directed adult learners. Learning through experience was conceived as learning from their own observations ("learning by doing"/"learning from

mistakes"). It was clear that for them, experience represented the most important element in their learning. They recognized that experience can be modified or replaced by new experiences. As Jarvis said,

It may be seen that every new experience is interpreted by the self and has a meaning given to it which is then integrated into the meaning of past experiences stored in the mind. This ultimately results in a system of meaning or a body of knowledge that helps the person interpret reality. (p. 58)

Coolican (1974) in the studies from her review of literature found that three methods most commonly used in learning by her study participants were: practice, reading, and discussion, respectively. Listening, observation, and instructors were also used, but not as frequently. The methods used most often for self-directed learning were all active, involving the learners directly. The least used learning techniques were passive, watching or listening to someone else do something.

The findings suggest that these learners do not consider learning through experience the most efficient way of learning, mainly because of the cost in terms of money and/or time. As Bandura (1977) pointed out, "coping with the demands of everyday life would be exceedingly trying if one could arrive at solutions to problems only by actually performing possible options and suffering the consequences" (p. 171).

AREA OF INQUIRY #4: What have been the main problems/challenges faced when learning on their own?

Problems/Challenges for Them as Self-Directed Learners

During the interviews, the word "problem" was usually understood by the learners in this study to be problems related to their farms. They did not perceive any problems in their self-directed learning process.

I keep thinking the problems are in the farm. (#3)

I do not recognize any barriers. I actively try to learn some new things from time to time. (#4)

No, I have never seen much trouble (learning).
(#13)

Well, I cannot say that there is anything that I really do not like about it. (#2)

So, when the researcher tried to get the answer to that question by explaining to them what it meant, and by using other words like barriers, challenges, constraints, frustrations, and so on, several problems/challenges were mentioned in relation to their learning.

The following sections contain the presentation of the findings related to those problems: time, getting information, motivation, and others. After that, some of the things that they considered would help them to be better self-directed learners are presented.

Time

Lack of time was perceived by most of the participants to be the major problem or constraint for them as self-directed learners. Time was sometimes combined with money and effort.

I think that the problem for me in this learning is that I do not have enough time. (#14)

(Time) is the biggest problem. There is just never enough time. (#16)

Time is a big constraint. I guess it is just time and money. If I had more money, it would make a lot of things easier, but I accept that. It is time. I just do not have the time to learn. (#12)

From where I am at now right now, I guess I do not see the amount of time that we really spent. We see an abundance of things to learn (smiling). Right now, we have enough in front of us. There is no limit. (#3)

As far as I am concerned, there are no barriers. There are a thousand of opportunities. Well, time is a barrier. How much time I have got? So really time for me is the only problem. Time is an important constraint. (#4)

Well, I am not sure if I can answer that in the fashion that you want. The main constraints on what I do are money and time. (#5)

The main constraint is probably time, because it takes so long. It takes the whole season to learn. You know I got this great idea this morning. It would be really great to try it. You get out there and time just, just does not do to you, because it takes you the whole year just to see what the problem is and even during that year sometimes you just quite do not get to it. It does not work out quite what you expected. To try it again the next year it is a long ways. That is really the main thing that is holding you back--time and effort. It really takes a lot of effort to get it all done, and we have had several things

this year where we have just run out of time and effort just to do it. (#8)

I guess time constraints (are a problem). When you are a farmer, sometimes you are so busy doing, just doing farming that you do not really have time to do the type of research that you would want to do. Like sometimes there are two or three alternatives. It would be nice to have a little test pilot and try different things and compare or try putting a little extra phosphorus in this part of the soil. But it is such a time consuming thing, you do not have time, and the money. You get out of this is so little. I guess the two biggest things are one not having immediate access to somebody to answer a question, and two not really having the time to study while you are doing it, as much as you should. (#9)

I do like to learn, but I have go so many interests that I cannot learn it all. That is my problem. I have an interest in flying, in music, in building all kind of wood stuff, in fancy cars, in organic, and so on. (#2)

Getting Information

Getting information meant the availability of learning resources. The adult learner respondents did not consider getting information as a problem for them, but some of them recognized that getting information could be a problem for people who were just starting in organic farming.

I think that the limits are with the new people. The limits are not with the people that get into it. When you get into it, you are not new. Maybe you are still running low financially and whatever, but there are ways again. I do not think we are limited in the education. (#3)

The data suggest that the general feeling about getting

information was that the resources are out there and it was a matter of getting familiar with finding them.

(Getting information is not a problem) because over the years I have learned who I can depend on for dependable information. (#1)

Right now I do not (see that as a problem), but it has taken me 10 years to find out how to network into this. I do not see that as a problem now. I think that our education thing right now seems pretty well. (#3)

For me finding information and finding good people with good information has been relatively easy. I have never had any problem with that area. (#4)

Occasionally (getting information is a problem). Not so much at this point because I have a lot of information to still get in. (#8), It is not a major problem, just a minor problem. Yeah, usually if you really want to run it down you could probably find most information. There are side things. I think about that I would like to know the answer to it. I probably could write letters or whatever, but I am just not really that interested in figuring out the answers. (#7)

(Is getting information a problem?) No. (#15) It has not been for us, but I think getting information is a problem. (#14)

For some people, the problem was perceived as where to most quickly find the best information.

Where to find the best information the fastest when you need it. Finding the right information is sometimes a pain. (#17) There is no one here to say, hey look at here and go there. (#16)

Some people interpreted the problem as how to relate the information found to their own situation.

I guess, the problem is, I get the information I can do something with, now what can I do with what I have got? (smiling) So, that is a problem, I think. (#12)

No, not reading them (referring to some books), but maybe comprehending what they say. Trying to tie it into something else you can relate to or make it useful. Yeah, that is a big problem, but I am fairly good at that. (#6)

Motivation

This group of adult learners recognized that motivation was a very important component of their learning because, as they said, when they felt motivated to do something they did not see any barriers to their learning, they could keep doing what they started. As one of them nicely stated, "Motivation can make up for the lack of knowledge they may have."

When I get interested in something, I can read well, comprehend well, and I can study on my own quite well. If you give the information, I can go through it and get what I want out of it or correlate it with something else. That is what I do a lot. (#6)

Well, if I like the work that I have to do, obviously work is work, but if it is a real chore or if you do not like doing the things that have to be done to do that crop, you are going to do that thing last and you are going to put it off. So, that crop is not going to do very well. But, if you want to do them, you are willing to do it. Then, you will spend time on that crop, and it can be successful. (#13)

I really am not somebody who is meant to be a farmer, except that I love the soil and working on it so much. My abilities are more in other areas, but I sometimes make up for my lack of knowledge and abilities with enthusiasm, because I really enjoy what I am doing. (#9)

At the same time they recognized that to get motivated and to motivate others was not an easy task.

I guess there a couple of things that really frustrate me about learning and about knowledge and one of them is how can you inspire someone that is not inspired? It is difficult and is a frustrating thing to me. I guess that is my worst problem. (#2)

I think the most frustrating to me about learning is that I can learn something and hold it to be true, and know from my experience and from everybody else who has written who say that to know that to be true, and then to have other people see it, but not see that to is true. Two people can see the same thing but then come out with different conclusions. I know that has been true with us. We have had people talking things that I know to be true now, but in that particular time, it did not really matter how many people would have told me that. I either did not pay attention to it. One way or another, I just did not care if it was true or not. Or, I just said, you are crazy, that cannot be true. (#14)

Learning Incentives

Among the things that kept them motivated in their learning were the following: learning new things and new ways of doing things. Some people described that excitement as a "thrill of something new."

I enjoy learning new things about everything that I do, but specially, the organic farming. I do not foresee the place where I ever learn it all. I guess I am odd, and there are quite a few odd guys in this organic group. In that they are more willing to work for what they want and learn. (#2)

Well, one of the things that I have always enjoyed is just exploring new areas and learning about them. It is something that I have always enjoyed, and so I ended up getting into a lot of areas. Outside areas that are not immediate concerns just because it is interesting to learn about them. I

guess, I am almost always doing something a little new, just thinking about how can I do something better, and trying it and seeing how it works. (#5)

I am constantly looking at new ways of doing things better and that is why I keep learning. I am constantly looking for something that I do not know, or some new little angle, or new territory, or a new piece of information. (#4)

I am always looking for new answers to questions that I had before. (#8) It seems to be something out there that pushes us to learn. It is some kind of cosmic teacher, or something. Something that (tells us) the knowledge is there. (#7) It is the thrill of something new. It is the thrill of what new discovery there might be. (#8)

Money Versus Satisfaction

The data suggest that money was not considered to be their major thrust for motivation. There were other incentives a part from that. For example, satisfaction was what they got from doing their job, or what they got when something worked as a result of their learning.

I really love what I am doing. You have to, because unless you are awfully good, which I am not, it is certainly what you get out of it for the time you put into it. Monetarily, it is nothing. I was making 10 times as much as I am making now 10 years ago. As long as I can get by, I would rather be enjoying my life. (#9)

(Farming) financially wise is insignificant compared to what I could make in industry. So, if money is the final product for financial success, I am not really getting that (all laughed). So, it has to be something besides that. I have no illusions anymore about whether I will be a successful farmer. I will not. It just is not going to happen. (Do you mean successful in the economical sense?) Yes, but I have other strong goals in life. I really like farming. I like the processes, so I have to find other forms of

satisfaction from doing that, other than economics. So, if I can learn something, that new piece of information, may be somebody else could take it and carry it even further. That is satisfaction to me. I think the satisfaction of when something does work, that comes out of your own thought process. There is a lot of satisfaction in that. (#10)

I like what I do, and I like about everything connected with it. Now, doing things just on the basis of money, I do not like that quite as well. But, even that it is interesting to me. (#6)

I get really excited about learning. I guess the best thing is that if I find a problem that hits me one year and I can do something the next year, whether I learned from a book or learned from a friend, it is really exciting to come here and say, "Hey Mary guess what, no potato bugs this year." (#9)

The reward when something comes through, that you have done. It is highly rewarding that we have learned how to do that. (#3)

Other Problems/Challenges

Among the other things that were pointed out as source of frustration or a constraint in their learning were the following.

1. Not getting the final product as expected or not even knowing what to expect.

Loosing the crop (is a frustration). You cannot really say, may be I could have done this. You could have gone out and tried to apply chemicals on in, but usually it would have been too late anyway, so you cannot really say. It is just a frustration to loose something you cannot really go back and change it all. You just hope you have learned something. (#7)

It is frustrating at times. More than anything else that your weather conditions are right and

you do not come out with the kind of thing you want. You think that the beans or whatever look good, and you are disappointed at the end. I guess that is the hardest part. You do not come up with the things that you think should be there, even though all the things fall in place, but you think they should work. They do not always work. (#2)

Well, some of the dislikes would be the failures that you experience. (#1)

I think the biggest constraints are knowing what to expect. If you have formal training, you are trained before you go out and try it, and it gives you a general view of what to expect. For me, not having had it (he refers about formal training in raising sheep), someone says this is probably the general problem you are going to run into. You cannot really anticipate what is going to go wrong. Once it goes wrong, we call the vet or extension, or this or that after that happened. So, I guess it is the anticipation of what is going to go wrong and knowing what to expect. With more years, you get experience. The more things that you know or anticipate the better you are able to react. (#16)

2. Not having access to enough people to share with.

I guess my biggest frustration is not having enough people with immediate access to, or at least that I feel that I have immediate access to, to ask questions. I would like to be able to, as soon as I am perplexed by something, to be able to find out any answer to that, and if I cannot do it from a book. . . (Do you go first to a book?) Yeah, but if I had somebody right there to ask a question, if my next door neighbor was an organic gardener who had been doing it for 15 years, that it is what I find as the best and I would probably go there first. I would probably go first to the books to get a general idea so I could ask a better question. (#9)

(Things you do not like?) I do miss having other people around. The excitements of learning, I do miss that. It is teaching. You have to be able to teach, and then it is frustrating that there

are not more outlets to share and to teach through. (#12)

3. The constraints are in yourself.

We do not tend to blame other people for our problems. It depends mostly on yourself. (#14) I have a hard time remembering things. I have problems trying to remember so much stuff. (#15)

(The major constraint) for me is myself. It is the fact that I do not go to other people for information as I should, that is my basic problem. (#10)

I have trouble learning. I just do not know how to (explain them) (smiling). Well, I think my major problem in learning is I procrastinate and wait, and I do eventually change. (#13)

Confidence, probably is another problem. For me undertaking a new project, either not having enough or having too much, a lot of times is just a lack of confidence. When you are going to do something new, I think everybody has doubts. (#16)

Kind of Help Needed

Some of the people interviewed talked about the kind of help they considered necessary for them as self-directed learners. That needed help can be summarized into three major groups.

1. Having more people around either as mentors or working together in the organization.

I guess that it would have helped me to start, to have somebody who is knowledgeable who would have given me more than an overall feature of what was necessary to get to from where I was starting to where I wanted to go; somebody who could have given me some kind of road map sort of speak, on how to get from here to there. I am saying this and I am kind of contradicting myself. I would not have done that (laughing). I would not have

taken the advantage of that. That is a problem. (#10) I think those people were there, but he (referring to her husband) would not have done it because he is very independent. (#11)

I guess to have a mentor, somebody there to show you and to teach you so that you could see the results, or just somebody to help you, so you do not make all those mistakes. More information and more support. It could be a neighbor or an extension agent. I guess somebody that just drops in would be fine. (#12)

Somebody who is available, like an extension agent, or I would just like to have more neighbors who were organic farmers. I have farmers around here, but they are all big commercial farmers and like I said I get a little bit of information from them, but very little. I would be happy to be in a community of a lot of people who had 15 to 20 acres, who were farming more in the small scale but really taking care of their land. That would be really a nice situation, and I think that is a real good learning situation, where you can constantly be helping each other with physical tasks, not just knowledge. (#9)

I think the only thing on a smaller scale, working towards that goal is to get individual farmers working together with one another so there is some kind of political power by bonding together. (#14)

2. Encouragement is necessary.

I would like to see more encouragement. I think that if farmers were more encouraging to each other, that would be nice. It would be nice if it comes from other farmers, but it could be from extension. (#13)

3. Getting more specific type of publications.

You need some more specific guidelines because as you get further into it, pretty much, most of the books we have seem to be more addressed to the novice or just the beginner. As you get more experience, you need information that is more directed. I guess if you could have a real good how-to book in farming in general where you just take almost every scenario in, reading someone

personal histories, where to go, what to look for or what to expect. (#16)

Having some source of publication which told which are the better books to be reading, probably a good reference to organic sources. (#9)

4. Having an internship or an apprenticeship.

It would be beautiful to spend a given amount of time with somebody who is farming, and you go and stay with him. I prefer that to start. If I can go someplace for a year or six months and live with someone who is doing it. (#16) A kind of internship or apprenticeship. (#17) Somewhere you can go and watch, and then you can know what they do. You can actually go and see a sheep in labor with lambing problems. They are not your sheep. If they die, it is this other guy's sheep. It is his responsibility. You learn. It is observational. (#16)

Problems/Challenges to Learning -- Discussion

One interesting finding of this study was the fact that when first asked about the problems/barriers they usually faced as self-directed learners, the people interviewed either said they did not see any problem or answered that question in terms of problems on the farm (e.g. marketing, costs). However, after the researcher explained that the main interest was to know what were the problems they faced if any, when learning on their own, the majority of them started to give some answers. A similar kind of phenomenon was reported by Brookfield (1982a). He explained his experience as follows,

On reflection, there are two reasons why the apparent absence of problems is not as surprising as first seems the case. Firstly, subjects who

felt a major part of their efforts were devoted to dealing with irritating difficulties rather than experiencing the pleasures of learning would be unlikely to continue their learning for very long. Secondly, it may be that the term "problem" with its connotations of blockage and obstruction, was an inappropriate one to use. There was evidence to show, that the kinds of difficulties a researcher might label as "problems" were regarded as enjoyable challenges, or interesting diversions, by the independent learners themselves. The problem of finding a more effective way of managing bee swarms was, for example, the central concern of the apiarist. It was not regarded as a difficulty blocking the progress of his learning, but rather as the absorbing focus of his efforts, a continuing source of interest and enjoyment. The whole concept of "problem," seemed to be alien to these adult learners as well, and at times became almost apologetic in their inability to recall any difficulties they had experienced. Interestingly enough, the correspondence students showed a much greater awareness of labouring under particular constraints and limitations.

It is interesting to note that the majority of the research literature about self-directed learning have rarely approached the issue of problems/barriers for learning on their own. Instead, the research questions have been usually related to the factors that are a hindrance to the participation of adults in learning activities. In this regard Cross (1981), for example, talked about three categories of barriers that do not allow people to participate in adult education activities. She classified them under three categories: Situational, Institutional and Dispositional. Among the Situational Barriers (those arising from one's situation in life at a given time) lack of time was considered, in the majority of the surveys, as one of the main "obstacles to education." (p. 51)

"Time," Cross (1981) continued saying, "was mentioned more often by people in their 30's and 40's, and more often by the highly educated" (p. 146). These findings seem to be supported by the findings in the present study where "Time"

was recognized by the majority of the adult learners interviewed, as their major problem/barrier.

This lack of time, specifically self-time by these adult self-directed adult farmers can be explained by the presence of multiple roles. This phenomenon, as Lewis and Weigert (1981) pointed out, is a common one in any modern society. The majority of people interviewed were part-time farmers. They had off-farms jobs, which in the majority of the cases allowed them to work on their farms only before or after work, during the week-ends, and in some cases during the summers. In addition, these adult farmers had to play other roles, for example, in their homes (e.g. parents, spouse), in their communities (e.g. member of the organic farmers organization) and so on. As Lewis and Weigert (1981) said, "when competition between forms of social time arises, it is 'self-time' which is frequently the loser. In a sense, self-time is always potentially with us, but it is submerged under other types of social time much of the (physical) time" (p. 445). The fact that none of the full-time farmers mentioned lack of time as their major problem seems to confirm that explanation.

Only a small number of researchers (Tough, 1968; Brookfield, 1982a) looked directly at the question of what goes wrong while learning "on your own." For example, Tough's (1968) research showed that "the most frequent

source of confusion, frustration, and even anger occurs during the contact with the person, book or other resource that is expected to be of help. Such problems are more common than knowing when help is needed or where to find it" (p. 105). Those findings are similar to what was found in the present study. The majority of the adults interviewed did not perceive finding information as a problem, but they faced some problems during contact with the source (book, people etc) and/or after the information was obtained. For example, they found difficulties in relating, what they read in books and/or heard from other people to their own situations.

Regarding motivation/incentives for learning, the data from this study revealed that this group of adult self-directed learners enjoyed what they were doing. These findings agree with what other researchers found (e.g. Tough, 1968; Brookfield, 1982a and 1982b; Danys and Tremblay, 1985) in the sense that the enjoyment of the learning activity plays an especially important role in the continuation of their learning projects. The fact that the "thrill of something new" is one of the major incentives in their learning agrees with the results obtained by several researchers (e.g. Tough, 1968) in the sense that curiosity is "particularly important in individually guided adult learning projects" (Rossing and Long, 1981, p. 25).

Money was not perceived by this group as their major incentive for learning. The data suggest that this group of adult learners gave a higher value as incentive, to other things like the satisfaction they get from their job. As Bandura (1977) said, "values determine behavior in that prized incentives can motivate activities required to secure them, and disvalued incentives do not" (p. 139).

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

A brief overview of the research purpose, procedures and major findings are presented in the first section of this final chapter. Afterwards, a discussion of the major conclusions reached regarding the self-directed learning process of a selected group of adult farmers in Michigan is included. The third section contains a number of implications and recommendations that were formulated based upon application of the study findings and conclusions. Finally, the suggestions for future research in this area are presented.

Summary

Traditionally, the role of the agriculture extension agent has been conceived as an expediter for the transfer of technology to the farmer. However, in recent years there has been an emphasis on the importance of the role as adult educator. As an adult educator, there is a clear need for the extension agent to know more about facilitating the process of adult learning. One of these modes of learning is self-directed learning.

This study was designed as a response to the need for more research in self-directed learning. The purpose of this study was to enhance understanding of the self-directed learning process as a basis for improving extension education programs. A group of adult farmers in Michigan was selected and the collection of data was conducted using open-ended interviews.

A major contribution of this study was utilization of qualitative research methodology. Specifically, grounded theory methods were used to study the self-directed learning process, viewed from learners' perspective. A relatively different kind of adult population was used; adults in a farming setting. In addition, this study may contribute knowledge that could be applied to situations that are of immediate concern to both extension agents in the field and decision-makers in organizations that have responsibilities for their staff development.

A summary of the four areas of inquiry that guided the research process, each followed by the major findings described in Chapter IV, are presented below:

AREA OF INQUIRY #1: Who are these learners?
(Demographic characteristics)

These learners represented a relatively young and highly educated group of organic farmers. The majority were

men, who had worked in organic farming for at least five years and who were working as part-time farmers.

AREA OF INQUIRY #2: How do they perceive learning and how do they perceive themselves as learners?

They conceptualize learning as a continuous and cumulative process; a process that never ends. The majority of them perceived themselves as good and interested learners, always looking for new things. However, a small group of them, four out of 17, perceived themselves as slow learners. This low perception of themselves as learners did not seem to be related to low educational level because three of these people held BS degrees.

AREA OF INQUIRY #3: How have they learned about organic farming?

They learned about organic farming mainly on their own as self-directed learners. Self-directed learning activities were cited by all of the study participants as their preferred way of learning mainly because in this way they felt free to learn what they wanted at their own pace. The majority of them did not like learning from formal courses because these courses were usually oriented towards only one subject.

The learning process they followed was described as a "round about" process. The major components of that process

were: learning through reading, learning network, and learning through experience.

Learning from reading was considered the most common way of learning. It usually helped them get started in the topic, and provided them with the basic questions to ask to other people, if necessary. The longer they had been in the organic farming business, the more specific types of information they sought from their reading.

Learning network. This group of learners did not learn in isolation. Most of their learning occurred in a social environment. The major components of this learning network were the following: learning from other farmers, formal network. Other components perceived as less important were Cooperative Extension Service, and consultants and salespersons.

Learning from other people, together with reading was considered a very common and important way of learning. The majority of the people in this group liked this way of learning. There was a small group that preferred other ways of learning. The reasons for this preference were mainly related to personality types (e.g., some people are more outgoing than others). Others had become "experts" in their areas. The main advantage of learning through other people was

that "you can save your own resources -- time and/or money."

Formal network. All of the study participants belonged to the voluntary organization of organic farmers. Through this organization, they participated in different kinds of learning activities. For example, farm tours (visiting other peoples' farms); open forums (formal and informal exchange of ideas during the meetings); seminars/conferences (organized and/or promoted by the organization). The role played by this formal network was perceived by the majority of the respondents as a very important component of their learning, especially for the support it provided. The importance of the network was greater for people new in organic farming.

Cooperative Extension Service. The majority of the adult farmers interviewed did not perceive the Extension Service as a learning source. These feelings were directly related to their negative perception of the attitude Extension workers had traditionally expressed against them and organic farming in general. Some people perceived this limitation was changing.

Consultants and salespersons. These adult learners preferred to first consult their relative and friends rather than paid experts. In general, they

felt leery about consultants and salespersons. The general feeling was that the farmer did not need to pay anybody because those people (consultants and salespersons) would not know the farm as well as the farmers do.

Sharing of information. There was a general feeling that information was usually shared among the people in the organization and with other farmers. However there were specific cases where some kinds of information were withheld. The information withheld was "hot" information that could make other farmers competitive. The phenomenon of withholding information, perceived by the majority of the farmers interviewed, had been directly experienced. However, there was a small number that thought the phenomenon was not really a case of conscious withholding of information, but rather a case of some farmers (particularly old in the business) not giving information to new farmers, not because they did not want to, but because they thought that information was too obvious to be given. Two people felt this phenomenon did not exist.

Learning through experience. Experience was conceptualized as "your own ideas and observations." The term was usually used to refer to "learning by doing" and "learning from mistakes."

There were activities that were prepared consciously for learning through trial and error. There were also other activities that although not prepared initially with that intention, became learning by mistake type of activities because something went wrong. The major characteristics of those trial and error activities were the following. First, they were usually short in duration; it was possible to see the results in less than one year. Second, they were usually done on a small scale; and finally, they were usually closely supervised by the farmer.

Even though learning from experience was considered the most important way of learning, it was not considered the most efficient one mainly because this way of learning implied costs (in terms of money and their own resources).

AREA OF INQUIRY #4: What have been the main problems/barriers faced when learning on their own?

Time. Lack of time was considered the major constraint when learning on their own.

Getting Information. This was not considered a problem. The problem was how to find the best and fastest source of information, and then how to relate it to their own situations.

Motivation. This was considered a very important element in their learning, not only to start an activity, but also to continue doing it. The major learning

incentives were the "thrill of something new" and the general "satisfaction" they received from doing their organic farming. Money was considered important, however, it was not considered the main thrust for their learning.

Help Needed. Some people gave some ideas about the kind of help they would like to receive. For example, some would like to have more specific types of publications; to have access to publications that give references to other publications; to receive more encouragement from other people; to have someone like a mentor, especially during the initial years; or to have the opportunity to practice some of the skills without spending own resources (a kind of internship or apprenticeship).

Other Problems/Barriers/Challenges. Some other problems/barriers reported were: "not getting what you expect" or "not knowing what to expect," "not having enough people around," and "the constraints are in yourself" (e.g. bad memory, not being outgoing, procrastination, lack of confidence).

Conclusions/Implications and Recommendations

Statements of the three objectives of this study, each followed by the major conclusions or implications and recommendations are presented below.

Objective #1: To explore and describe the self-directed learning process of a selected group of

adults by viewing it from the learners' perspective.

The findings previously stated in this summary, and also in chapter IV, were the basis for the following conclusions.

1. These learners represented a relatively young and highly educated group of farmers. The majority of them were men, had worked in organic farming for at least five years, and were working as part-time farmers.
2. Their preferred way of learning was self-directed. The majority of them did not like learning through formal courses.
 - a. Learning from reading was most common among this group.
 - b. However, they did not learn in isolation. They had a learning network or "parallel educational universe."
 1. Learning from other people was the second most common way they learned. Relatives and friends were consulted more often than paid experts (consultants/salespersons).
 2. The formal network played a supporting role. The role of the formal network was perceived as more important by people who were relatively new in organic farming.
 3. Not all the information was freely shared among the members of this group. Some of it was withheld, especially that information that could make other people competitive.
 - c. The Extension Service personnel were not considered an important learning source mainly because of the perceived negative attitude towards, and lack of knowledge about, organic farming.

- d. Learning from experience (learning by doing/learning by mistakes) was perceived as the most important way of learning, but not necessarily the most efficient in terms of money and time.
- 3. Lack of time (self-time) was considered the major problem/challenge faced when learning on their own. Finding information was not a problem. The problem was where to find the best information the fastest, and how to relate that information to their own situations.

Objective #2: To propose hypotheses and/or a learning model that would be an explanatory paradigm emerging from the data which in turn could be tested by other researchers.

The following propositions, drawn from the findings, may represent conclusions. They are suggested as hypotheses for further study.

- 1. The more dissatisfied the self-directed learner feels from institutional learning, the greater will be his/her reliance on self-directed learning.
- 2. The higher the self-directed learner's level of education, the greater their reliance on reading as a way of learning.
- 3. The perceived importance of the learning network decreases with time and expertise in the activity. The newer the self-directed learner is in the learning activity, the more important the role played by the learning network.
- 4. The more receptive and knowledgeable about the topic the representatives of a formal learning institution are, the more assistance the self-directed learner will seek.
- 5. Learning from experience (learning by doing, learning through mistakes) is perceived as the most important way of learning for self-directed learners.

6. What are commonly perceived by researchers, as problems/barriers in learning, are likely to be perceived by the self-directed learners as enjoyable challenges.

Based on the findings, the following is a proposed learning model suggesting further study. The self-directed learning process can be described as shown in Figure 5.1. The data from these findings appear to confirm the learning model developed by Jarvis (1987). Jarvis based his model on the learning cycle previously created by Kolb (1984). According to this model, "no experience occurs in isolation, neither is any interpretation given in isolation. Experience and interpretation are social phenomena" (Jarvis, 1987, p. 166). Another very important characteristic of this model is the fact that, "since some experiences may not result in learning, it implies that there might be more than one route from the experience itself" (Jarvis, 1987, p. 165).

This model suggests that there might be experiences that are not necessarily learning experiences. These are everyday life acts (routine type of activities) where the individual responds automatically. These activities "are taken for granted" and so they serve "to reinforce the stock of knowledge already held" (Jarvis, 1987, p. 167). But there might be other experiences where the stock of knowledge acquired through the process of living is not able

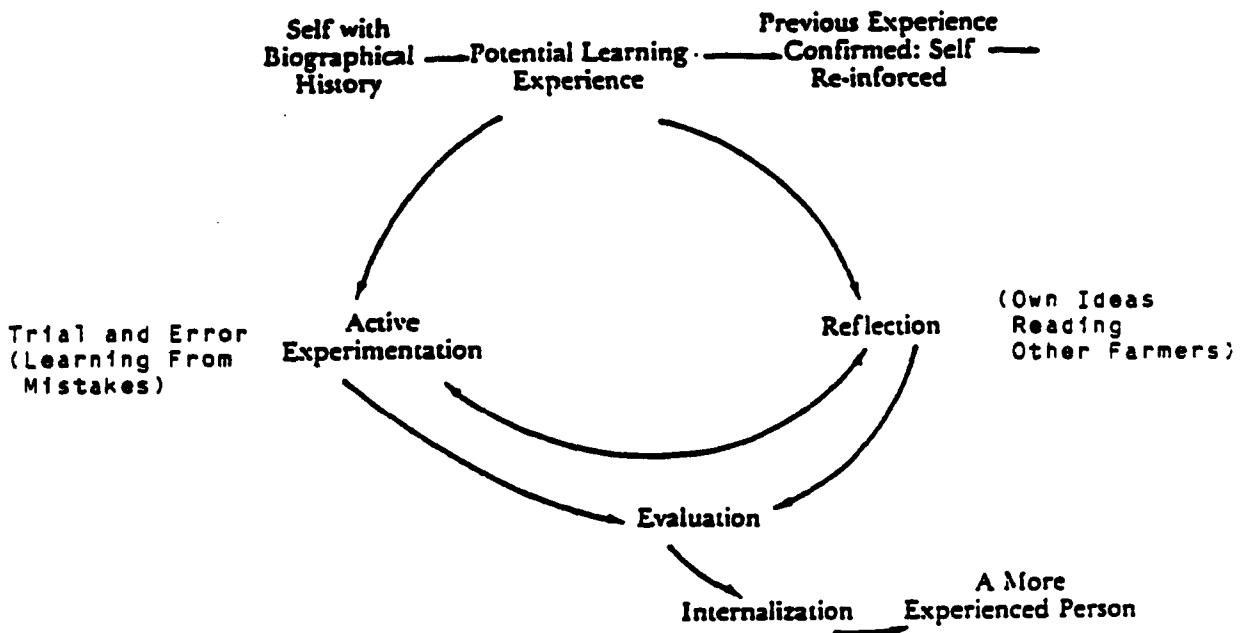


Figure 5.1. Towards a Model of the Self-Directed Learning Process.

Adapted from Jarvis, P. (1987) "Meaningful and Meaningless Experience: Towards an Analysis of Learning from Life," Adult Education Quarterly, Vol. 37, No. 3, Spring, pp. 166.

to provide an automatic response, and the people "have to think about it, reflect about it and, maybe, seek other opinions about it" (Jarvis, 1987, p. 168). This process of thinking is known as reflection (Jarvis, 1987; Boud, Keogh and Walker, 1985; Freire, 1973).

So, reflection is a very important component of this learning model. Reflection, as Jarvis (1987) pointed out, "is an essential phase in the learning process whereby people explore their experiences in a conscious manner in order to lead to a new understanding and, perhaps, a new behavior" (p. 168).

Objective #3: To analyze and report the findings of this study including an assessment of its implications and recommendations for improving the extension agent's programming and practice.

A number of implications and recommendations concerning the extension agents' programming and practice were drawn from this investigation. The reader is reminded, however, to interpret these implications with the following caution in mind. Because the study design was based on a selected group that represented only one nonrandomly selected segment of a much larger target population, and because of the descriptive and naturalistic nature of this study, the degree to which findings and conclusions can be generalized to broader situations is limited.

These implications and recommendations are based primarily on two assumptions: (a) all adults are capable of a degree of self-direction in their learning, and (b) that human potential can be fostered and facilitated.

These implications and recommendations are presented in terms of three different levels. The following is a brief discussion of the major implications and recommendations at the institutional level, at the practitioner or extension agent's level, and finally, some implications and recommendations for developing countries are presented.

Institutional Level

A move towards self-directedness implies a broadening in the scope of the professional role of the extension agent. In other words, it implies the incorporation of facilitation of self-directedness learning as one of his/her roles. To implement this change, the institution (or institutions) in charge of the programs for staff development (pre-service and in-service programs) of extension agents could follow several routes. One of these might be providing "administration, faculty, and staff with opportunities to become knowledgeable about published research on self-directed adult learning" (Brockett and Hiemstra, 1985, p. 36). This means, that the courses for both pre-service and in-service training should prepare

extension agents to facilitate this type of learning for the adult clientele served by extension.

There are several ways of doing this. For example, one way might be allowing the extension agents to experience (directly or indirectly) the self-directed learning process through active participation in courses like "learning how to learn," instructional simulations, and/or role plays. Studies like the one done by Richardson (1986) showed that extension agents in fact would like "self-directed learning to be a part of their formulated training" (p. 63). The major content of those courses (or learning activities) could be oriented to make the extension agent aware of the major findings coming from research on self-directed learning.

Practitioner or Extension Agents' Level

For the purpose of analyzing the implications and recommendations at the practitioner or extension agents' level, two groups of practitioners with different needs were differentiated, those who foster self-directedness among their current clientele and those self-directed adults who are not currently being served by an institution.

1. Those extension agents who want to foster and facilitate the self-directedness of the adult clientele with which they are already working.

The extension agents, in conjunction with their respective institutions, should be aware of the research results about self-directed learning, and they should use that knowledge for improving their daily practice. Some of the research results on self-directed learning, judged to be relevant for the improvement of the extension agents' practice, are presented below.

- Self-directed learning is not a uniform process and is not necessarily the best way for everybody to learn.

This implies that the extension agent should be aware that because of individual differences, there will be different degrees of self-direction. As a result, the facilitator should understand that there might be cases where some learners want to become more self-directed. As Brockett and Hiemstra (1985) stated:

With the great diversity that exists both in learning styles and in reasons for learning, it is extremely shortsighted to advance such an argument. Perhaps, it is more appropriate to think of self-directed learning as an ideal mode of learning for certain individuals and for certain situations. (p. 33)

- The self-directed learner does not learn in isolation.

This implies that extension agents should work with groups, preferably with pre-existing social groups rather than attempting to create new groups. If these groups do not exist, then the extension agent should encourage the formation of learning networks and groups.

- The self-directed learner accepts help if the help offered is appropriate.

This means that the input of the learner is very important for determining the relevance of the help.

- Some other suggestions are:

Provide resource materials.

Help the learners to become aware of their learning style.

Give feedback and encouragement.

Provide the learner with enough time for reflection during the learning activities.

Provide the learners with opportunities for hands-on experiences.

2. Those extension agents who want to assist those self-directed adults who for one reason or another are not being served by the institution.

The extension agent, together with the institution, has to create ways of communicating and getting feedback from this population. In other words, it is necessary to get as familiar as possible with the characteristics of this group. This can be done through several means such as participatory research, surveys, and so on. The next step would be to try to respond to the needs found. This response could take several forms such as advice, written materials, location of information resources, and so on. Brookfield (1985) described in detail some successful examples of this kind of

assistance, e.g. "advisory service for adults" and "home study service" (p. 79-80).

Developing Countries

From the educational point of view, the small farmers in the majority of rural areas in developing countries have some characteristics in common. Most of the people are illiterate. This means, among other things, that most of the people have not participated in formal (school) learning, and so the natural way of learning for the majority of these people has been self-directed learning. Most of the knowledge about farming has been acquired and transferred through informal learning networks.

Given this kind of situation, and given the general lack of resources available to reach all of these people through formal education. The role of the extension agent can be improved by trying to be a facilitator of the self-directed learning already existent. In other words, the extension agent should try to be of assistance to these self-directed learners by making use of the available human and material resources.

As mentioned before, a move towards self-directedness implies a broadening in the scope of the professional role of the extension agent. In order for this move to be feasible, there is the need for a supportive environment by the institution where the extension agents work. This

change of roles might be difficult in areas where for example, the extension service is under an institution which has a centralized bureaucratic system. This situation would greatly limit the involvement or participation of the clientele in the decision-making process. Another example would be those cases where the extension agent plays multiple roles; those situations where the extension agent not only works in the transference of technology but also plays regulatory kinds of roles. In these cases, the freedom for action of that extension agent would be very limited.

There are of course many other factors that should be taken into account when trying to implement these kinds of changes in a system. These factors are the political, socio-cultural, and economic situation of each particular country. The extension agent and the institution he/she works for should be aware that all and each of these factors can work toward either promoting and facilitating, or limiting and constraining this move towards self-directedness. So, this movement towards self-directedness is a complex process that needs a proper environment (at different levels). This environment is created by the interconnection of many other factors, of which the extension agent is a very crucial one.

Recommendations for Future Research

Replications of this study would be helpful for clarifying some aspects of the findings, to test how far the findings can be generalized, and/or to add factors not included in the original study. For example, it would allow a look at the self-directed learning process in populations like the dairy farmers or other commodity groups who have traditionally had different connections with a formal learning institution such as the Cooperative Extension Service. Getting the same sort of results as this study would increase the confidence placed in the scientific validity of the findings. Replication, in other words, could increase the significance of the study, or raise other questions about farmers' self-directed learning.

The following is a list of suggestions for follow-up, continued investigation, and future research in this area:

1. A study to test the hypotheses and learning model presented in the study.
2. A study to determine the current level of knowledge and use of self-directed learning among the extension staff.
3. Replicate this study using other sectors of the agricultural population -- full-time farmers, dairy farmers, etc.
4. Conduct a similar study with farmers who have different demographic characteristics-- illiterate farmers, all women, etc.
5. Conduct a similar study with farmers in developing countries.

6. Conduct further intensive study with members of this population, trying to go more in-depth into one or more of the areas that emerged in this study. For example, look in-depth at learning from experience or the process of sharing information.
7. Conduct a study comparing the adults' own judgement regarding the quality of their self-directed learning efforts and that quality as measured by some external objective standard.

APPENDIX A
FAMILY FARM PROJECT

FAMILY FARM PROJECT

DATA COLLECTION

DATA COLLECTION ACTIVITY	DATES	
	FAMILY #1	FAMILY #2
GROUP INTERVIEW	03/24/86	03/24/86
OBSERVATION	04/01/86	04/11/86
INDIVIDUAL INTERVIEW	04/24/86	05/02/86

APPENDIX B

INDEX MAP

APPENDIX C

INTRODUCTORY AND THANK YOU LETTERS

Agricultural & Extension Education



Michigan State University
410 Agriculture Hall
East Lansing, Michigan 48824 - 1039
(517) 355 - 6580

October 8, 1986

Dear

I would like to have your attention for a couple of minutes. I am Consuelo Quiroz from Venezuela and at the present I am doing a PhD degree in Agricultural Extension at Michigan State University. Before coming here I was working in Venezuela as a teacher of Agricultural Extension at the college level and I am planning to go back to the same job as soon as I finish my degree here.

I have always been interested in looking at alternative ways in agriculture, particularly organic agriculture. At the same time I have been amazed at the little research being done on the area of Self-directed-learning (learning on your own), most of the research in education has been concentrated on learning that occurs in the classroom. Now I have this great opportunity in life to combine these two areas of knowledge in my dissertation topic.

The outcomes of this study will be useful for learners, and for adult educators, in helping them to know more about the process of learning. This knowledge will be helpful in overcoming difficulties, identifying needed resources and, in monitoring direction. Adult educators, in this particular case Extension agents, will be able to contribute in providing the resources and conditions necessary for learning to occur.

By this time, I can imagine that you are saying, well that is fine, but what do I have to do with all this?. Your participation in this study is the most crucial part of it because without you and other organic growers like you this project would be impossible. What I am asking of you is your help by providing me with an opportunity to talk with you (for approximately 45 minutes). During that time we will be talking mainly about the way you have learned the skills related to organic farming. All the information collected will be kept confidential and will be used only for the dissertation purposes.

I will be contacting you by phone so we can agree on a convenient date and time to have the interview. My telephone in East Lansing is (517) 355-3214 if you want to contact me. You can call me collect.

Yours sincerely,


Consuelo Quiroz

:CQ

Eden Acres, Inc.
12100 Lima Center Rd.
Clinton, Mich. 49236

517-456-4288



To the Thumb Chapter,
Organic Growers of Michigan

Let me introduce Mrs. Consuelo Quiroz, who is from Venezuela and is currently engaged in her Ph.D dissertation research. The topic she is looking at is the process of self-directed learning of farm skills for organic growers.

For this purpose she is planning to have a conversation (about 45 minutes) with farmers who are involved in organic agriculture. You can be certain that the information collected will be strictly confidential, i.e., no names will be used.

Your collaboration in this research will be greatly appreciated and the results of it will be useful for better planning of adult education programs oriented to farmers - not only in Michigan, but in Venezuela where Consuelo will be returning to teach. You will gain some insight into other agricultural methods and economies as you visit with her, and I'm sure you will enjoy the interview.

Please make her welcome,

Jean Winter

Jean Winter
Marketing Coordinator
Organic Growers of Michigan

Eden Acres, Inc.
12100 Lima Center Rd.
Clinton, Mich. 49236

517-456-4288



To the Thornapple Valley Chapter,
 Organic Growers of Michigan

Let me introduce Mrs. Consuelo Quiroz, who is from Venezuela and is currently engaged in her Ph.D dissertation research. The topic she is looking at is the process of self-directed learning of farm skills for organic growers.

For this purpose she is planning to have a conversation (about 45 minutes) with farmers who are involved in organic agriculture. You can be certain that the information collected will be strictly confidential, i.e., no names will be used.

Your collaboration in this research will be greatly appreciated and the results of it will be useful for better planning of adult education programs oriented to farmers - not only in Michigan, but in Venezuela where Consuelo will be returning to teach. You will gain some insight into other agricultural methods and economies as you visit with her, and I'm sure you will enjoy the interview.

Please make her welcome,

Jean Winter

Jean Winter
 Jean Winter
 Marketing Coordinator
 Organic Growers of Michigan

Eden Acres, Inc.
12100 Lima Center Rd.
Clinton, Mich. 49236

517-456-4288



Dear Organic Grower,

Let me introduce Mrs. Consuelo Quiroz, who is from Venezuela and is currently engaged in her Ph.D dissertation research. The topic she is looking at is the process of self-directed learning of farm skills for organic growers.

For this purpose she is planning to have a conversation (about 45 minutes) with farmers who are involved in organic agriculture. You can be certain that the information collected will be strictly confidential, i.e., no names will be used.

Your collaboration in this research will be greatly appreciated and the results of it will be useful for better planning of adult education programs oriented to farmers - not only in Michigan, but in Venezuela where Consuelo will be returning to teach. You will gain some insight into other agricultural methods and economies as you visit with her, and I'm sure you will enjoy the interview.

Please make her welcome,

Jean Winter

Jean Winter
Marketing Coordinator
Organic Growers of Michigan

December 18, 1986

Address of Interviewee

Dear _____:

Thank you so much for allowing me to interview you regarding learning on your own about Organic farming. I know how very busy you are and I appreciate your taking time out of your schedule to talk to me.

This study is really very interesting and hopefully the results will be useful for all of you. I will be happy to share a summary of the findings as soon as it is completed.

Again, thank you for your time and willingness to participate.

Sincerely,

Consuelo Quiroz

APPENDIX D
INTERVIEW FOCUS

INTERVIEW FOCUS

- Background:
 - Time in farming
 - Time in Organic
 - Education?
 - Why still organic (support?)
 - SDL in Organic:
 - Books, Magazines,
 - Other people
 - Extension
 - Consultants
 - Conferences
 - Salesmen
 - SDL through other people:
 - Sharing
 - Exchange
 - When, Why, Whom
 - Relation with Extension:
 - Dilemma
 - Expectations from extension
 - Why more interest from other people than from extension
 - Problems (constraints, etc) as learners
 - Time
 - Getting information
 - Understanding information
 - Challenges as learner (enjoyable?)
 - Likes and dislikes as SDL
 - Yourself as learner
 - What do you think will help you to be more effective as SDL?
 - Member of other groups apart from OGM?
- SDL = Self-Directed Learning.

APPENDIX E
SUMMARY OF FINDINGS

SUMMARY OF FINDINGS

This very rough draft has been prepared today 11/27/86 using as data the information collected from the first 13 interviews. There are two more interviews which are already scheduled. In other words this is my first attempt to integrate all the information drawn from the different interviews, it was written using everyday language, as the thinking was flowing.

- This group of organic adult farmers seems to be a group of very "interested" and "eager" adult learners. They are "curious to be learning new things".
- They enjoy the "process" more than the "goal" itself while learning, i.e. even though the majority of them cannot be considered "successful" from the economic point of view, they seem to feel "successful" in their learning, they all "enjoy" what they do.
- In relation to their way of learning, the way they usually do it is by either reading about it or listening about it from other farmers and then "experimenting". "Trial and error" is by far considered their major source of learning, there are cases where they have to go to alternative sources (especially by asking other farmers or reading) and this is when the result of what they're trying to learn takes a long time (more than one year).

- In relation to their use of other people (farmers, partners, the Organic Grower Organization), all of the people interviewed belong to that organization, so they have voluntarily joined that organization. They see the role played by this organization from different perspectives. Most of them agree that it is mainly a social event where a group of people get together and share common concerns, and which acts as a support group in the sense that it helps them not to feel alone in their efforts. In relation to the issue whether they consider this way of learning as a major one, the opinion varies, there are different degrees, there are those who although define themselves as "independents," "introspectives," or who might even see farming as a "private profession," they really use a lot of other people such as partners, spouse, or consultants.
- In relation of how important do they consider the OGM to be as a source of learning, the opinion varies. But it is clear that those who find those meeting interesting for them are able to find the time and manage to attend even if the place is far.
- In relation with the "sharing" of information among them, they recognized the fact that there are some people who withhold part of the information, specially that part of the information ("hot") which maintain

that person in the "cutting edge", i.e information who could make the other people compete against them.

- All of them emphasize the importance of being in close relation (everyday) with your farm (land, crops, etc), so you can be "in tune" with it.
- They have built a kind of "basic knowledge" (different degrees depending on the amount of time they have been farming), that they always seem to rely upon and which is always being modified as new information is obtained and added.
- The use of consultants seem to be limited mainly to the use of soil consultants in counted opportunities. There were two cases where people hired as consultant people from other states. In general the feeling is that the consultants are not necessary, and are very expensive. Most of them feel "leery" about consultants and "experts" in general. There is the feeling that farmers should make use of other farmers instead, should not pay any "stranger", that might not even now their farms as well as they do. They feel suspicious as well of the salespersons because their main purpose is to sell a product.
- In regard to their relation with the extension service, they really seem to have a "parallel universe" (as Brookfield mentions), they are involved in different

degrees with extension, the degree depends on the kind of experience that they personally have had with extension. Traditionally the extension service has not served the organic growers, and has had negative attitudes against growing organically, those attitudes have created an environment of resentment. But the situation is changing lately. There are clear cases of positive attitude, and increased involvement, depending on who is the extension agent or who is the new CED in that county, i.e. depending on whether this ag. or CED is open or not towards organic. It looks like the old generation of agent had been trained to service only the chemical farmers. Most of the research which is going on at MSU has been funded by big corporations (it has been very interesting to me to notice how much aware the organic growers are of this fact, i.e. they know that if there was a big corporation or somebody who would give a big amount of money to MSU to do research on organic, there would be that type of research. Some of them are aware as well of the fact that MSU is one of the Land grant colleges, and so its purposes should be more oriented towards the needs of the community (e.g. consumers are not heard either).

- In relation to the way they evaluate ("grade") themselves, it really depends in how do they "feel". This evaluation is done mainly at the end of the crop, or at the end of the year, some people talked about more sophisticated ways of evaluation, for example they mentioned two different stages for doing evaluation, one immediately after finishing the activity and a second one some time after.
- In relation to their main problems as Self-directed-learners. This has been one of the most difficult questions in the interview. I have had to use many different words to try to help the people to understand what I mean (e.g. barriers, constraints, frustrations, likes and dislikes). Some people have related that question mainly to farm related problems (e.g. marketing, varieties, etc), and some people have even said that they do not have any problem at all in learning. This part seems to coincide with what Brookfield said in one of his papers, i.e. it seem that the successful self-directed learner does not think in terms of problems, because he/she really enjoy their learning. Among the problems as learners that were mentioned, time, was by far the most popular, time was sometime combined with money. Getting information is not a problem, the sources are there, it takes time to

know where and whom to consult, but you can do it, given the time (and money) they felt able to learn anything.

- As frustration: seeing failures at the end. Another problem (frustration) is the fact that some of the readings (magazines, etc) that are available do not apply to their own particular situation, for example those who don't have vegetables find totally useless the readings which talk about gardening, and so on. There is the general feeling that there is the need for more specific type of written information, there is the feeling of having to have to sort out (too long) through the existent materials, to find out exactly what they need. They would prefer to have more specific type of written information, and reading which might serve as source of other readings. Some of them mentioned how useful they find the encyclopedia type of publications.
- Other problems: their own personality, not having other organic growers around, they feel that they are not being taken seriously for being small farmers.
- Among the things that would "help" them to be more effective learners: more "straight forward" type of publications, somebody like a "mentor" (could be another farmer, extension agent), who would play

several roles, mainly needed to give encouragement. Some people recognized that these people ("mentors") already exist out there but they haven't made use of them for several reasons, including their own personality (very "independent", etc.)

APPENDIX F
MEMBER VALIDATION

MEMBER VALIDATION

Interview: 11/30/86
Transcription: 12/06/86

- C: Do you still have a few minutes more, if not ... I'm going to read one thing which is my interpretation of what several people have said, I would like to check..
- (1) It looks that the process is more important than the goal itself.. L: is that what they say.. C: no that's my interpretation.. it looks like most of you enjoy so much what you're doing - the process - not so much the end of that
- L: that could be true, I'm not sure that's always true, the reason is that the end results is important to me, you grow,..., if you use -spray- and it destroys the ozone... the end product is such that you also destroy the atmosphere, so everybody is getting cancer.. so the method you're saying is more important, I'm saying the end product is important too ... A: the end product being destroying the atmosphere... C: probably I was thinking of more, learning skills in organic.. A: I think what you're saying, is these people are enjoying the process of learning and applying what they're learning, as well as getting a product, if it was just a matter of, they wouldn't enjoy as much if they didn't have any of that going on, and they just got the corn or the berries or whatever, they actually have some satisfaction on going through the process, and the learning of doing it... C: yes and even, since one of the, value system, which is normally used is economic, even if that product is not that profitable, it looks like that's not really the major importance, it's the whole process, ... A: for better or for worst I myself I'm process oriented, I would not go through a process like the hairspray stuff, the end product is important as far as whether or not it is going to be helpful or harmful to someone else, that I weighed hopefully before starting into the process, but if it's something in the farming, working with fibre, the kids at school, I think the process in learning something throughout the process that you're going to apply to the next thing, it's possible more important to me than having each product turn out perfectly.. C: that's the impression I've got from talking with diff. people, I'm not saying that everyb. is like that, but, ... L: I think more homesteaders, small farmers might be in that category, but I'm not sure that's the way I do, I believe in the

end product... the end product its important, you set your goal to what that end p is, then you have different methods to get there, and I would choose the method, wherever the sit. is you're force into a lot of options, you're k o limited, money, time, etc, but y still have a few options, so you decide which option you want to take, id take the organic method rather than the chemical, but unless I know the importance of that goal, I'm not even worry about it... C: you set a goal and you have all those alternatives, and you really follow a process, reading, talking with other people, relating to your past, etc, and you choose one, but for some reasons this goal didn't come out exactly the way you expected, I've got the impression that even if that happens, the people enjoy the process of learning for getting there, and probably is just a semantic problem, I don't know... L: I think its not a progressive thing, if you're thinking of the human race as a whole that's not a progressive way to think, but I think that's the way the majority, if not all human think, bec. getting there is half the fun, its more of a selfish personal type thing, you say its semantics, but its semantics, bec. if we all were goal oriented, the quickest method, that's the one we would choose, I can see that being as more as people in the beehive, the bees, humans are a little different, we are a little more selfish, less concerned about society as a whole, relating even this to a sexual thing, the human say that, getting there is half the fun, once you're married, all the fun is over, bec. it was the path through that, am I making a k o clear comparison... A: I got lost in the last part... C: yes, me too.... A: in the beehive, I think I know what you're saying, but y just look at that goal, I think a lot more people would get hurt if you just take the most efficient thing, I think the reason people get involved with the process is bec. they're thinking how the pro. is gonna effect all the other things around them, I don't think anybody is clear cut, just to the goals.... some people are leaned? one way than the other L: I don't think people learn just for enjoying experiences, I think people learn for the final product, I think the whole educational thing is set in the final prod. and sure is nice to be ----- but I don't think that's what you intend, I think you decide to become a learner so y have an outcome... C: are you thinking of SDL or the formal way of learning at school, bec. I can see that very clear in school, when you have a goal of getting a degree, but in this type of learning I don't think is that clear, the goal

is not clear, what is a goal for you is not necessarily a goal for me... L: its possible true, bec. my goal is to live this earth in a little better shape, the particular thing that I was given to handle or touch, than before I was there, at least not destroying it, that's basically my goal on earth... A: and with that general goal, some of the goals to get into that change as you see ---- too, so the process is ---- change... L: I don't think were gonna solve this, C: no, its not something that anybody is gonna solve but I needed to hear other people thinking ... (Ice)... L: if you see that as being true, its a lot harder for the extension service to try to set up some k o program to help these farmers, they really don't care about the end prod., all they do is care about... A: no, no, you're saying they don't care about the end product, that's not true (yeah), its part of the enjoyment is in the process as well as getting the end prod. (yeah), is not like, mindlessly, like popping?? river?? I really hate to do this but the car is nice when it gets done... (C: some people have expressed so many beautiful things about just the soil... touching the soil.... L: you realize though in our country, if you show that you along this way you like any of the stuff for the end goal, then all the stuff you cant use to say that you were farming, cant use for tax deduction, bec. the government say (right -yeah) -----... isn't that a crazy thing,.... C: it is crazy but that's one of the things that I'm getting the impression,.... L: and they wont allow you help us do that then, bec. you are supposed to be out for people make money, ... C: but one of the things I'm getting is that money is not the goal, there are people who have lost money... L: in my own mind that's the thing that separates a lot of the org. growers from the chemical growers, is that particular fact.. (yeah, of course, and that's why, even though there are some lost, they continue doing it..L: I think its true,... that's why the capitalist economy doesn't like the org. growers..

C: if you still want to listen... let me.... usually people say, I do something, I learn by the mistakes bec. I can know when it is wrong, one of the questions I have, is that, what about when is something which is totally new, its the first time that you're doing something, how do y know whether is wrong..

L: I think is instinct, for eg. if I touch an electric fence, the first time it hurts me, my mind, will tell me that that was wrong, there are certain things that

as a human race, as animals, developing into humans, we have evolved to protect the species, I don't know whether this is automatic knowledge or instinct or whatever you want to call it, but there are certain things as a group called humans that we've evolved to protect ourself, and that's how we know, certain mistakes, we just know that, a lot of it deals with our senses, if it tastes funny?, if you take a plant and it tastes bitter as supposed to sweet, most of the sweet plants taste sweet and have evolved to be sweet bec. we have evolved a liking towards sweet bec those are the plants over the centuries that are proved not to be poisonous to humans,... (Hce)..

C: its something that you have previous knowledge in your mind that y can, even though if y don't know that particular

L: we've been taught, through our genes, from past generations, that's known to be true

C: consultants, have y used consultants that you have to pay for them to come

L: soil tests (why you didn't use them)... (C: I have found some growers who hire consultants, for eg. to initiate his farm, he hired a consultant, that's why I've been trying to check whether that's common...) it seems that Mich states is promoting this as one of the fields young kids can start learning, in the college, to come graduated as consultant, can tell y come to work in your farm, for 2-3 months, to tell y where you're going wrong, and you should be doing next year, may be, I see that in some of the news clips I get out of the paper, they're trying to put people into mich, st, not to become farmers bec they see that field as not profitable for people to get into, so they're trying to figure, some ways to keep the college open, so they're trying to find other places to have these kids that would come to ag. school make a living, and this is one place..

C: interesting enough, at least for me, that person hired not a college graduate, it was another farmer, who hasn't worked as a consultant before, he paid him to come.... (Ice)

L: its not common now, but it may be common in a few years, because time is so limited in this person he

might? have been reading in some general subjects that you and I wouldn't have time to read, I think is worth,

C: some people have mentioned as well the need to have a mentor, have ever thought about that, as a mean, for help, in farming..

L: I don't understand, how do you spell that.. A: like a teacher, probably an old farmer... L: to me I would never think of that, bec. I wouldn't think of money to be, to me passing down information is k o religious,-- -- pay money for something like that, its like I'm planting the trees here, they wont produce nuts for me, the next generation, I wont get to see any, ... (hce)... A: even without pay.. C: I don't think the people who mentioned that were thinking about money, but, ... it sound to me like a consultant.. L: the problem I would have with that is that I'm not so sure, an older person coming to consult me, would be accurate, a couple of different reasons, nutrition is going down in this country, even if you think they are eating organic products, but is he,.....(hce) and there have been so much innovations, and theories, disapproved in the last 15 years, how accurate, is that person is gonna be... C: although, the word mentor for me, doesn't necessarily means old.... A: yes, someone working a k o along, somebody would be there... C: I'm not sure either, I didn't check at that time.... (end of side 1 - Tape 2, 60 min. 12/07/86)

L: we don't have that kind of system anymore (passing information from ancestors), so people don't even think on those terms C: yes, and I was surprised when those people mentioned that,.. L: I think is one of the bad thing of america that we lost that, heritage.... (hce)

C: I'm going to do one thing with you, if you allow me, I haven't done before, I've made this summary, I'm gonna read..... my interpretation from the 13 interviews..... I really need your feedback.... it doesn't necessarily have to represent you, but this is the way how I see the group in their learning... (I read the summary, he was taking notes)

- In relation to the sharing: this would more true with certain org. farmers than other too, in the more competitive fields which are market garden vegetables, A: real competitiveness, L: they would be scare to give out the secrets; Fruits: there would be quite a bit of

competition there, not so much than -----.... but that would bring diversification? to a group trying to get together and help each other, surely does it...

- In relation to the use of consultants as "stranger": that's a good point, that comes from: its because if those consultants could give you all this inf to make all this money, why aren't they doing it themselves and making a whole bunch of money themselves, and as a group we know this particular fact, and that's why we don't trust these consultants...
 - In relation to the SD learner not thinking in terms of problems: A: bec. the things that you choose to learn about, you're interested, you chose them..
 - (After finishing reading the summary): ... L: as a group if you're gonna to combine us as a group,... people that are not taken seriously, I think, small farmers, I see that as a group, consider ourselves as not being taken seriously, because the long term trend is towards large farming, and the government policy and the industry... (hce) and every time you're less important you have less voice and that frustrates you as a group and makes you ---- withdraw?? and don't even care if they talk to people too, bec. they think that's not going to be any good, so I think its a really important point, as far as important point not being taken seriously as a woman, I don't think that's true as a group as a whole...(hce)
- L: In relation to the encyclopedia type of publication, I'm not sure what they mean by that... there is an enc. of org. farming ... but we've never used them to any, to much good use, id give it about a grade? about a D+, basically, bec. they're so general, like I explained you, we in particular are very specific people, we know our goals (i.e to check about the enc., its ok about the specific...)... everybody wants them to come down to specifics, its a lot easier for everyb. if someone comes and says this is the to your problem, its everybody's dream... but it doesn't work like that, how people can expect a magazine article to fit their particular situation (weather, soil differences etc), for me it shows a lack of knowledge inl their part, a lack of reality .. AL a lack of understanding, to me the reason why y would read that article is to take the facts that they have and try to apply a couple of facts that are similar in your situation, you're not gonna expect someone to write a manual for what's going on in

your farm, bec. they're not living in your farm, so I think their expectations are not really... L:..... and that's my problem, it goes along with this part of giving information to their situation, the fact that many articles don't bring bibliography..... we can go to the bibliography.....so they can fit their own sit.... time being one of the most serious problem, I believe that's true with everyb., I see that as one of the basic goals for ext in the future, how to get us more time, not only more information, but the inf. could get us more time, but ---- chose the short cuts, use herbicides instead of weeding, that's been the push, to give us more time, but look at the problems, that's the same thing, ----- I can see that they've done what people want them to do, but is being sad the outcome... (C: time: at the same time is awful, bec. there is not really too much that an outside person can do in relation to your own time..), yeah, we try to solve it saying, were not going to do as much as we used to... we prioritize - priorities are different for every person - ... (C: but probably ext. could help you to learn how to prioritize..) A: yeah, I think there's something really valid there bec. sometimes, some people don't know how to go about that..

- In relation to the OGM as social: L: I said before that 75% of our chapter is now like giving take of information, and I don't see that as what it should be it should be 50% of group marketing and purchasing, but its evolved to more social bec. there's not enough build up of the ---- farmers stuff?... (that's the impression I've got).. that is the sad impression bec that has led to the down fall of the thornapple chapter in the past that, that's all the ended that being 100% social or the green? valley chapter and also the southwest ch is now very weak, bec they gradually lead into the more social, and less and less... I think that's a real very important point to bring out the weakness of the group, cause any group that subsist on just the social, we can do that, we could ----- on sunday and that's not going to build the organization, that's a real serious weakness, although that's true, its a real true, its a lot of what it is, that's what has kept the org. chapter really quite in michigan, and not a competitive force with the commercial ag., if you look at one group that is strong right now is the thumb area chapter, they're the strongest right now bec. they're not a social group, they're really into bringing into good speakers, marketing together, and it shows, that's really important,

- In relation to the way how people learn: L: then they went on to say that the most thing that they use to get their inf. is trial and error, and that doesn't fit in with the other 3, bec. they said that that was the third,..... that would be their experience, so put the experience first before the reading and ---- A: yeah, you do all the other stuff and may be read a book after its all done, that doesn't.. L: I can see that people can say it but its really confusing to put that down in a paper, and I think the people themselves are not realizing that they're saying that... L:... humans are smarter, than to ---in their heads, and suddenly you know the answer and solve your problems, so what they do is to take other peoples experiences---- that's reading and talking to people, but what you in your soul you really believe is things that you experience, that's the things you believe ---- even though they're not right, A: so they're not taking this gathering of information stage as the real learning (It sounds like that...) (Side 2 of tape 2 ended. 60 min. 12/09/86) (Among the things that I remember they said after the tape was off is that for some people would be worth to spend the \$15 in a magazine's subscription rather than going to the OGM meetings and paying the monthly rate there..)

Interview: 12/07/86

Transcription: 12/12/86

C: rough draft.... I try to put in writing the first thoughts..... it doesn't necessarily have to show yourself, but what things are right for the group or not....

A: are most of the people into crops... (yes, and I mentioned the ones who had animals)... please stop me (I began to read the summary)

--... They all seem to enjoy what they do: I like what I do, A: its not business only, sheep are nice (laughing), I rather have them than some---- animal..... (Side 2 on tape 1 ended, 90 min).

- In relation to the people coming to the OGM meetings even from far places: Cs:we have noticed that, we probably are the closest ones to Grand Rapids...

- In relation to the basic knowledge, and relying on it and modifying: Cs: you've got to improve it, you're gonna have to..
- In relation to the relationship with extension and so on: Cs: I don't think that when we were at college, the purpose of coop. extension was to, make example of the big farmers, so they said that there is no way to go out and visit every farmer, so the took? the biggest farmers and tried to get them to do what msu said should be done, and everybody would see how it suits???, and that k o turned me off, right from student, so, I think a lot of people have the same opinion...
- In relation to the frustration, the failures at the end: Cs: you've got sheep eating corn, everything is ready, but they ----...
- In relation to the encyclopedia: Cs: we've got that, I've got one encyclopedia, on management of sheep,...
- In relation to the mentor: C: what do you feel about that part, some people said that it would be nice to have somebody even working with you.. Cs: I wouldn't? have it working with y, but having it there, I consider like is ----- for this sheer? man, is more or less, the closest I have for a mentor, if I have some problems, I can talk with this guy, he's always there, he's raised sheep, is real friendly, he's been up here a couple of times, in fact he's coming out to -----, I'd just as soon not have someone necessarily working with me, but, definitely if they come out and oversee what is here, and can see what's going on,.. A: -----, Cs: he's my greatest source of information, as far as, encouragement, he doesn't necessarily tell you , well you're doing right, ---- pat you in the back, but its just, you see what he's doing, the problems he has, not really? inspiration, you're in? charge? ---in your field??, but he's very helpful,... C: what about you.... A: I haven't truly? found a person that I would like working with me just for the fact that there aren't too many people that, think the same way I do, I have, I cant even think of a person that I know would be interested, doing the bedding plants, putting an extra effort into them, bec. I don't use the chemicals, I've got an insect problem here, ----- water around...., it would be nice, if I could find a person, to, well, I do have a girl friend, that I grew up with, who is pretty much into Org.?? growing too, she doesn't

have a green house, she is more in the nursery plants, and her and I talked about going into business, sometimes, ---- that I would really like bec. then you would have ---- somebody, and I've known her long enough, we get along well, we can work together, that would be nice, I think that would work really well, --- somebody support, who think that I'm not crazy (all laughed), I wanna put a little more work into doing things to get things growing, ----

- So how do you feel in general, this is a very rough draft, its a summary..

Cs: seems to me like you're heading right direction,.... A: sound pretty accurate, one thing though, the, people that said they were doing it more for the enjoyment, more than anything else, I know for us, well, I do the bedding plants bec. I enjoy that, and work that I do outside the home I also do bec. I enjoy it, I don't make a lot of money but I do, so that holds true for me but, for case and his sheep, he does it more bec. we hope that some day makes money out of them.. (Cs: right).. but we do enjoy the sheep..

Cs: there is an economic strength?? to that, if its not going to pay for so, the break even point, its a real near goal hopefully, after that I want to make some money out, I wouldn't be raising sheep if I don't intend make money... C: it looks like you have like a limit, of time, where you are going to see.. Cs: if I'm close I wouldn't shot?? myself off?? but definitely it has to return the cash, get a dividend, I want to-----, I enjoy doing it, that's the reason I'm doing this, I don't enjoy raising pigs, I started with pigs and I didn't, care for that, and goats, I didn't see the, unless there's a whole new?? market system, that's the nice thing with sheep, the market system is right there, ---- is down the road, its something I've always liked sheep, it is really enjoyable, most times, getting up at 2 o'clock in the middle of january is not enjoyable (all laughed), but, I like the animals.... A: id say, ----- we enjoy being in the farm, enjoy what were doing... Cs: that's probably has been my biggest change, in my, mind senses???, --- out of school, I had a job in a rural, I quit the job in the rural???, she goes to school, so she can learn something else, when we quit we said, well money is not, our primary objective, -----, now that I'm getting started in this, its nice, money isn't everything, but, you have to have money, and if you're doing it, you've want to

have a little bit more, its not our primary pursuit?? but its a necessity, if its not going to return cash, I don't go ----, -----,

- This is not a general comment, but I wrote bec. I found it interesting, there is one particular person who said that, it looks like that when you're learning something, its fun to be learning and finding out, but when you already now how to do it, its not so much fun, and that person even told me that it looks like you don't want to master, to be master only that, but trying to do it in a different makes? fun, and that person said, it looks like this is opposite to the other really commercial farmer, bec. in the other type of farming, they really want to master and to do it, and to know exactly how to do it, and do it once, two, three time, and so on, the most you do it the same way, the most profitable, the most... how do you feel about that, I haven't talked with other people about this, I don't know...

A: I was just thinking that when you get to doing something and, it looks like if you're going to master it, you're almost manipulating nature, in a sense, and if you get to do it so often, you can manipulate nature and make it work that way for you, to me it seems like, you're messing (smiled), higher things, just...

Cs: she's talking about routine chores, I would think, (C: it sound like it becomes a routine instead, so its like, its not so enjoyable any more, it looks like instead of keeping doing it this way, that person try to find new ways of doing it, to experiment with new ways, just because that person enjoys doing new things, but...)... Cs: I might do that for, to find the most efficient way of doing certain chores, its not just to find new ways to do a chore, if you want, for me that's like getting to a certain goal, saying ok, I'm here, and I can see how I can get from where I was before, back here again, well, looks like chasing your tail, I would just, if I could find the more efficient way of doing this, then you can go on, ---- to me that's I get more intrigued?, I get more intrigued, I enjoy learning how to get there but I like to keep going on, to ----, if I can be more efficient, cleaner smoother operation, it might be a routine chore, but, something that you're out there, struggling to get the charcoal down the sheep, that is not enjoyable to me, ----- its less stressful in the animals, smooth and quick id enjoy that a lot more.... next time I know how to do it

and I can go to something else, but if its not enjoyable learning, its not my point just to be ----, that's what it seems to me, like there is ----....

C: if you have any questions or something that you think that we didn't mention,

A: the people that do the organic growing have more appreciation, for the things that they're growing or raising, like I get the feeling that the big commercial farmers don't have any thought?? of the feeling of the animals they're raising or the crops, I just get the feeling, I think that's what that question brought to mind, in fact that this people do things and they do it two or three time, they get it, they do it certain ways at the time, they don't even think about what they're doing for a while, I, get the feeling sometimes when I go out in the garden, and the flowers are coming out nice, the herbs are really coming along, and, its almost like they know that you want them , the plants, they just do well for you, bec. you can appreciate it, or the animals, the sheep are really used to him, when he goes out there they don't run too much, but when I go out there they're not too used to me, though,----- (shce & hce)... Cs: I think you've got a good point towards the fact that, a lot of the people I know, who farms, is not necessarily organic but, go out and get it done as quick as you can, and then, you go to something else you don't care, if they have to go out and tare? the field and leave it --- and compacted,--- --- where a lot of the people, had the mind set, well it takes longer to do it, its enjoyable, and its not-- - the earth, -----enjoy get the hands dirty, and clothes, it sounds funny that you enjoy that, but it can be enjoyable,

C: I visited one farmer, which had as a neighbor a big field, corn, chemical (Ice visited only once or twice a year)... Cs: (talked about a similar neighbor)... I enjoy walking through the corn field, smell the corn, if you get to big, I think you want bigger tractors, bigger plough, (hce)... A: you feel for sheep too when you were trying to give them the charcoal..... Cs: (hce).... (tape stopped: approximately 25 min. 12/12/86). (After I read everything and before I asked specific questions, their reactions were to say words like: sure, yeah, and right, about all the things that I read from my summary).

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