



Influence of barriers to participation and attitudes toward adult education on small business managers' participation in adult education
by Charles Gunnard Ericksen, Jr

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:

This study investigated the influence of deterrents to participation and attitudes toward adult education on small business managers' participation in adult educational activities. It involved 600 small business managers in Nebraska. Usable data packets were received from 302 individuals for a response rate of 50.3%. The data were collected with the Adult Attitudes Toward Continuing Education Scale (AACES), the Deterrents to Participation Scale-General (DPS-G), and a demographic data sheet. The data were organized to facilitate statistical analysis.

The statistical analysis included correlational analysis, factor analysis, and discriminant analysis. Since the AACES and DPS-G were newly constructed, it was necessary to check their overall reliability, construct validity, and content validity with the small business population. This study found that the AACES and DPS-G were both reliable instruments. In addition, the AACES was found to possess content and construct validity. However, while the DPS-G possessed construct validity, it did not possess content validity.

The SPSS factor analysis program was used to analyze the factors underlying the AACES and DPS-G. Three orthogonal factors were identified on the AACES which were labeled Personal Need and Benefit, Formal Learning, and Participation in Continuing Education. Four orthogonal factors were identified on the DPS-G which were labeled Personal Problems, Course Structure, Self-Concept, and Time. Discriminant analysis was done with select demographics along with the total score from the AACES and DPS-G. A second discriminant analysis was done with select demographics along with the underlying factors on the AACES and DPS-G. In the first discriminant analysis it was found that attitudes toward adult education were the most powerful discriminators of adult education participation. The second discriminant analysis revealed that attitudes toward participating in formal continuing education and Time were the most powerful discriminators of participants and nonparticipants in adult educational activities.

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TOWARD ADULT EDUCATION ON SMALL BUSINESS MANAGERS'
PARTICIPATION IN ADULT EDUCATION

by

Charles Gunnard Ericksen, Jr.

A thesis submitted in partial fulfillment
of the requirements for the degree

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APPROVAL

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This thesis has been read by each member of the author's committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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ABSTRACT

This study investigated the influence of deterrents to participation and attitudes toward adult education on small business managers' participation in adult educational activities. It involved 600 small business managers in Nebraska. Usable data packets were received from 302 individuals for a response rate of 50.3%. The data were collected with the Adult Attitudes Toward Continuing Education Scale (AACES), the Deterrents to Participation Scale-General (DPS-G), and a demographic data sheet. The data were organized to facilitate statistical analysis. The statistical analysis included correlational analysis, factor analysis, and discriminant analysis. Since the AACES and DPS-G were newly constructed, it was necessary to check their overall reliability, construct validity, and content validity with the small business population. This study found that the AACES and DPS-G were both reliable instruments. In addition, the AACES was found to possess content and construct validity. However, while the DPS-G possessed construct validity, it did not possess content validity.

The SPSS factor analysis program was used to analyze the factors underlying the AACES and DPS-G. Three orthogonal factors were identified on the AACES which were labeled Personal Need and Benefit, Formal Learning, and Participation in Continuing Education. Four orthogonal factors were identified on the DPS-G which were labeled Personal Problems, Course Structure, Self-Concept, and Time.

Discriminant analysis was done with select demographics along with the total score from the AACES and DPS-G. A second discriminant analysis was done with select demographics along with the underlying factors on the AACES and DPS-G. In the first discriminant analysis it was found that attitudes toward adult education were the most powerful discriminators of adult education participation. The second discriminant analysis revealed that attitudes toward participating in formal continuing education and Time were the most powerful discriminators of participants and nonparticipants in adult educational activities.

CHAPTER I

INTRODUCTION

Participation and Small Business Managers

Small business has played an important role in the equitable allocation of scarce resources in the United States. "These small businesses produce 43% of the business output of the United States, a third of the Gross National Product (GNP), and more than half of all private employment" (Fox & Mancuso, 1980, p. xii). Despite this substantial influence, many involved in small business management have lacked the managerial skill needed to compete in an every changing domestic and foreign environment. In fact, "most small business owners haven't the foggiest notion of what the devil they're doing" (Smith, 1982, p. 13). This lack of skill or knowledge might contribute to the high failure rate experienced by small business firms. Specifically, the Small Business Administration "estimates that 40% of new companies fail during their first year. Only one in nine new enterprises lasts until its seventh year!" (p. xi). This extremely high attrition rate might be reduced if small business managers were better educated about proper practices and the procedures of running a

small business. Such an approach of using adult education as a strategy for improved business practice requires that small business managers take a proactive stance and participate in the adult educational process.

Traditionally, the issue of participation has held a long-standing position of prominence in adult education research. This is one of the few areas where adult education researchers have begun to build a systematic knowledge base (Darkenwald & Merriam, 1982). This dominance in research and investigation helped determine that certain characteristics emerge that distinguish participants from nonparticipants. In particular, Johnstone and Rivera (1965) pointed out that these two groups differed in age, amount of formal schooling, and where they lived. In the seminal research on participation Houle (1961) developed a typology of orientations for participation in adult education activities. This typology has provided a theoretical basis for much of the research on reasons for participation in adult educational activities. This typology classified participants as goal-oriented, activity-oriented, and learning-oriented, and it provided a potential explanation of why adults participate in adult education activities. Building on Houle's study, Boshier (1971) identified numerous clusters of reasons for participation in adult education that not only lent support

to Houle's earlier study but also showed that motives for participation may be more complex than Houle originally believed.

Numerous studies have been conducted in adult education that are germane to participation in learning activities (e.g., Burgess, 1971). However, while it is valuable to know why adults do participate, it is equally as critical to know why adults do not participate in learning activities. The situation can be viewed as a two-sided coin with reasons for participation on one side and barriers to participation on the other. Cross (1981) classified barriers to learning under three major headings: situational, institutional, and dispositional barriers (p. 98).

Situational barriers arise "from one's situation in life at a given time" (p. 98). Upon closer examination of these barriers, it appears that they primarily relate to the finite amount of resources possessed by the individual. Cost, not enough time, home responsibilities, and job responsibilities are examples of barriers included in this category. Over time, many of these situational barriers may become nonexistent and disappear as barriers. It is fairly common for families to have more money, free time, and less child care responsibility as the family matures.

However, as some barriers disappear, other barriers may take their place (e.g., health).

Institutional barriers "consist of all those practices and procedures that exclude or discourage working adults from participating in educational activities" (p. 98). Examples in this category consist of inconvenient class schedules or locations, amount of time required to complete a program, and lack of information on course offerings. One reason these barriers exist may be because institutions were originally devised for a specific group other than the adult education student. For example, colleges and universities were devised to accommodate full-time day students and not to serve part-time day or night learners.

Dispositional barriers are the third type of barriers. These barriers primarily relate to the self-perception and attitude of the learner. Being afraid that one is too old to learn, having low academic confidence, not enjoying studying, and being tired of school are examples of dispositional barriers (p. 98).

Subsequent research (Darkenwald & Hayes, 1987; Darkenwald & Scanlan, 1984; Darkenwald & Valentine, 1985) has focused additional attention on deterrents to participation in adult education. In part, these studies identified clusters of reasons for nonparticipation by various adult groups. Like Houle's original typology,

these may prove valuable in understanding the total pattern of motivational factors that influence an adult's participation in adult education activities.

Participation in adult education activities may also be influenced by an adult's attitude toward education. An attitude is a "learned tendency to react in a consistently favorable or unfavorable manner toward people, objects, ideas, or situations" (Siegel & Ramanauskas-Marconi, 1989, p. 28). Although practitioners suggest that attitudes influence an adult's participation in adult education, a paucity exists of research on the relationship of participation to attitudes toward adult and continuing education. Yet, those limited studies which have been conducted suggest that attitudes are related to participation in adult education (e.g., Adolph & Whaler, 1967). In fact, favorable attitudes toward adult education have been found to enhance participation by various groups in adult educational activities (Seaman & Schroeder, 1970).

Statement of the Problem

Countless business firms fail. However, small business firms fail at an unusually high rate. The major reason for this high failure rate has been identified as management incompetence in 45% of the cases (Smith, 1981, p. 24). Despite the apparent need to acquire new skills and knowledge

to survive in their business, many small business managers have chosen not to participate in adult education. Current research has not investigated why small business managers decide to abstain from educational opportunities which offer the potential of providing the knowledge and skill training which they desperately need to survive in their business. Do they simply not participate because they perceive some barrier? Do they choose not to participate in those activities because they possess an unfavorable attitude toward adult education? Consequently, in order for any action to be taken for designing or delivering educational experiences for small business managers, their perceptions and attitudes toward participating in adult educational activities had to be identified.

Two recently developed instruments make this identification possible; they are the Deterrents to Participation Scale for the General Population (DPS-G) and the Adult Attitudes Toward Continuing Education Scale (AACES). Prior to the development of these two measurement devices, the instruments available for measuring barriers to participation in adult education activities and attitudes toward participation in adult education activities were scarce and of limited quality. However, further tests of the

reliability and validity of these instruments were needed before they could be used more universally.

Thus, although educational opportunities are available from numerous sources for small business managers, many do not participate in them. While traditional adult education program planning models (e.g., Knowles, 1980) include steps for assessing the needs of the learner, very little is known about the perceived educational barriers and attitudes of small business managers. While two new instruments offer potential for measuring these, they had not been used extensively enough to establish their general validity and reliability. The systematic group testing of small business managers with these instruments allowed both the validation of the instruments and the identification of small business managers' perceptions toward adult education. Therefore, the purpose of this two-part study was to investigate barriers to participation and attitudes toward adult education that influence small business managers' participation in adult education and also to examine the validity and reliability of the two recently developed instruments used to gather this information.

Hypotheses

This study investigated differences between small business managers who participate and those who do not participate in adult education activities. These differences were tested in the areas of their perceptions of barriers to participating in adult education activities and of their attitudes toward adult education. The following hypotheses were tested:

1. There is no difference between the original estimation of reliability and validity for the DPS-G and the AACES and the estimation of reliability and validity of the DPS-G and the AACES when used with small business managers.

2. Among small business managers, it is possible to discriminate between participants and nonparticipants based upon demographic variables such as gender, age, income, educational level, and years in business; attitudes toward adult education as measured by the AACES; and perceived deterrents to participating in adult education as measured by the DPS-G.

3. Among small business managers, it is possible to discriminate between participants and nonparticipants based upon demographic variables such as gender, age, income, educational level, and years in business; attitudes toward adult education as measured by the factors of the AACES;

and perceived deterrents to participating in adult education as measured by the factors of the DPS-G.

Significance of the Study

This research has potential for both the business and adult education communities. For business, it may ascertain reasons related to training or knowledge which help to explain why small businesses fail at such an alarming rate. For adult education, this study might help program coordinators of community education, continuing education, conferences and institutes, and training to identify educational needs which may exist within their local business communities. Equipped with relevant information about the attitudes and perceived barriers of this particular group, adult educators can plan educational programs that meet the knowledge and skill needs of small business managers and structure and market them in a fashion that takes into consideration their specific barriers and attitudes. Such an approach offers both a potential for recruiting small business managers into adult education programs and an opportunity for adult educators to be principal players in the solution of this small business crisis.

This study will enlarge the existing literature in small business administration and adult education by

providing specific information about attitudes toward and perceived barriers to participation in adult education activities by small business managers. Also, this study applied the DPS-G and the AACES to a unique population which heretofore had not been examined in a critical manner in the adult educational literature and thereby suggests further joint investigations between the small business and adult education communities. Finally, further instrument credibility was established by testing the recently constructed DPS-G and the AACES for reliability and validity.

Definition of Terms

Adult Attitudes Toward Continuing Education Scale (AACES) - a 22-item, five-point Likert scale which identifies attitudes toward adult education (Darkenwald & Hayes, 1988, p. 5).

Adult Education Activity - a process whereby persons whose major social roles are characteristic of adult status undertake systematic and sustained learning activities for the purpose of bringing about changes in knowledge, attitudes, values, or skills (Darkenwald & Merriam, 1982, p. 9).

Attitude - a learned tendency to react in a consistently favorable or unfavorable manner toward people, objects,

ideas, or situations (Siegel & Ramanauskas-Marconi, 1989, p. 28).

Barrier - a perceived obstruction which prevents participation in adult education activities (Cross, 1981, p. 98).

Continuing Professional Education (CPE) - any and all methods, formal or informal, used for the growth and development of professionals (Grabowski, 1981, p. 85).

Deterrent - something which discourages or deters participation in adult education activities.

Deterrents to Participation Scale for the General Public (DPS-G) - a 34-item, five-point Likert scale which provides a measure of perceived deterrents to participation in adult education (Darkenwald & Valentine, 1985, p. 180).

Mandatory Continuing Professional Education (MCPE) - required continuing education by professionals (Cervero, 1988, p. 73).

Nonparticipation - not taking part in adult education activities within the past 2 years.

Participation - taking part in adult education activities within the past 2 years.

Professional - one who has obtained recognized professional status (Cervero, 1988, p. 4).

Small Business - a business operating with a profit motive while employing fewer than 100 full-time individuals. This business could be organized as a sole proprietorship, partnership, or corporation (Peterson, Albaum, & Kozmetsky, 1986, p. 63).

Small Business Manager - an individual who is the owner or the agent of the owner who strives to obtain organizational goals and objectives by planning, organizing, controlling, communicating, directing, staffing, and motivating others within the organization (Drucker, 1973).

Delimitation

This study was delimited in three areas. One delimitation restricted this study to one state. The second limited the size of the business organization included in the study. The third limited the investigation to nonprofessional continuing education.

First, this study was restricted to Nebraska. This limitation was established because Nebraska has attributes of several eastern and western states. In particular, the eastern part of the state consists of fertile farm land and larger cities. The western part of the state is arid, sparsely populated, and use primarily as ranch land. This combination of eastern and western cultures made Nebraska a

unique location for the study of a diversity of small businesses in a variety of environments.

Second, this study was limited to small business firms with 100 or fewer employees. This limitation was established because larger firms may have attitudes and perceived barriers which differ from those possessed by smaller organizations. Small business organizations generally do not maintain their own educational trainers or departments and are, therefore, potential participants in local adult educational activities.

Third, this study was limited to nonprofessional continuing education. Continuing professional education (CPE) and mandatory continuing professional education were not considered in this investigation. This limitation was established because small business managers do not presently fit within the accepted definition of what constitutes a profession. For example, medicine, law, engineering, accounting, architecture, and theology have long been recognized as professions because they share several common characteristics. In particular, these characteristics consist of "(a) a responsibility to serve the public, (b) a complex body of knowledge, (c) standards of admission to the profession, and (d) a need for public confidence" (Meigs, Whittington, Pany, & Meigs, 1989, p. 47). Generally, professionals have access to CPE

programs designed specifically for their continuing professional development. These programs are often offered by professional associations, professional schools, employing institutions, and independent providers with defined expertise in the professional area.

A number of scholars have examined traditional CPE, including Houle (1980), Grabowski (1981), Schon (1987), and Cervero (1988). However, few studies of comparable sophistication have probed the continuing education of nonprofessional groups such as small business managers. Since small business managers are not considered professionals, they may not enjoy the same opportunity to participate in meaningful adult educational activities. Therefore, this study examined this nonprofessional group, which may actually be the most endangered and neglected species in adult education.

CHAPTER II

REVIEW OF RELATED LITERATURE

Adult Motivational Orientations

In adult education, participation generally refers to involvement in certain events, activities, or programs that are primarily educational in nature. Historically, "the majority of research on participation in adult education has centered around describing the characteristics of participants in various educational programs as compared to nonparticipants" (Scanlan & Darkenwald, 1984, p. 155). Several studies examine participation from a descriptive and theoretical viewpoint.

A substantial amount of material exists on the motivational orientations of participants in adult education. The development of this phenomenon grew out of the work of Houle (1961). In The Inquiring Mind, he studied 22 men and women who were considered "exceptionally active adult learners" (Cross, 1981, p. 82). Houle's major objective was not so much to investigate motivation as it was to examine why these learners were so active. Out of this study, three subgroups of learners emerged which were categorized as goal-oriented, activity-oriented, and

learning-oriented. Goal-oriented learners were people who saw learning as "a series of episodes, each beginning with the identification of a need or an interest" (p. 82). On the other hand, activity-oriented learners were participating "primarily for the sake of activity itself rather than to develop a skill or learn subject matter" (p. 82). Finally, those identified as learning-oriented participated in activities primarily for the sheer joy of learning.

Several years after Houle developed this typology, Tough (1971) began to examine further why and how adults are motivated to participate in learning activities. His work was unique because he focused on the individual and the individual's motive to undertake or continue a self-directed learning project. A learning project was defined as "a series of related episodes, adding up to at least seven hours. In each episode, more than half of the person's total motivation is to gain and retain certain fairly clear knowledge and skill, or to produce some other lasting change in himself" (Tough, 1971, p. 6). What is engaging about Tough's definition is that he included two of Houle's three subgroups in the process; these were the goal and learning orientations. Additionally, Tough's research pointed out that adult learners were frequently motivated by a desire to be pragmatic.

While Tough was conducting research in Canada, Boshier (1971) was testing Houle's typology in another part of the world. A 48-item Education Participation Scale (EPS) was developed and then administered to 233 adults in New Zealand. This scale was used in studies to "facilitate the growth of theory and models to explain participation, throw light on the conceptual desert that underpins adult educational dropout research, and enhance efforts to increase the quantity and quality of learning experiences for adults" (Boshier, 1971, p. 3). Finally, Boshier intended to explore the applicability of Houle's typology in New Zealand and to formulate a cross-cultural model of adult education participation.

Boshier found that participants were predominantly growth or deficiency motivated. It was determined that a vast majority of the population was deficiency oriented and that they were seeking an equilibrium or homeostasis. In contrast, the growth-oriented person was seeking nonequilibrium or heterostasis. The EPS purports to measure these two motivations. Boshier concluded that what impels motivation for participation is more complex than Houle had originally believed and that adults participate in adult education for a plethora of reasons. Because of this

complexity, he suggested that researchers take a holistic approach when studying adult learners and their motives for participation.

In a related study done 14 years later, Boshier and Collins (1985) re-examined Houle's typology in order to test this popular typology that had become an accepted concept in many adult education publications. Since Houle used only 22 participants in his theory-building study, Boshier and Collins believed that it was imperative to statistically test this typology with a large data base. This large data base consisted of a master file of 13,442 cases from around the world. After subjecting this data to cluster analysis it was concluded that Houle's goal and learning orientations were evident though the activity orientation consisted of an aggregate of social stimulation, social contact, external expectations, and community service.

Houle's typology has been extensively tested during the past 25 years, and his theoretical model of three learning orientations has been supported. Although other research studies by Sheffield (1962) and Burgess (1971) have generated more than three factors, there has been a general reluctance to say Houle was incorrect. In fact, "when one examines the nature of student participation, one must conclude with Houle that there are three basic

orientations which seem to prevail" (Grabowski, 1976, p. 214).

Tyler (1984) studied how adults decide to participate in graduate programs in adult education. The key research question was to determine what motivates adults to participate in specific graduate programs. An open-ended taped interview was used to gather data on the subject. The findings indicated that new students participate in graduate adult education programs primarily because this decision is perceived to enhance their career development. These findings support the Houle typology. Specifically, new graduate students appeared to make participation decisions based on what Houle described as goal-oriented learning. These goal-oriented learners used graduate education as a means of accomplishing fairly clearly defined objectives.

In conclusion, the evidence gathered to date support Houle's overall typology. However, time and additional research point out that Houle did not anticipate the overall complexity of the activity orientation. Perhaps the activity orientation is more multifaceted than he thought. In fact, this factor can be easily broken down further into social stimulation, social contact, external expectations, and community service (Boshier & Collins, 1985). While the activity factor appears to be more

complicated than originally believed, the goal and learner orientations have generally proved to be as Houle initially described them.

Participation

Intention to Participate

Grotelueschen and Caulley (1977) presented a theoretical model for use in determining a professional's intention to participate in continuing education. The framework for this model consisted of the professional's attitude toward participating in continuing education, the professional's perception of what most people think about participation, the professional's personal beliefs about whether or not they should participate, and the professional's motivation to comply with these beliefs. This model was developed to "present a rationale for a program of inquiry directed at understanding one aspect of the 'why' question: why do professionals participate in continuing education activities?" (Grotelueschen & Caulley, 1977, p. 23). The model suggests that participation or nonparticipation in continuing education cannot be predicted from prior knowledge of a professional's attitude toward participation. Therefore, participation is primarily determined by the professional's intention to participate and not by one's attitude towards participation.

The distinction between beliefs, attitudes, intentions, and behaviors was clearly developed in constructing this model. According to the model, beliefs about an object influence a person's attitude toward that object. Therefore, if a person's beliefs about an object are mostly favorable, that person's attitude will also tend to be favorable or positive. If a professional has a positive attitude, then an intention to participate may bring about actual participation in continuing education. While a professional might intend to participate in continuing education, certain obstacles may arise to prevent one from participating. Knowledge about a professional's beliefs, attitudes, and intentions might be a predictor of participation in educational activities. However, the weights and relative values of each of these three predictors may be highly specific and may even vary within an established profession (e.g., accountants). In conclusion, Grotelueschen and Caulley maintain that the model provides a theoretical framework from which further inquiry into a professional's intention to participate in continuing education might be developed.

Cost and Participation

In adult education surveys, "lack of time vies with cost for first place among the obstacles to education" (Cross, 1981, p. 103). Since cost has been listed as one

of the most significant barriers impeding participation, Boshier and Baker (1979) wanted to determine the effect if this cost barrier was removed. In particular, they were interested in the participation by lower socio-economic groups when tuition cost was eliminated. The influence of cost was tested with 721 adults enrolled in two British Columbia community schools in which the fee and nonfee condition were assigned randomly to 59 education courses. The participants completed the EPS and provided additional social and demographic data.

This study did not significantly enhance understanding of participation motivation or provide administrators with practical information on fee structures. Despite the fact that 70% of the participants enrolled in the nonfee courses, it appeared that "participants attracted to nonfee courses do not appear to be from the socially or economically disadvantaged groups in the population" (Boshier & Baker, 1979, p. 165); in fact, they were similar to the participants in the fee courses. Also, participants showed a strong preference for free courses and that "when faced with free courses and others that demand payment of a fee, most participants appear to prefer the free courses" (p. 165). Since more participants chose the free courses, the authors concluded that even modest fees were a psychological barrier to participation. This study points

out clearly that "participation is a complex phenomenon stemming from multi-variate origins" (p. 165). The study did not determine whether fees made a significant difference in participation nor if fees were related to socio-economic status. In particular, the study did not establish that the removal of the cost barrier would attract more financially disadvantaged participants. What was determined was that all participants preferred the nonfee option more than the fee option.

Age and Participation

Research indicates that "after educational attainment, the most powerful predictor of participation in adult education is age" (Cross, 1981, p. 57). Because of these prior findings, Fisher (1986) sought to identify specific predictors of participation in educational activities by older adults. A majority of older adults do not participate in adult education activities, and this is a concern that could be addressed in the program planning process. Therefore, information from 786 active older adults was examined. An active older adult was defined as "a person 55 or over who engaged in one or more programs designed especially for older adults and which occur outside the home" (Fisher, 1986, p. 203). These activities could be educational, recreational, nutritional, or social in nature.

A variety of data was gathered on these active older adults. The Srole Anomia Scale, the Life Satisfaction Index A, the Fisher Self-Directed Learning Index, and questions about demographics and participation were used. The anomia concept was included in the study because "nonparticipants in adult education activities possessed a greater level of anomia than participants" (Fisher, 1986, p. 203). The "concept of anomia has been used to describe alienation, loneliness, and lack of clear-cut expectations resulting from a marginal social position among various segments of the population" (p. 203). The Life Satisfaction Index was included to measure successful aging, which Fisher believed to be an important consideration in the study. Using t-tests with participation as the dependent variable, it was found that participants differed significantly from nonparticipants in educational attainment, anomia, self-directed learning activities, awareness of sites, and awareness of learning needs. However, no significant difference existed with life satisfaction between the two groups. These findings support earlier projects done by other adult education researchers (e.g., Johnstone & Rivera, 1965). The findings lend support to the notion that a significant difference exists between participants and nonparticipants on many key variables. It was suggested that practitioners could use this information

to increase participation in their adult education programs by more clearly defining their target market. In conclusion, apparently older adults choose educational activities for intrinsic reasons instead of participating in activities primarily to achieve a particular goal.

Deterrents to Participation

A voluminous amount of research exists on what impels participation in adult education. "Few studies of comparable sophistication have examined what deters it" (Scanlan & Darkenwald, 1984, p. 155). However, some research does examine the nonparticipation and deterrent issue.

Demographic data on nonparticipation was compiled in an early adult education study by Booth (1961). The intent of the study was to derive a profile of the nonparticipant to help adult education administrators reach this new clientele and aid researchers who may contemplate further study in this area. Several demographic tendencies were discovered that were related to nonparticipation. Specifically, nonparticipation was more likely to appear in that portion of the population over 45 years of age, with less than a high school education, and from the "lower echelons of the labor force" (Booth, 1961, p. xx) or not in the labor force at all. In addition, nonparticipants were

more frequently females than males and had less formal education than participants. Nonparticipation tended to be higher among young men between the ages of 20-29 and older women over 45 years old than by men and women between the ages of 30 and 44. Finally, rural residents participated less than urban residents regardless of education, and nonwhites participated less than whites regardless of their educational achievement.

As part of their extensive study on the educational pursuits of American adults, Johnstone and Rivera (1965) identified two major types of barriers to participation in adult education. Specifically, these two were situational influences that are more or less external to the individual and dispositional barriers based on personal attitudes toward participation. The situational barriers identified were cost, being too busy, being too tired at night, having difficulty getting out of the house at night, and not knowing of available courses. The dispositional barriers were not being the studying type, unappealing courses, feeling too old to learn, fear of feeling childish, and not needing the classes. Gender, age, and socio-economic status were also considered in relation to these two major barriers.

It was found that older adults (45 and over) identified more barriers than younger adults and that older adults

were more likely to perceive dispositional barriers whereas younger adults were more likely to perceive situational barriers. In addition, women identified more situational constraints to participation than men, and they perceived a larger number of external hurdles. Finally, persons of lower relative economic status perceived more situational and dispositional barriers than those persons who were considered to be situated higher on the same socio-economic continuum.

In an exploratory study, Dao (1975) identified clusters that prevent adults from participating in educational activities. These clusters were generated from a list of 554 reasons given for nonparticipation compiled through personal interviews and literature research. The Reasons for Educational Nonparticipation (REN) was then developed to assess the reported level of influence each cluster had toward nonparticipation. The REN was given to a sample of 278 respondents who were not taking part in educational activities at the time the instrument was administered.

Nine clusters were identified which prevent adults from participating in educational activities. These nine clusters were entitled: not enough time, too difficult to participate, too difficult to succeed, against social norms, negative feelings toward institution, negative prior experiences, results not valued, indifference, and

unawareness. The clusters of not enough time and indifference were found to be the most influential reasons among the nine clusters for nonparticipation. Those adults who did not participate often considered negative prior experiences and too difficult to succeed as being the most influential reasons not to participate. Finally, adults who participated in educational activities perceived against social norms and unawareness as being their most influential reasons for nonparticipation.

Cross (1981) classified obstacles to participation under the three headings of situational, institutional and dispositional barriers. These classifications were derived primarily from a national survey conducted for the Commission on Nontraditional Study by Carp, Peterson, and Roelfs (Cross, 1974). Cross defined situational barriers as "those arising from one's situation in life at a given time" (p. 98). Cost, time, home responsibilities, job responsibilities, lack of child care, and no transportation are examples of situational barriers. The cost for tuition, books, and child care and not enough time are the most serious obstacles to participation. Institutional barriers were defined as "all those practices and procedures that exclude or discourage working adults from participating in educational activities" (p. 98). Examples in this area include inconvenient schedules, inappropriate courses

of study, and too much red tape in getting enrolled. Finally, dispositional barriers were those relating to attitudes and one's self-perception. Lacking interest in learning and being too old to learn are examples in this category.

Quigley (1987) suggested that a new conceptual framework could be used to partially explain why adults do not participate in adult basic education (ABE). His contention was that traditional ABE literature either blames the nonparticipant and labels them as hard to reach, or it blames the government for not providing enough support. However, nonparticipants need to be seen as different, and their nonparticipation may be explained as an intentional resisting of the formal educational system. Furthermore, once this resistance was recognized, a new constructive outside perspective on ABE would become possible. The data used for this study consisted of 10 works of fictional literature. Each of these 10 works included some type of resister and was defined as one who tacitly or overtly challenged the school system and at the same time embraced an alternative set of values to those advocated by schooling. Phenomenological analysis revealed that there were six steps in the resistance behavior process including observing, comparing, challenging, breaking away, controlling, and accepting/reconciling.

From this analysis, a new construct of resistance and schooling emerged. Specifically, resistance was viewed as "a struggle to become free in the eyes and heart of the resister on the basis of a specific liberty which must be attained and held at any cost" (Quigley, 1987, p. 204), and schooling became "a physical environment which embodies both the habitat of objectified lessons and the habitus of values and culture" (p. 204).

It was found that there was a vast difference between participants and nonparticipants in the ABE context and that these resisting ABE nonparticipants should not be assumed to be the same as those who attend formal ABE. In addition, the findings that resisters were resisting habitus (i.e., values) and not habitat (i.e., objective lessons) lead Quigley to recommend that ABE needs to develop an alternative to the traditional program that is learner-grounded and built on the habitus of objectified knowledge used as the learning content. Interestingly, the most visible resister was never the first person to quit school and the father-figure was the single most influential figure in the resister's decision to resist or not participate. The final recommendation was that researchers should give more attention to the issue of resistance in ABE since this phenomenon may hold promise for explaining

and understanding nonparticipation across all fields of adult education.

Three recently developed deterrent instruments have been utilized to acquire a better understanding of the underlying structure of reasons given for nonparticipation in adult education. These instruments consist of the Deterrents to Participation Scale (DPS) developed by Scanlan and Darkenwald (1984), the Deterrents to Participation Scale-General (DPS-G) developed by Darkenwald and Valentine (1985), and the Deterrents to Participation Scale-Low-Literate (DPS-LL) developed by Hayes and Darkenwald (1986). The initial DPS examined allied health professionals in New Jersey. The DPS-G study moved beyond the narrow homogeneous population of the DPS and probed deterrents to adult education participation in the general population. Finally, the DPS-LL investigated deterrents of adults who were participating in an adult basic education (ABE) class.

Factor analysis was utilized to ascertain the number and nature of the constructs underlying each instrument. This analysis identified six conceptually meaningful factors on the DPS and DPS-G, and five factors on the DPS-LL. The factor analysis revealed that each group was reporting distinct deterrent factors unlike those in the other select groups. For example, only self-confidence and

low personal priority were found on the DPS-G and the DPS-LL while cost was the sole deterrent identified on the DPS-G and the original DPS. In conclusion, all three DPS studies demonstrated that factors could be identified as deterrents to participation in adult educational activities and that they were multidimensional.

Attitudes Toward Adult Education

Studies in this area are generally concerned with determining whether or not participants or nonparticipants have favorable or unfavorable attitudes toward adult education. In particular, if it could be determined that favorable attitudes promote increased participation, then data about these attitudes might be used to predict participation in adult educational activities. However, few studies related to attitudes have been conducted in adult and continuing education.

London (1963) suggested that research was needed by adult educators to determine the relationship between attitudes toward adult education and social class. He believed that this was important because a number of myths about attitudes existed that were misleading and perhaps untrue. In particular, he believed the frequently mentioned myth about the working class having negative attitudes toward education was false and that perhaps these

adults simply had negative attitudes toward school. In addition, a study of attitudes toward adult education was important because it could play a central role in providing continuing education to help adults "catch up, stay up, and keep ahead of rapid technological change" (London, 1963, p. 228).

London's primary purpose was to make adult education research more inclusive or, in other words, meet people where they were rather than restricting research to certain social classes. Prior research centered exclusively on middle-class audiences, and, therefore, little was known about other social classes. In his opinion, lifelong learning was important to individuals at all levels of society, and the vitality of society was dependent upon adults continuing to learn new skills and growing to wisdom.

The population for this study consisted of the city of Oakland, California. A sample of 5,000 households was selected by stratifying on the basis of average rental housing. Due to the limitation of funds, the very lowest and upper strata of the population were excluded. A sample of 600 adults was selected with 50% of the participants identified as manual workers and 50% as nonmanual. These participants were interviewed for an hour and were asked a number of diverse questions. For example, questions were

asked about leisure time activities, participation in adult education, occupational history, and formal and informal associations. Finally, they were asked questions about attitudes toward adult education, attitudes toward general education, and learning in general.

It was concluded that time did not permit an adequate discussion of all the hypotheses and variables, and for that reason no final conclusions or recommendations were made at that time. However, London believed that the results of the study would add to the limited data available on educational attitudes and participation by class level and particularly by the working class. A comparison between participants and nonparticipants on all key variables in the study was planned. However, no final conclusions nor recommendations were made concerning the study.

The relationship between educative behavior by adults and their attitudes toward continuing education has also been examined (Seaman & Schroeder, 1970). This study tested the hypotheses that a positive relationship existed between educational level and educative behavior, that educative behavior was negatively related to age, that educative behavior was positively related to attitudes toward continuing education, and that the relationship between attitudes toward continuing education and extent of

participation in educative behavior did not change significantly when the effects of age and educational level were partialled out. Employees of the Florida Power Corporation were stratified into four occupational levels according to jobs performed, and then a proportional random sample of 100 employees was selected. To determine the degree of participation in educative behavior, the Leisure Activity Survey (LAS) was utilized. The LAS consisted of 46 items that were summed to determine an individual's participation score. To determine attitudes toward continuing education, the semantic differential technique was employed. The semantic differential technique generated data which was subjected to factor analytic procedures in order to identify the most meaningful concepts. After this procedure, six concepts emerged: skill, education, instructor, knowledge, self-improvement, and learning. These two instruments were mailed to the 100 individuals selected for the study, and a 98% response rate was obtained.

It was found that individual participation in educative behavior was positively related to level of formal education and that participation in educative behavior was negatively related to age. In addition, it was found that no significant relationship existed between attitudes toward continuing education and extent of educative

behavior. Finally, it was proposed that numerous other factors not considered or identified may influence attitudes and educative behavior.

The relative degree of favorable or unfavorable attitudes toward adult education held by various groups of adult education participants was investigated by Adolph and Whaley (1967). The researchers desired to know if differences in attitude existed among various age and gender groupings. In order to gather information about these attitudes, a 24-item Likert type scale was developed. The sample for this study was made up of 51 participants who were currently enrolled in various adult education activities. These participants were broken down further into three groups. One group of participants were enrolled in an evening course in grade 10 science; the second group consisted of inmates at a correctional institution who were involved in vocational training; the third group consisted of adults enrolled in beginning sailing.

It was found that all groups were favorably disposed toward adult education. In fact, of all the participants in the sample, 41% indicated a strongly favorable attitude toward adult education, 41% indicated they had favorable attitudes, and the remaining 18% of the sample indicated a neutral attitude. In addition, women had more favorable attitudes than men, and the noncorrectional participants

had more favorable attitudes than the correctional group. Finally, the participants between age 22 and 32 had the most favorable attitude while the 33 to 58 and the 15 to 21 age groups had essentially the same attitudes. After a perusal of the written statements and the instrument totals, the researchers concluded that the under 21 years of age group viewed adult education as a ticket to a better job, the over 32 years of age group wanted to keep up with progress, and the 22 to 32 years of age group wanted to use adult education for a second chance.

In an attempt to expand and enhance the Adolph and Whaley (1967) study, Blunt (1983) developed a new instrument to measure attitudes toward adult education. This instrument was created primarily because the earlier study appeared to contain material shortcomings. Specifically, the sample size of 51 was not large enough, the sample was not representative of adult education participants, the selection of scale items was made by non-experts, and the empirical support for the validity of the scale was weak. In particular, 12 of the 51 participants were males aged 16 to 24 who were incarcerated in a correctional institution. In terms of age and social role, this group of young offenders was far from typical. Judges of the scale items were 40 undergraduate students enrolled in an introductory adult education course and, therefore, could not be

considered expert adult educators. Finally, Adolph and Whaley (1967) referred to objective procedures to eliminate items from their scales; however, they never reported the detail of this item elimination procedure.

To eliminate the aforementioned shortcomings, a new attitude measurement instrument was developed. All 24 items from the previous scale and 92 additional items were identified in a doctoral seminar in adult education as a pool of 116 items. Fifty-four judges were then selected from the field of adult education to evaluate the pool of items. Twenty-eight items were eventually determined by these experts, with only one of the original Adolph and Whaley (1967) items retained. The instrument had a Cronbach reliability coefficient of .76 in its final form. This 28-item questionnaire was sent to 263 adults between the ages of 18 and 60 who were randomly selected from 520 adult patients in a family medical practice. The scores on this attitude scale were correlated with five variables that were found to be related to participation in adult education. These five variables consisted of years of school completed, social participation, socio-economic status, internal-external locus of control, and participation in adult learning activities. Correlations obtained between each of these five variables and the

attitude scores indicated that all coefficients were in the anticipated direction and statistically significant.

It was believed that the structure of attitudes toward adult education was complex. Therefore, the decision was made to take the study further by subjecting the gathered data to factor analysis. The analysis resulted in the extraction of nine factors with three of these factors identified as most meaningful. These three factors were labelled the general appreciation of adult education, subjective antipathy, and goal achievement. The further analysis indicated that attitudes toward adult education were multifactorial. In conclusion, the use of the Blunt (1983) instrument was recommended over the Adolph and Whaley (1967) scale because he believed that many of the prior shortcomings were addressed and corrected.

Darkenwald and Hayes (1988) developed an improved "valid and reliable scale to measure attitudes toward continuing education" (Darkenwald & Hayes, 1988, p. 3). The 22-item Adult Attitudes Toward Continuing Education Scale (AACES) used items drawn from Blunt's (1983) attitude scale and from a panel of 11 advanced doctoral students and faculty in adult education at Rutgers University. It was tested with a sample of 275 adults in central New Jersey. As expected, significant positive correlations between the AACES and educational attainment, family income, and gender

were found. Specifically, those with higher levels of educational attainment and family income possessed more positive attitudes toward continuing education. Women exhibited more positive attitudes toward continuing education than men. The correlations between age and race were not statistically significant.

Current research on the relationship of attitudes and adult education have been sparse. Darkenwald and Hayes believed that the AACES can be used as a tool to further understand the nature and role of attitudes in continuing education. These attitudes are "important not only in affecting adults' participation in education, but also in determining their support of continuing education programs in the community and workforce" (p. 1). In addition, Darkenwald and Hayes recommended that further studies be conducted to determine the relationship between the AACES and the deterrents to participation in adult education with various populations (p. 12).

CHAPTER III

METHODOLOGY

Introduction

This study employed the causal-comparative research design. The intent of this type of research is "the discovery of possible causes for a behavior pattern by comparing subjects in whom this pattern is present with similar subjects in whom it is absent or present to a lesser degree. This method is sometimes called ex post facto research, since causes are studied after they have presumably exerted their effect on another variable" (Borg & Gall, 1983, p. 533).

Population and Sample

The study investigated the participation of small business managers in adult education activities. The population for this study was small business managers working within the state of Nebraska who were members of the Nebraska State Chamber of Commerce (NSCOC). The 1988 membership of the NSCOC consisted of a wide range of diverse small business managers including such job classifications as accountants, architects, attorneys,

carpet cleaners, contractors, morticians, and podiatrists. The diversity of this group allowed for Darkenwald and Valentine's (1985) recommendation that replication of the Deterrents to Participation Scale-General (DPS-G) should be performed with a heterogeneous population in order to enhance generalizability (p. 187).

The Nebraska small business managers selected for participation in this study resided in every geographical location in the state, possessed various income levels, had varied educational backgrounds, had different business experience, represented both genders, and were of a wide variety of age. From the population of approximately 1,450, a random sample of 600 small business managers was obtained from the 1988 membership roster. The two major cities of Lincoln and Omaha made up 49% of the sample, while 51% of the sample consisted of participants from cities and towns with populations of less than 35,000 residents.

Instrumentation

The Deterrents to Participation Scale for the General Population (DPS-G) and the Adult Attitudes Toward Continuing Education Scale (AACES) were used to measure the variables of barriers to participation in adult education activities and the attitudes of small business managers toward adult

education. The DPS-G was developed by Darkenwald and Valentine (1985) to identify perceived deterrents to participation in adult education by the general population. Darkenwald and Hayes (1988) constructed the AACES to determine adult attitudes toward continuing education.

The Deterrents to Participation Scale

Scanlan and Darkenwald (1984) developed the Deterrents to Participation Scale (DPS) to explore the underlying structure of the reasons adults give for nonparticipation in continuing education. Its development and use was designed as an attempt to expand and contribute to theory in the participation area. While Houle's typology of adult learners was helpful in understanding participation, it has not been successful in predicting it. In particular, "motivational orientation factors have not proved useful in distinguishing participants from nonparticipants" (Scanlan & Darkenwald, 1984, p. 155).

The survey consisted of a random sample of health professionals in New Jersey who held credentials in physical therapy, medical technology, and respiratory therapy. The sample was drawn from 750 professionals, and a 69.8% response rate was obtained on the questionnaire. The alpha reliability coefficient for the final version of the DPS was .91. The DPS consisted of 40 items that were generally related to six deterrent factors. Specifically,

these factors were disengagement, lack of quality, family constraints, cost, lack of benefit, and work constraints. All six factors explained nonparticipation to some degree. Of the six factors, disengagement was found to be the most influential with cost, family constraints, lack of benefit, lack of quality, and work constraints following in importance. These deterrent factors "provided empirical evidence to support a multidimensional perspective on the deterrents construct, the underlying structure of which was found to be more complex than suggested by earlier intuitive formulations" (p. 165). All deterrent factors exhibited strong predictive power in relation to nonparticipation except for the factor of work constraints. Although the results of this study could not be generalized to all health professionals or to other professionals in general, it demonstrated that factors could be identified as deterrents and that they often were multidimensional.

In an attempt to determine deterrents to participation by the general public, Darkenwald and Valentine (1985) developed a second Deterrents to Participation Scale (DPS-G). This study builds on the Scanlan and Darkenwald (1984) research and "moves beyond the narrow, homogeneous population of the earlier study in an effort to enhance the generalizability of the findings, and thus their utility for contributing to a general theory of participation

behavior" (Darkenwald & Valentine, 1985, p. 178). A random sample of 2,000 households was selected from Somerset County, New Jersey. A response rate of 10.7% was obtained on the 34-item DPS-G questionnaires. This low response rate was anticipated by the researchers and was considered to be of little importance since this was an exploratory study.

The DPS-G was newly constructed. It was developed by interviewing and randomly sampling a diverse group of adults with varying educational backgrounds and economic status. Fifty-eight items were selected for pretesting after eliminating idiosyncratic and semantically equivalent statements. The prototype DPS-G was developed by randomly assembling the deterrents identified in the interviews, random sample, and literature review. The scale was then "subjected to standard item analysis procedures, including a determination of internal consistency. Despite high reliability ($\alpha = .91$), analysis of respondent comments and item statistics indicated that the scale could be improved and shortened by revising or deleting certain items" (Darkenwald & Valentine, 1985, p. 180). As a result of the pretesting, 24 of the original 58 items were deleted; the final version of the DPS-G had an internal reliability coefficient of .86. In general, it is

desirable to obtain reliability coefficients "as close to 1.0 as possible" (Wiersma, 1986, p. 289).

Content validity refers to the extent to which a test measures a representative sample of the theoretical universe of subject-matter content (Borg & Gall, 1983, p. 276; Gronlund, 1976, p. 81; Kerlinger, 1972, p. 458). A test which is high in content validity would theoretically be a representative sample of this universe (Kerlinger, 1972, p. 458). The content validity of the DPS-G was established by the elaborate interview procedures used for item selection. Construct validity refers to "the extent to which a test measures one or more dimensions of a theory or trait" (Wiersma, 1986, p. 452). Correlational analysis between select sociodemographic variables and the six deterrent variables was conducted. It was concluded that "since the pattern of correlations is largely what one would expect, it provides support for the construct validity of the DPS-G" (Darkenwald & Valentine, 1985, p. 187). Finally, it was emphasized that the external validity of the instrument would only be established by further replication. Therefore, this study not only used the DPS-G but also re-examined its validity and reliability with small business managers.

A six deterrent factor breakdown was determined to be the most conceptually meaningful solution just as it had

been in the earlier DPS investigation (Scanlan & Darkenwald, 1984). Cost was the only deterrent identified in both DPS studies. In addition to cost, lack of confidence, lack of course relevance, time constraints, low personal priority, and personal problems were identified. It was determined that modified or specially developed DPS instruments would be "needed to measure deterrents for distinctive sub-populations" (Darkenwald & Valentine, 1985, p. 185). The investigation found that some of the deterrents identified were related to the conceptualization proposed by Cross (1981). However, the factors in this study were more multidimensional, just as they were in the prior DPS study (Scanlan & Darkenwald, 1984). It was suggested that "an individual's decision not to participate in organized adult education is typically due to the combined or synergistic effects of multiple deterrents, rather than just one or two in isolation" (Darkenwald & Valentine, 1985, p. 187). Darkenwald and Valentine argue that as a practical matter, the DPS-G could be used in adult education for program planning and market analysis. By simply determining the item means, practitioners could identify deterrents that might affect participation by potential participants in adult educational activities.

Deterrents that prevented low-literate adults from participating in adult basic education (ABE) were also

investigated in a study which partially replicated and extended the research started by Scanlan and Darkenwald (1984) and by Darkenwald and Valentine (1985). In these prior studies, it was found that the deterrents construct was multidimensional and that factor structures varied with different populations. Therefore, Hayes and Darkenwald (1988) constructed a new form of the DPS [called the Deterrents to Participation Scale-Low-Literate (DPS-LL)] to measure deterrents among the low-literate adults. The DPS-LL consisted of 32 items and had an alpha reliability coefficient of .82 in its final form. The data was drawn from 160 adults who were participating in an ABE class. As in the prior DPS studies, exploratory factor analysis was used to analyze the data.

Five factors were found to be conceptually meaningful. In particular, these factors were low self-confidence, social disapproval, negative attitude to classes, low personal priority, and situational barriers. The five factors identified in this DPS-LL study differed from the factors found in the DPS and DPS-G studies. Only self-confidence and low personal priority are also found on the DPS-G. It was suggested that results on the DPS-LL could be used by practitioners to identify major barriers in this target population and, therefore, enable program directors

to focus their efforts on eliminating these barriers for this select group.

Building on prior DPS research, Duquette, Painchaud, and Blais (1987) studied deterrents to participation in continuing professional nursing education in Canada. The assumption was made that the propensity of professionals to participate in educational activities was stronger than that of the general population and that the deterrent construct occupied a central place in theories of participation. The DPS developed by Scanlan and Darkenwald (1984) was selected for data collection because the target population was similar. However, revisions were made in order to take into account the use of French language and the context of the nursing practice in Quebec. In its final form, the Cronbach alpha reliability coefficient was .89. The scale consisted of 50 items of which 38 items were from the prior Scanlan and Darkenwald (1984) DPS. This new instrument was mailed to 2,063 people randomly selected from a sample stratified by age and regional district, and an 80% response rate was obtained.

An eight factor solution was found to be most conceptually meaningful. These eight factors were lack of perceived need, time constraints due to work, negative impressions regarding courses, lack of confidence, low personal priority, professional disengagement, cost, and

lack of benefit. Data generated from this study indicated that perceived deterrents to participation in adult education may well be situationally specific. In addition, constraints due to the work environment appeared to be the major deterrent to continuing education. Finally, questions related to course offerings, instructional methods, and schedules acted as major deterrents to participation only when the decision to participate had been made and therefore would affect participants more than nonparticipants.

The goal of the Martindale and Drake (1989) study was to "examine the stability and universality of the DPS-G factor structure with a different population as recommended by Darkenwald and Valentine" (p. 63). The 34 items on the DPS-G along with 12 sociodemographic items were used to gather the data. The population for this study was 2,734 off-duty Air Force personnel at Maxwell and Gunter Air Force bases in Alabama. A sample of 966 personnel was selected from the population. After reducing the sample to 882 for unopened or unusable returns, the adjusted response rate was 71.5%. The "DPS-G survey item reliability coefficient, coefficient alpha was .86 for the studied Air Force population. Darkenwald and Valentine (1985) also reported a coefficient of .86 in their study of the general population" (p. 65).

It was found that the study aligned closely with the Darkenwald and Valentine (1985) study and that variations were logical to explain after considering the two distinctly different populations. Generally, as in prior DPS research, situational barriers were ranked highest and were followed by institutional and dispositional barriers. The top six deterrent variables were the same in both DPS-G studies. Factor analysis revealed eight factors which aligned well with the six factors found by Darkenwald and Valentine (1985). These eight factors were lack of course relevance, lack of confidence, cost, time constraints, lack of convenience, lack of interest, family problems, and lack of encouragement. These findings provide additional evidence about the generalizability of the DPS-G over various populations.

The Adult Attitudes Toward
Continuing Education Scale

Small business managers' attitudes toward adult education were measured by the AACES. This scale was developed by Darkenwald and Hayes (1988) to identify attitudes toward adult and continuing education. The AACES is a 22-item instrument which employs a five-point Likert scale to provide a measure of adult attitudes toward adult education. The AACES had a Cronbach reliability coefficient of .90 in its final form and unidimensionality was

established through multiple factor analysis. The construction of the AACES was accomplished after creating an item pool from a literature review with additional items generated by an expert adult education panel. This construct-validity panel consisted of advanced doctoral students and faculty in adult education. The content validity support for the AACES was "inferred from the procedures utilized in its construction" (Darkenwald & Hayes, 1988, p. 5). It was concluded that since the expected correlations were found between the AACES and select demographic variables, support for construct validity of the instrument was established. Finally, this study not only used the AACES but also re-examined its validity and reliability with small business managers.

Data Collection Procedure

Each participant in the study was sent a packet in June of 1989. Six hundred instrument packets (see Appendix) were sent directly to the small business managers randomly selected for the sample. Each packet included a cover letter addressed from the Department of Business Administration at Kearney State College specifically outlining the purpose of the study. In addition to the cover letter, each packet included copies of the DPS-G and AACES. To assure a reasonable response rate, one follow-up

packet was sent to nonrespondents in July of 1989 emphasizing the importance of their response. The aforementioned packets included a pre-paid, return envelope. Finally, a data sheet requesting select demographic data was enclosed. Information was sought concerning the respondent's gender, age, income, educational attainment, number of years in business, type of business, geographical location in the state, and whether they had recently participated in adult educational activities.

Data Analysis

This two-part study utilized three types of analyses. First, simple frequencies were used to describe the sample. The following areas were described: age, income, gender, educational attainment, number of years in business, type of business, and geographical location in the state. Second, the validity and reliability of the instruments with small business managers was checked. On the DPS-G and the AACES, content validity was established by correlating each individual item on the instrument with a participant's overall score. In order to have content validity, each item should correlate positively to the individual's overall score. In addition, a factor analysis of each instrument was conducted to re-examine the constructs in these instruments to ascertain if the actual constructs in

the instruments supported the theoretical basis of the instruments which were proposed by their authors. Third, discriminant analysis was used to examine the difference between participants and nonparticipants in adult educational activities with respect to perceived barriers to adult education participation and to attitudes toward adult education.

Factor Analysis

Factor analysis is "a statistical technique used to identify a relatively small number of factors that can be used to represent relationships among sets of many interrelated variables" (Norusis, 1988, p. B-41). A factor is "a construct, a hypothetical entity, that is assumed to underlie tests, scales, items, and indeed, measures of almost any kind" (Kerlinger, 1973, p. 659). In this study, confirmatory factor analysis was employed to examine the constructs proposed by Darkenwald and Valentine (1985) and Darkenwald and Hayes (1988) relating to the DPS-G and the AACES. By using factor analysis, the number and nature of the constructs underlying the DPS-G and the AACES with small business managers was determined. These constructs or traits help to explain the phenomenon of perceived barriers to participation in adult education and attitudes toward adult education. In factor analysis, variables or factors are generated that represent the constructs of the

data. The key to this analysis is parsimony. Parsimony refers to simplicity which allows the "best way to view the variables" (Kerlinger, 1973, p. 671). Parsimony is accomplished by grouping variables with high correlations and thereby reducing the data to a more understandable or conceptually meaningful format. Therefore, if variables have low correlations "it is unlikely that they share common factors" (Norusis, 1988, p. B-43).

Eigenvalues were used initially to determine the number of meaningful factors underlying each instrument. An eigenvalue is "a mathematical property of a matrix; used in relation to the decomposition of a covariance matrix, both as a criterion of determining the number of factors to extract and a measure of variance accounted for by a given dimension" (Kim & Mueller, 1978, p. 76). As an additional aid in factor selection, a scree plot of the eigenvalues was done. This analysis made it possible to visually examine where the eigenvalues started to trail off or break. This "trailing off is called a scree because it resembles the rubble that forms at the foot of a mountain" (Norusis, 1988, p. B-47). In order to enhance the interpretability of the factors, an orthogonal rotation using the varimax method was performed. This method "attempts to minimize the number of variables that have high loadings on a factor" (p. B-55). Finally, the analysis conducted was

