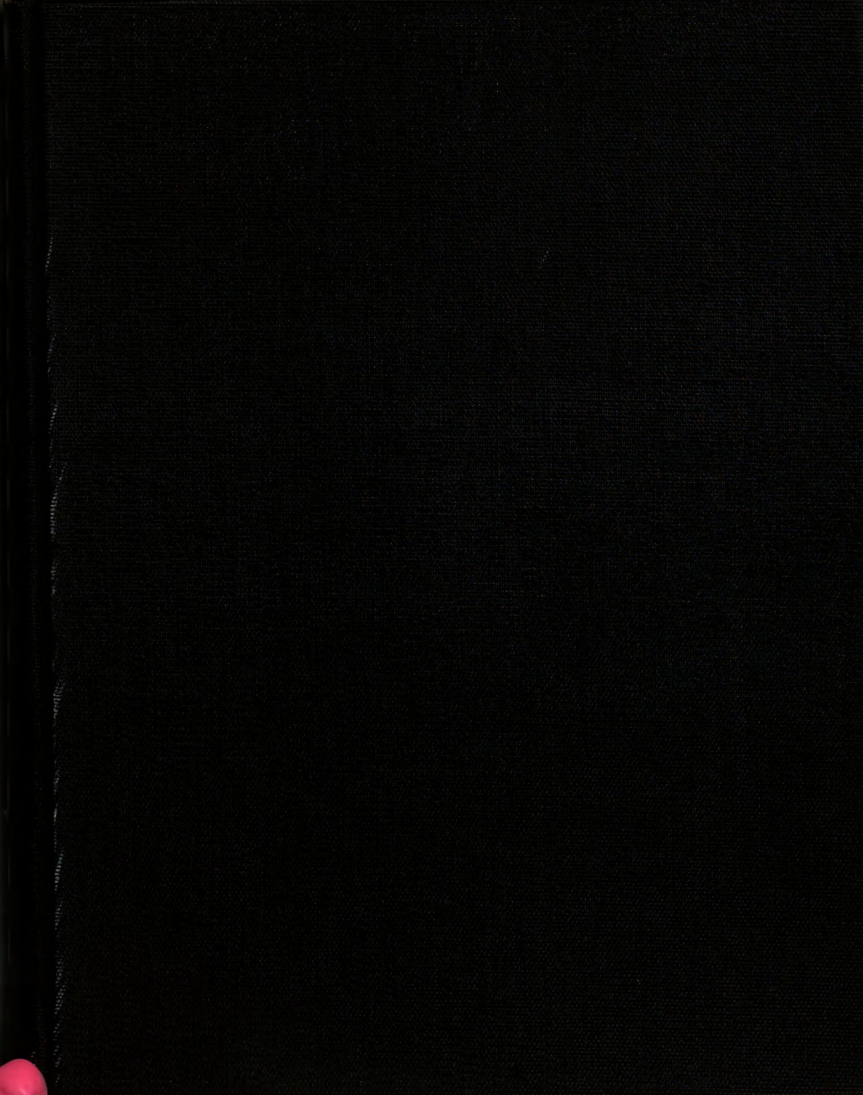
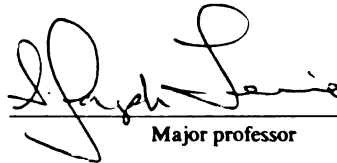






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Behold, I come quickly; and my reward is with me, to give every man according as his work shall be. I am Alpha and Omega, the beginning and the end, the first and the last.

-Lord Jesus Christ

Holy Bible, Revelation 22:12,13.

**PARTICIPATION AND MOTIVATION IN ADULT NONFORMAL EDUCATION:
A SOCIAL SYSTEMS APPROACH**

By

Gollapalli Prakasa Rao

A DISSERTATION

**Submitted to
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ABSTRACT

PARTICIPATION AND MOTIVATION IN ADULT NONFORMAL EDUCATION: A SOCIAL SYSTEMS APPROACH

By

Gollapalli Prakasa Rao

Research and experience have shown that adult nonformal education is an effective means for achieving community development. As such, further exploration of factors that contribute to its effectiveness is important. Participation and motivation have been most enduring research concerns in adult learning. Past studies have shown that socio-demographic factors such as age, sex, and income shed little light on participation and motivation. Therefore it is appropriate to try alternative approaches to the examination of participation and motivation.

The purpose of this study was threefold: To examine the aggregate and individual impact on participation and motivation of selected sociodemographic attributes like age, sex, education of adults enrolled in nonformal education; to lay out a theoretical model to understand adult participation and motivation drawing upon Merton's(1957) theory of social structure and anomie; and to examine associations between learning orientations of adults and their social systems.

Gollapalli Prakasa Rao

The study was conducted in North India, drawing a random sample of 261 learners from adult nonformal education programs of selected voluntary agencies. Multiple linear regression, analysis of variance, and crosstabulation procedures were used as statistical tests.

The study showed that the sociodemographic variables account for 7% of variance in participation which is lower than the 10% variance in participation accounted for in American studies. The same variables accounted for 13% of the variance in motivation. The study has suggested a theoretical model that may be called the Response Pattern Model, to enable a further understanding of participation/motivation as a function of a learner's response pattern. The Response Pattern Model is based upon a learner's acceptance of the goals and means of an educational program. The study has also suggested that the social system to which an adult learner belongs influences his/her participation and motivation.

The findings of this study may help meet the challenge of further developing theoretical grounding of adult education and to plan and operate adult education programs as 'community based programs' rather than mere 'learner based,' so that adult education can become a more effective means for achieving community development.

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Dedicated to Gnanamma and Gollapalli Elias, my mother
and father, whose faithful Christian testimony,
prayers and support provided a model
for my life's journey

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CHAPTER I

INTRODUCTION

Need for the Study

Literature and experience show that rural development implies change at the community level. Acquisition of knowledge and skills by the people of the community through a participatory process are critically important if change is to occur and if the process and gains of change are to be sustained. There are two avenues for this: formal and nonformal education. Studies of Coombs (1974) have shown that nonformal education for adults is a far more effective means as it pertains to enhancement of knowledge and skills within the actual context of the community besides having the virtue of providing participatory learning possibilities. Coombs (1974) observed that, "for combating poverty, nonformal education is one of the essential weapons to be used." It is therefore imperative that developing countries give importance to nonformal education in their development plans. From the early 1970s most developing countries, particularly India, have expanded this sector of education hoping it would accelerate development.

Since 'nonformal education' (NFE) for adults is so important for development, it is essential that we continue to explore factors that contribute to its effectiveness.

The Problem

Two of the variables that have, so far, been looked at for the purpose of explaining differential levels of effectiveness of adult nonformal education are participation and motivation. These two variables have been most enduring research concerns since investigations of adult learning began and continue to occupy the attention of current research. The problem is, past studies had conceptualized and measured these two variables mostly in terms of sociodemographic variables such as age, sex, income level with participants drawn mostly from middle-class or working-class Americans. However, those studies have explained only about 10% of the variance in participation (Cross, 1983). This suggests that past research approaches are insufficient for understanding participation and motivation; also, we cannot claim generalizability for theories and concepts of adult learning derived from those studies. The real

explanation for participation may lie elsewhere and the sociodemographic factors relevant to adults in developing countries may explain participation and motivation differently.

The following two questions arise at this point:

1. What percentage of variance in learner participation and motivation could be attributed to sociodemographic variables of adults in less developed countries like India?
2. What alternative view could better explain participation and motivation of adult learners?

Who people are is sometimes less important than the cultural surroundings in which they operate. It is necessary that a conceptual and a theoretical approach is taken to understand adult participation and motivation. Merton's (1957) paradigm "social structure and anomie", which is firmly based on concepts relating to social systems and their cultures, appears to provide an alternative approach to understanding adult motivation and participation in nonformal education programs operating in social systems.

We also know that man is always a part of a larger system and only in this wider context can his conduct be

understood (Young 1956). In other words, man in his social system, interacts with his fellow members and seeks social reinforcement for his behavior (Malinowski, 1945). For understanding participation/motivation it appears logical to look at a community as a social system and the adult learner as a part of it, sharing culturally approved goals and values of the community.

The Purpose

The purpose of this study was to:

1. examine relationships of selected sociodemographic variables such as age, sex, income level and their aggregate and individual impact on participation and motivation of adult learners in nonformal education programs in North India.
- 2(a).lay out a theoretical model to enable a further understanding of adult participation/motivation drawing upon Robert Merton's(1957) theory of social structure and anomie.
- 2(b).examine ways that the social and cultural context may influence the learning orientation of adults.

Theoretical Foundations

Theoretical foundation relative to purpose (1)

Most research relating to adult learning has been done in the industrialized countries. Brookfield (1986) states that:

in research in adult learning, the adults who form the sampling frames are for the most part ethnically homogeneous; that is, they are Caucasian Americans. They are drawn chiefly from middle-class or upwardly mobile working-class families.... how can we then write confidently of adult learning style in any generic sense when we know little (other than anecdotally) of the cognitive operations of, for example, Asian peasants, African tribes people, or Chinese cooperative laborers?

Anderson and Darkenwald (1979) found through a study of about 9,000 American adults, 17 years of age or older who were participants of organized adult education, that sociodemographic variables of adults explain only 10 percent of the variance associated with participation. They say that such variables play a relatively modest role in influencing participation. Their finding however, cannot be generalized as their sample was drawn from the

American learners only and therefore, studies for understanding participation/motivation in developing countries using different strategies, including the use of sociodemographic variables relevant to adults in those countries as a strategy, are necessary.

Theoretical foundation relative to purpose 2(a)

Sociologists tell us that culture is a dominating factor in human life. Horton (1965) suggests that, "from before one is born until after he is dead, his life is circumscribed by his culture.... his culture defines the meaning of situations and thereby indicates the behavior expected." Therefore, as Young (1956) suggests, "it would seem completely logical that examining the cultural environment itself could make explicit the learning process and learning must be viewed as an aspect of the cultural milieu."

However, culture covers a host of variables. Merton (1957) suggests that, "among the several elements of social and cultural structures, two are of immediate importance... the first consists of culturally defined goals held out as legitimate objectives for all or diversely located members... the second, the acceptable modes (means) of reaching out for those goals." This

implies that goals and means are two important factors in cultural milieu which deserve serious consideration for understanding human behavior. Based on these two factors of culture, Merton developed his theory 'Social Structure and Anomie' in an effort to explain human behavior with respect to social systems.

Merton's theory suggests that individuals in a social system associate themselves to prescribed goals and available means in definite patterns which Merton (1957) calls response patterns. He suggests that these response patterns correspond to a typology of modes of adaptation or modes of behavior. Merton's suggested modes and the corresponding response patterns are shown in Figure 1.

Modes of Adaptation	Acceptance of goal (G)	Acceptance of means (M)	Response pattern(RP)
Conformity	High	High	G+ M+
Retreatism	Low	Low	G- M-
Innovation	High	Low	G+ M-
Ritualism	Low	High	G- M+

Figure 1. Modes of adaptation and response patterns.

Conformity, according to Merton refers to the behavior of a person which is consistent with the expectations of

his/her society which has prescribed the goals and the means. Innovation supposes that the individual abandons institutional means while retaining the aspiration to successfully pursue the prescribed goals. In this mode his/her concentration is on finding an alternative means to attain the same goals. In the Ritualism mode, the individual abandons the goal but clings to the routines and other institutional norms in order to escape possible dangers which he/she might face by not following those norms and routines. Retreatism refers to the behavior of an individual who is in the society but not seriously involved in it's activities. Here, the individual has relinquished the prescribed goals and his/her behavior does not accord with the institutional norms.

To apply Merton's paradigm to adult nonformal education we must view a nonformal education program as having two distinct components; first being the goal the program offers to its learners and second, the institution itself which serves as an available means to achieve that goal. In this study, a goal is viewed as the professional and social status or vocation an adult learner could attain by successfully participating in a nonformal education program, where participation is assumed to be the same as learner's class attendance. For example, a welding

training program could enable a learner who participates in it to become a welder. One can then say, the welding program offers a 'welder status' as a goal to its participants. The teachers and staff who operate the program and the equipment used are assumed as a means available to the learners to attain that goal.

In this study, goal(NFE) stands for the goal offered by a nonformal education program and means(NFE) stands for the institution that operates that program, as explained above. These two terms carry the same meanings wherever they appear in this study.

It is assumed that Merton's modes of adaptation and the response patterns in adult nonformal education context may be defined as outlined in Figure 2.

Mode	Assumed definition
Conformity:	High levels of participation and motivation.
Innovation and Ritualism:	Medium levels of participation and motivation
Retreatism:	Low levels of participation and motivation.

Figure 2. Assumed definitions of modes of adaptations in nonformal ed. context.

In a nonformal education setting, if learner's acceptance of goal(NFE) and means(NFE) are measured quantitatively by suitable scales, Merton's response patterns may be defined as outlined in Figure 3.

Response Patterns:	Definitions:
(G+ M+) ..	Learner has high levels of acceptance of goal(NFE) and means(NFE) .
(G+ M-) ..	Learner's acceptance of goal(NFE) is high and acceptance of means(NFE) is low.
(G- M+) ..	Learner's acceptance of goal(NFE) is low and acceptance of means(NFE) is high
(G- M-) ..	Learner has low levels of acceptance of goal(NFE) and means(NFE) .

Figure 3. Assumed definitions of response patterns in nonformal education context:

Merton's suggestion that these four response patterns correspond with the four modes of adaptation is fundamental to this study. Based on the above definitions of response patterns and modes of adaptations given in

Figures 2 and 3, four relationships are identified between participation /motivation and the levels of acceptance of goal(NFE) and means(NFE); these relationships are shown in Figure 4.

Level of participation/ motivation	Definition of response pattern in nonformal education context
High level of participation/ motivation	High goal(NFE) and high means(NFE) acceptance
Medium levels of participation/ motivation	High goal(NFE) acceptance and low means(NFE) acceptance
	Low goal(NFE) acceptance and high means(NFE) acceptance
Low levels of participation/ motivation	Low levels of goal(NFE) and means(NFE)

Figure 4. Relationships between participation/motivation and goal(NFE) and means(NFE) acceptance levels.

A diagrammatic representation of this construct is given in Figure 5.

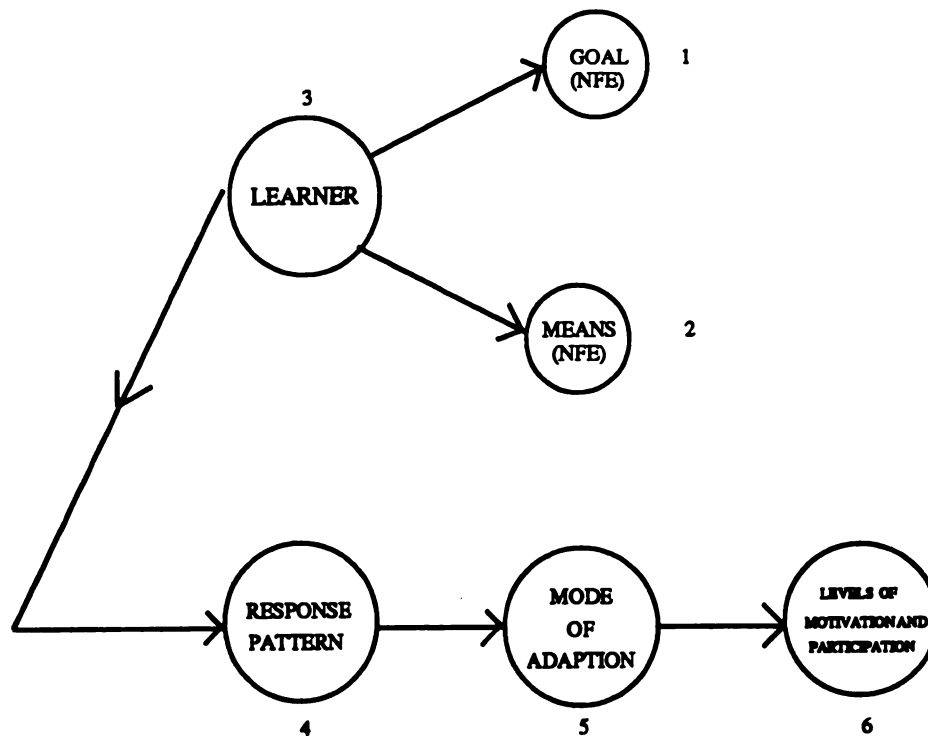


Figure 5. Diagrammatic representation of relationships between participation/motivation and the levels of goal(NFE) and means(NFE)

In Figure 5, the Circle 1 represents the goal(NFE), Circle 2 the means(NFE), and Circle 3 the learner. Through a process of examination of the goal(NFE) offered and the means(NFE) made available by a nonformal education program, the learner internal to himself/herself will form a level of acceptance for each of these factors, which in this study are termed goal(NFE) acceptance and means(NFE) acceptance. The process of examination may be

influenced by factors internal and external to the learner. Taken together, these two form a response pattern (Figure 5, Circle 4). If all the possible levels are categorized into two groups, low and high corresponding to Mertons 'rejection' and 'acceptance', we come up with only four different combinations. Merton suggests that each combination corresponds to typology of modes of adaptation or a mode of behavior (Figure 5, Circle 5). It is hypothesized in this study that each mode of adaptation corresponds to a low or a medium or a high participation or motivation of the learner in adult nonformal education (Figure 5, Circle 6).

Theoretical foundation relative to purpose 2(b)

When a nonformal education program operates within or near a village, different culturally homogeneous communities in that village are likely to examine the goals(NFE) and the means(NFE) offered by that program in the light of their own culturally valued and accepted goals and means and adopt different response patterns vis-a-vis the nonformal education program. Such community response patterns, in turn, are likely to influence formation of response pattern of the learners of that

community because, as Horton (1965) suggests, "a young person looking for a career may feel he has a free choice, but he will choose one of the lines of work his culture has taught him to value." Young (1956) suggests that, "man is always a part of a larger system and only in this wider context can his conduct be understood." Along the same lines, Malinowski (1945) says that, "humans live not by psychological drives alone but by physiological drives molded and modified by the conditions of culture and man never deals with his difficulties alone." In other words, man in his social system, interacts with his fellow members and seeks social reinforcement for his behavior. In that process, his perception and attitude towards an educational goal and institution may be influenced by the perceptions and the attitudes of the members of that social system of which he is a part. Brookfield (1986) thinks that nonparticipation is a function of a cluster of cultural attitudes. Therefore, variations in a community's responses to a goal(NFE) and means(NFE) may, through the channel of culture, correspondingly influence and alter an individual learner's level of acceptance of those components of NFE. It is logically consistent to assume here that a learner's response to a goal(NFE) and means(NFE) may be closely related to the corresponding responses of his/her community.

A diagrammatic representation of this construct is shown in Figure 6.

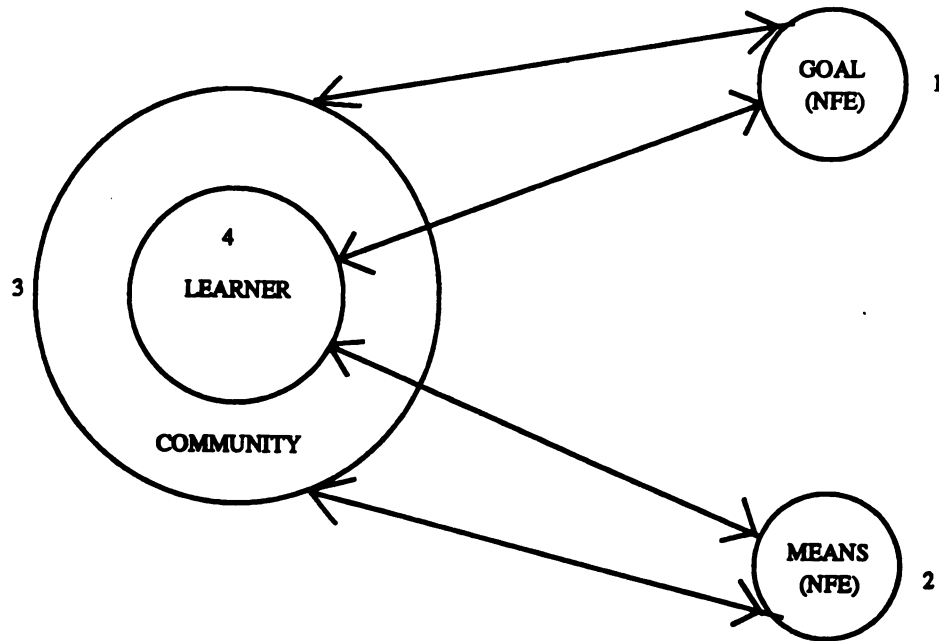


Fig. 6 Diagrammatic representation of relationships between community's and learner's response patterns.

In Figure 6, Circle 1 represents the goal(NFE) and Circle 2 the means(NFE). Through a process of examination of the goal(NFE) offered and the means(NFE) made available by a nonformal education program, the community (Circle 3) though a process of interaction among the members is likely to come up with a level of acceptance for each of

these two factors. This study has hypothesized that through the channel of culture, the response pattern of the community is likely to influence the process of formation of learner's (Circle 4) response pattern in such a way that finally the two patterns will have a close correspondence.

Hypotheses

The following hypotheses were constructed on the basis of the above theoretical orientations.

1. There is a linear relationship between participation /motivation and the set of sociodemographic variables: age, sex, caste, education, area of residence, marital status, economic status, media exposure, health, and occupation.
2. Adult learners differ in their participation and motivation with respect to their response patterns.
- 3(a). High level participation in adult learning has correspondence with response pattern G+M+.
- 3(b). High level motivation in adult learning has correspondence with response pattern G+M+.

4(a).Medium level participation in adult learning has correspondence with response patterns G-M+ and G+M-.

4(b).Medium level motivation in adult learning has correspondence with response patterns G-M+ and G+M-.

5(a).Low level participation in adult learning has correspondence with response pattern G-M-.

5(b).Low level motivation in adult learning has correspondence with response pattern G-M-.

6(a).Participant's acceptance of goal(NFE) has positive correspondence with his/her community's acceptance of that goal(NFE).

6(b).Participant's acceptance of means(NFE) has positive correspondence with his/her community's acceptance of means(NFE).

Definitions

Nonformal Education

Adopting Coomb's (1974) definition, NFE is any organized educational activity outside the graded formal system of

education whether operating separately or as an important part of a broad activity, that is intended to serve an identifiable clientele and objectives.

Adult

The definition adopted in this study is that an adult is an individual who has assumed some kind of responsibility for himself/herself and may be for his/her immediate family and or for others, and is at least 18 years old.

Participant

A participant is an adult enrolled as a learner in a nonformal education program.

Participation

In this study participation is limited to a learner being able to attend all the classes or learning sessions organized by a nonformal education program. In this study, participation is measured in terms of class attendance.

Nonformal education goal

In this study, a goal is viewed as the professional and social status or vocation an adult learner could attain by successfully participating in a nonformal education

program, where participation is assumed to be the same as the learner's class attendance.

Goal(NFE)

In this study, goal(NFE) represents nonformal education goal defined above.

Nonformal education institution

In this study 'nonformal education means' refers to the institution or the school that organizes and operates a nonformal education program. It includes the teaching staff, the facilities, and the equipment used.

Means(NFE)

In this study, means(NFE) stands for the nonformal education institution or school.

Acceptance of goal(NFE)

Acceptance of goal(NFE) is defined as the extent to which a learner is satisfied with the goal offered by a nonformal education program where both goal and nonformal education program conform to the above definitions.

Acceptance of means(NFE)

In this study, acceptance of means(NFE) is defined as the extent to which a learner is satisfied with the means,

that is with the teachers, the staff, the facilities, and the equipment which play a significant role in his/her realization of the goal(NFE).

Social System:

A community is visualized as a social system. People of a caste or a sub-caste living in a specific geographical area is considered a community.

Motivation

Motivation in this study is strictly intrinsic. It is defined as the learner's desire to effectively pursue a learning goal(NFE) where goal(NFE) conforms to the definition given above.

Dropout:

One who has discontinued attending a learning program.

Sociodemographic variables

In this study, age, sex, caste, education, area of residence, marital status, economic status, media exposure, health and occupation are considered as socioeconomic variables relevant to adult learners participating in nonformal education programs in India.

Organization of the Dissertation

Chapter I presents an introduction of the study. It includes need for the study, the problem, purpose, hypotheses and relevant theoretical foundations.

Chapter II has a review of literature pertaining to adult nonformal education, participation, motivation, and Merton's (1957) theory about social structure and anomie.

Chapter III covers methodology that includes, research design, a brief description of the population, sampling design, instrumentation, and statistical procedures used.

Chapter IV presents data analyses. It covers a brief description of the sample, important descriptive statistics, and a detailed description of the statistical analyses along with interpretations.

Chapter V presents summary and discussion which includes a brief description of the research problem and the research procedures used, discussion of the findings, conclusion, implications to theory and practice, and recommendations for future research.

CHAPTER II

LITERATURE REVIEW

Adult Education Theory

Adult education reaches back to ancient times. Indeed the great social movements that produced western civilization were all founded on the conviction that adult mind could learn and change (Robinson, 1989). In fact, it is such a conviction that was responsible for all the great changes in India and most other countries of the world.

In the last twenty five years a number of respected theorists have made attempts to identify generalizable principles of adult learning in their quest to build a theory of adult learning that would aid practice (Brookfield, 1986). Boshier (1971) thinks that, "adult education is a conceptual desert." Cross (1983) seems to support Boshier's blunt statement saying that, "one of the most under-utilized vehicles for understanding various aspects of adult learning is theory articles dealing with theory are still rare in adult education." But, none as Cross (1983) states, "would lay claim to a fully developed theory regarding participation in adult

education." Though it looks unlikely there will ever be one single theory of adult education, there is need for adult educators to continue working towards building theories that would strengthen adult education as a conceptually rich field.

Nonformal Education

Robinson (1989) points out three common uses of the term "adult education":

- (1). A field of study - An academic discipline;
- (2). A field of professional practice - Institutions and agencies; and
- (3). An adult activity - A part of every adult life.

Adult education as an activity which is a part of every adult life generally includes unorganized activities, whereas the other two types of adult education listed above, represent organized educational activities. Adult nonformal education, an organized educational activity therefore, can be rightly put under the second type of adult education, 'a field of professional practice'. Adopting Coombs (1974) definition, nonformal education (NFE) is any organized educational activity outside the

graded formal system of education whether operating separately or as an important part of a broad activity, that is intended to serve an identifiable clientele and objectives. Adult nonformal education is considered an effective means for achieving development, particularly in underdeveloped countries.

Experience has shown, as Coombs(1974) tells us that, "for combating poverty, nonformal education is one of the essential weapons to be used." As such, nonformal education is an appropriate and essential component of micro social change efforts. Nyrere (1976) talking about development says, "if adult education is to contribute to development it must be a part of life, integrated with life and inseparable from it. It is not something which can be put into a box and taken out for certain periods of the day....it cannot be imposed; every learner is ultimately a volunteer, because however much teaching is given, only he can learn." The kind of attributes that Nyrere has attached to the adult education that can contribute to development can be found only in nonformal education and hence its importance for rural development.

Realizing the effectiveness of adult nonformal education, since 1970s developing countries, particularly India, have

expanded this sector of education with the hope of accelerating rural development. Vocational education and literacy are two main types of adult nonformal education programs that have been taken up in these countries. However, as Korten (1984) points out, "one of the clear lessons of the 1970s has been that effective participation of the rural poor in the development process is more easily mandated in programming documents than achieved in the real world of program implementation." Freire's (1983) experience at Recife where, out of a group of five illiterate participants two dropped out on the third day of the program, also supports this view.

As long as nonformal education continues to be an important mode of rural development process, efforts to understand factors that can promote its effectiveness remain important for all those concerned with rural development.

Motivation in Adult Education

The three well known views on motivation are summarized by Robinson (1989) as follows:

1. Behavior impelled by inner urges (Freud);
2. behavior impelled by outer-situational forces (Pavlov- Skinner); and

3. behavior impelled by inherent capacity for growth (Carl Rogers and other third force psychologists).

An adult's motivation could conform to any one or a combination of the above three views. The adult nonformal education in the form of vocational training, literacy etc. confirms to the motivation seen as behavior impelled by outer-situational forces.

What ever view one might take, it is important that we understand motivation which appears to be a dominant factor in effective adult education. Cross (1983) suggests that, " the research methods for seeking answers to the motivation of adult learners fall into four basic designs: (1) depth interviews, (2) statistical analysis of motivational scales, (3) survey questionnaires, and (4) hypothesis testing." Houle (1961), Tough (1968), Carp et al. (1974), Rubenson (1977), Vroom (1964), and Aslanian and Brickell (1983) are some of the prominent researchers who attempted to study motivation using the above methods. On the basis of a careful review of their studies, Cross came to the conclusion that the question of why adults choose to participate in various kinds of learning activities has not been answered definitely by any of the four major methods mentioned above.

There are four well known theoretical works developed as models to explain motivation of adults in learning activities. These four as explained by Cross (1983) are briefly stated below:

1. Expectancy-valency paradigm of Kjell Rubenson (1977) states that the individual always chooses the course of action that he expects will lead to the greatest degree of pleasure or which will produce the smallest degree of pain.
2. Vroom (1964) proposed an explanation for adult motivation by drawing a comparison between "work" and "education". He suggests that, "education like work, appears to be an achievement oriented activity, meaning that people who want to get ahead will put effort into personal achievement in school or on the job."
3. Roger Boshier (1973) proposes that, "both adult education participation and dropout can be understood to occur as a function of the magnitude of the discrepancy between the participants' self-concept and key aspects (largely people) of the educational environment...; non participants manifest self/institution incongruence and so do not enroll."

4. Alan Tough (1979) suggests that anticipated benefits play an important role in forming motivation.
5. Miller's Force-Field theory based on sociological research suggests that positive and negative forces existing in the individual and in the environment when combined form a resultant motivational force. While most of the other theories are based on psychological and physiological principles, Miller's theory draws from sociological research.

It is to be noted that all of the above have used factors that relate to participant's environment and some psychological variables like self-concept. It is only Miller who went slightly into the area of sociology and based his analysis on compatibility of the values of the various social classes with the values of the educational system. One limitation of these studies however, is that all of them have dealt with organized school classes in which adults participate for credit or job promotion towards which either their employer or themselves had paid a fee. These dimensions build considerable pressure on the participants which develops a possibility of rendering participation more a subjective and mechanical behavior than a voluntary behavior tied up with genuine inner motivation.

Participation in Adult Education

Research points out that two most important factors that are associated with effectiveness in adult education appear to be motivation and participation. Past studies have also shown that there is a difference between those who participate and those who dropout, in terms of personal attributes or positional factors like age, sex, income, formal education etc. However, most of these studies were conducted in urban environments of industrialized countries. Brookfield (1986) suggests that, "in research in adult learning, the adults who form the sampling frames are for the most part ethnically homogeneous; that is , they are Caucasian Americans. They are drawn from chiefly middle class families.... how can we then write confidently of adult learning style in any generic sense when we know little, other than anecdotally, of the cognitive operations of, for example, Asian peasants, African tribes people, or Chinese cooperative laborers?" As such, it remains to be seen if these findings hold good for rural adults of less developed countries where people are, socially, culturally, and economically, not comparable to the people in those countries.

Research literature in respect to adult participation in learning activities is steadily growing in volume; but a significant part of it is concerned mostly with describing the characteristics that apply to adult learners, and is in the shape of "clientele analysis" as Knox(1965) puts it. To date, most research account for only 10% of the variance associated with adult participation in organized learning activities and therefore, the real explanation for participation appears to lie elsewhere as suggested by Cross (1983). As such, it is logically consistent to assume that there is a need to look into factors from other areas of knowledge for gaining further understanding of adult motivation and participation.

Roger Boshier (1972) suggests that, "it is well known to adult educators that dropout of adult learners from organized educational programs is a continuous problem." Hollenbeck (1965) points out that, "the problem is international." Dickenson, Gary et. al (1967) found through their study that, "the initial enrolment is rarely maintained." This problem is acute in adult nonformal education programs in rural India. The problem remains unsolved despite persistent efforts of the government and private organizations.

The theories so far put forward in an attempt to understand this problem appear to have fallen short of the need. Cross (1983) suggests that, "the answer to the question of why adults participate in learning activities will probably never be answered by any simple formula. Motives differ for different groups of learners, at different stages of life, and most individuals have not one but multiple reasons for learning." Verner and Newberry (1958) further clarify this complex issue saying that, "the decision to participate or not rests with the individual adult and is influenced by factors that are components of both the personality and social group life of the individual involved. Such personal independence in the matter of participation complicates the administrative functions, frustrates the adult educator and inhibits achievement of the maximum effective role of adult education in society." It is possible that adults' learning orientations are rooted in their cultures. Brookfield (1986) thinks that nonparticipation is a function of a cluster of cultural attitudes. As such, it may be necessary for research in adult education to direct its focus on to understanding communities and cultures of adults as a necessary step in understanding their learning orientations.

Merton's Theory of Social Structure and Anomie

Merton (1957) suggests that,

among the several elements of social and cultural structures, two are of immediate importance. These are analytically separable although they merge in concrete situations. The first consists of culturally defined GOALS/purpose, and interests held out as legitimate to objectives for all or for diversely located members. The second element of the cultural structure defines, regulates and controls the acceptable modes (or MEANS) of reaching out for these goals. Every social group invariably couples its cultural objectives with regulations, rooted in the mores or institutions, of allowable procedures for moving toward these objectives ...the cultural emphasis placed upon certain goals varies independently of the degree of emphasis placed upon institutionalized means.

Merton's theory suggests that, the individuals in a social structure adapt certain role behaviors corresponding to their patterns of responses explained above. His suggested adaptations are as follows:

<u>Pattern</u>	<u>Mode of adaptation</u>
(G+ M+)	Conformity
(G+ M-)	Innovation
(G- M+)	Ritualism
(G- M-)	Retreatism
(G± M±)	Rebellion

Where the (+) signifies "acceptance" or "internalization" and (-) signifies "rejection"; and (±) signifies "rejection of the prevailing goals/means and substitution of new goals/means". (In this study, the last mode of adaptation is not considered)

Merton defines the adaptation as follows: Conformity refers to the behavior of a person which is consistent with the culturally conditioned expectations of his society. Innovation supposes that the individual has been imperfectly socialized so that he/she abandons institutional means while retaining the aspiration to successfully pursue the prescribed goals. In the ritualism mode, the individual abandons the goal but clings to the routines and other institutional norms in order to escape possible dangers which he/she might face by not following those norms and routines. Retreatism refers to the behavior of an individual who is in a society but not seriously involved in its activities. Here, the individual has relinquished the prescribed goals and his/her behavior does not accord with institutional norms. Rebellion reflects the behavior of the individual who takes an arbitrary stand in respect of the goals and the corresponding means prescribed by the society; he/she seeks to define new goals and new means. Merton thinks that when the prescribed goals and the available means are not well coordinated with respect to any member in the society, there is the possibility of his deviating from the expected behavior. In Merton's words, the reason for such a behavior is that, "disjunction between the prescribed goals and the available opportunities (or

means) to realize those goals exerts pressure and produces anomie, a condition of relative normlessness leading to aberrant behavior." Conversely, aberrant behavior may be regarded sociologically as a symptom of disassociation between the culturally prescribed goals and socially structured avenues (means) for realizing those aspirations. Thus anomia is centered on pressure created by the discrepancy between culturally induced goals and socially structured opportunities. But, in the case of conformity and retreatism modes, anomie does not exist. It is suggested by Merton that this paradigm is applicable to all social systems. Since nonformal education programs, particularly in developing countries, operate in clearly identifiable social systems like villages, it appears that Merton's theory could be applied to educational systems operating in them, for understanding adult learning orientations in terms of participation and motivation.

CHAPTER III

METHODOLOGY

The Research Setting

India was chosen for this study because of the emphasis India has given to adult nonformal education in rural development programs during the past three decades. Among the several Indian states considered economically backward, Bihar, Orissa, and West Bengal had a large percentage of rural poor. Several private voluntary and governmental agencies had initiated adult nonformal education programs for development of poor communities in these states. For these reasons these three states were chosen for this study.

The Research Design

The design of the study was exploratory. Reid and Smith (1989) state that, "research has an exploratory purpose when it is used to gain preliminary understanding of phenomena or to stimulate the development of concepts, hypotheses, and technology." According to Babbie (1989),

"exploratory studies are essential whenever a researcher is breaking new ground, and they can almost always yield new inputs into a topic for research. Exploratory studies are also a source of a grounded theory." Since this study aims at exploring the possibility of finding a model that can explain participation and motivation based on Merton's (1957) paradigm in sociology, exploratory design was considered appropriate.

The methodological approach the study adopted was basically quantitative but was supplemented by a qualitative approach. The rationale for this dual approach was based on Bolster's (1984) observation that, "a fundamental requirement of any inquiry (in sociology) is that people must be considered as both the creators and the products of the social situations in which they live...and people act on the basis of meanings events have for them." An effective way to meet this requirement was to follow a strategy that employed a quantitative approach supplemented by a qualitative approach. According to Vidich and Shaprio (1955), "such a combination will allow us to gain a more complex theoretical picture of the variables under study". Here, quantitative approach meant gathering of information relevant to the variables predetermined and measuring it in units suitable for

statistical treatment; and qualitative approach meant participant observation and unstructured interviews for the purpose of examining and describing social institutions and cultural events in the community.

The Population

The target population for this study was the adults from the economically and socially backward communities engaged in organized nonformal education projects at various centers operated by nongovernmental agencies conducting rural development programs in India. For obvious difficulties in sampling from such a vast population an experimentally accessible population was taken as the focus of this study. The experimentally accessible population was comprised of adults from economically and socially backward communities engaged in organized nonformal education projects operated by nongovernmental agencies engaged in rural development programs for at least seven years, in the states of Bihar, Orissa, and West Bengal in North India.

India, located in Southern Asia, is bordered by Pakistan to the northwest, China, Tibet, Nepal, and Bhutan to the north, Burma to the east, and the Indian ocean to the

southeast, south, and southwest. It has 22 states and 9 union territories. About 80% of the Indian population, which is about 800 million, live in rural areas. Hindus account for 83%, Muslims 11%, Christians 3%, Sikhs 2% and others 1%. Female population is about 46.7% of the total (Morgan, 1983). It is estimated that about 40% of the population live below the poverty line with most of them being rural people. Almost all of the cities of India have slums wherein live mostly the village poor who have migrated to the cities with a hope of making a living.

An integral part of the Hindu religion is an elaborate network of fixed social relationships that is known as the 'caste system'. The English word caste corresponds more or less to what is locally referred to as 'varna'; a sub-caste corresponds to 'jati' (Jayaraman, 1981). There are four varnas: Brahmin, Kshatriya, Vaishya, and Sudra. Traditionally, as Jayaraman states, castes are exclusive groups, distinguished from one another by name, rules of endogamy, and association with an occupation. Castes are birth status groups (Atal, 1968). A fifth category, that of 'untouchables', has been regarded as outside the varna system altogether. Dube (1958) states that caste divisions are regarded as divinely ordained and hierarchically graded. Traditionally, this fifth category

of people was required to stay outside the village and do the work that was polluting or ritually unclean. This inequity, according to Hindu doctrine was considered justified by the good and bad deeds done in one's former lives, which reward or punish the doer in this life (Strayer, 1989). Gandhi, who tried hard to remove this inequity, called them Harijans, meaning 'people of God'. The fifth group includes many sub-groups; the constitution of India categorized all of them under one title, 'scheduled castes'. Though untouchability has been legally abolished, the custom continues to be a part of the Hindu caste structure. Untouchability still persists very widely (Shah et al, 1980).

In the present study, Brahmins, Kshatriyas, and Vaishyas were put together under one category, 'upper castes'. The tribals and Harijans were treated as two distinct castes as they differed in their social life styles and occupations. All the others in between were grouped under the title, 'backward castes/class'.

The Sample

The sample was drawn from the experimentally accessible population using a multistage sampling design (Babbie, 89). The districts of the states of Bihar, Orissa, and West

Bengal were listed and a sample of one district from each state was taken. The sample of districts consisted of Ranchi district in Bihar, Bhubaneswar district in Orissa, and 24-Parganas district (including Calcutta slums) in west Bengal. Then, the adult nonformal education centers in each district were listed and a sample consisting of 10% of each group of centers was drawn. The adult learners at each center were listed and a sample of about 50% of the learners (a minimum of 10 and a maximum of 40) at each center was taken.

Since the study design was exploratory in nature, a sampling process of this nature was considered acceptable. Reid and Smith (1989) state that, "research done with largely exploratory purpose in mind allows considerable flexibility in method. Samples may be selected according to which sources of data will provide the most useful information most readily, and additional sources may be added to pursue leads."

The final sample consisted of 261 adult learners from 24 nonformal education centers in all the three districts. The sample of 261 adult learners in nonformal education centers was about 20% of the experimentally accessible population.

The district-wise breakup of this number is given in the Table 1.

Table 1. District wise distribution of subjects.

District	Number of NFE Centers	Number of learners in the sample
Ranchi district, Bihar	9	97
Bhubaneswar district, Orissa	6	55
24-Parganas	9	109
	-----	-----
Total:	24	261

The selected adult nonformal education centers were organized and managed by organizations supported either by private funding agencies or by the government or by both. Their main objective was to provide training considered necessary for rural adults in order to raise their income levels and social status. Training was provided free or at a nominal charge. All the learners were from communities living around the centers. A few centers had hostels where food and shelter were provided to students at a small charge. Class schedules and duration of

nonformal education programs varied from center to center. Learners included both men and women. Most of the learners were from economically and socially lower strata of people and represented almost all the major castes, occupations, and religions in the selected states.

Data Collection

At the selected nonformal education centers, learners who were identified for participation in this study were taken to separate rooms and four data collection instruments, one at a time, were administered to them. In the case of those who were functionally illiterate, the researcher interviewed them and completed the instruments for them. A letter introducing the study, its purpose, and the participants' right to discontinue participation if desired, was read (Appendix-II). The participants were also told that their responses would remain anonymous. Teachers and staff members of the center were not present at the time data collection instruments were administered to the participants.

Staff at each center provided the researcher with information about participants' class attendance.

Instrumentation

Instrumentation for this study had four parts:

1. Measurement of Motivation (Appendix-III)

This questionnaire had five open-ended questions. The questions were based on Knowle's (1978) paradigm on adult motivation that adult learners are:

- self directed,
- concerned with development/life transition,
- rich in experience,
- desire immediate application, and
- problem centered.

These questions were reviewed and judged as appropriate for the purpose they were constructed by three Indian scholars.

2. Measurement of Goal(NFE) Acceptance (Appendix-IV)

This measure had twenty four Likert-type items and the responses were recorded on a scale of 1-5. The items were developed on the basis of studies by Houle

(1961) and Burgess (1971) which showed that adults have reasons to participate in learning activities.

One of the implications of Houle and Burgess' paradigm is that, given freedom, adults will desire to take up learning activities in which they see a fulfillment of their reasons. In other words, the extent to which an adult learner desires or accepts a learning activity is related to the extent he/she sees it fulfilling his/her reasons. Burgess(1971) had classified the reasons he identified into the following seven categories:

- the desire to know,
- the desire to reach a personal goal,
- the desire to reach a social goal,
- the desire to reach a religious goal,
- the desire to escape undesirable situations,
- the desire to take part in an activity, and
- the desire to comply with formal requirements.

The original three categories of Houle(1961) are: the activity-oriented, the learning-oriented, and the goal-oriented. The first two of these three categories are already included in the above seven

reasons delineated by Burgess. Therefore, with the addition of the third category, the goal-oriented of Houle's set, we have eight categories of reasons for adult learning.

This instrument was constructed on the basis of these above eight factors. Three Likert-type items were developed for each factor making a total of twenty four items. The researcher compiled this list in consultation with 15 Indian scholars at Michigan State University who had the experience of interacting with rural adults of India. Subsequently, the list was judged by three Indian experts in rural development as representative of all the eight factors of Houle and Burgess.

3. Measurement of Means(NFE) Acceptance (Appendix-V)

This measure had eight Likert-type items which were developed on the basis of the following eight institutional factors responsible for student satisfaction suggested by Apps (1981):

- administrative procedures,
- structure (schedule of classes),

- support systems,
- curriculum rationale (rationale for what is taught),
- financial aid,
- teaching apparatus,
- faculty attitude (towards learners), and
- faculty development (abilities of the faculty).

Apps (1981) says, the list was based on his interviews with eighteen professors including Malcolm Knowles and Ralph Tyler, review of literature, and his own personal experience.

These questions were also reviewed and judged appropriate for the purpose they were constructed, by three Indian experts.

4. Personal Data (Appendix-VI)

This questionnaire required respondents to provide information on the selected personal variables. Respondents were asked to answer all the items except for Media Exposure. The researcher personally interviewed the respondents individually and completed this item for them. Media exposure was

determined on the basis of the time one spent on reading newspapers/periodicals, hearing radio news, and viewing television programs. The variable had four levels: Very poor, Poor, Good, and Excellent.

Validity of the instruments

Validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration (Babbie, 1990). There are three widely recognized types of validity; content, criterion, and construct (Reid, 1989). Construct validity as Babbie (1989) suggests, is based on the way a measure relates to other variables within a system of theoretical relationships. Since all the items on the first three instruments were based on certain well recognized theories as explained above, the instruments were considered validated.

The fourth questionnaire being a mere demographic and personal data collection instrument did not require validation.

Reliability

Reliability may be defined as the level of stability of the measuring device over time (Borg & Gall, 1989).

Reliability analysis was conducted on each of the above three instruments using Cronbach's alpha method.

For testing the reliability of the instrument Measurement of Motivation, individual scores of each respondent on all the five items on this measure were entered into the computer using the SPSS PC+ (version 3.0) program and Cronbach's alpha was computed.

The reliability of the instrument 'Measurement of Goal(NFE) Acceptance' was tested for reliability by entering into the computer the individual scores of each respondent on all the 24 items on this instrument.

Similarly, the instrument 'Measurement of Means(NFE) Acceptance' was tested for reliability by entering the individual scores of each respondent on all the 8 items on the instrument.

Reliability coefficients for the instruments are given in Table 2.

Table 2. Reliability coefficients:

Instrument	Alpha
Motivation measure :	.64
Goal(NFE) acceptance measure :	.74
Means(NFE) acceptance measure:	.74

The alpha value .64 for the motivation measure was somewhat low; as such, reliability of this measure was further investigated using test-retest procedure on a randomly chosen sample of 12 participants. A time gap of 30 days was allowed between the test and retest. The coefficient of correlation between test and retest scores was .81 and was significant at the .001 Alpha level. Reliability of the three measures used in this study were considered established on the basis of the above reliability tests.

In addition to establishing validity and reliability, the instruments were pretested by administering them to 25 adult students at the vocational training center, Mason, Michigan. A second pretest was conducted in India (Bihar). The purpose of these tests was to ensure that the questionnaires were clear, understandable, and

unambiguous. The purpose was fulfilled by these pretests. All the four instruments were translated in India, into Hindi, Oria, and Bengali languages. The average literacy level of the participants was considered for choosing an appropriate writing style in each language. The translations were done by professional experts in the areas of sociology and rural development.

The Variables

In this study, motivation and participation were used as dependent variables. The researcher in consultation with adult education experts working for rural development in India, selected the sociodemographic variables sex, age, marital status, caste, occupation, economic status, health, education, area, and media exposure as the independent variables. The variables, media exposure and health, not used in American studies were included in this study as the researcher and the Indian experts whom he consulted believed that these variables should be included in the sociodemographic variables as they very much related to the social and personal lives of the adult learners. These variables, their operational definitions, and levels of measurement are presented in Figure 7.

Variable name:	Operational definition:	Levels of measurement:	IV/DV*
Motivation	Mean Score	Interval	DV
Participation	Percent of days attended out of total number of school days.	Ratio	DV
Sex	1. Male 2. Female	Nominal	IV
Age	Number of years	Ratio	IV
Marital status	1. Unmarried 2. Married/divorced/ widowed	Nominal	IV
Caste	1. Harijan 2. Tribal 3. Backward caste/caste 4. Upper caste	Nominal	IV
Occupation	1. Laborer 2. Small scale farmer 3. Large scale farmer 4. Small scale business 5. Service	Nominal	IV
Economic Status	Value of property and annual income in rupees	Ratio	IV
Health	1. Excellent 2. Good 3. Poor	Ordinal	IV
Education	No. of years of formal education	Ratio	IV
Area of Residence	0. Urban area 1. Rural area	Nominal	IV

 Figure 7. Variables used in this study.

* DV: Dependent variable, IV: Independent variable.

Fig. 7. continued:

Variable name:	Operational definition:	Levels of measurement:	IV/DV*
Media Exposure	1. Very poor 2. Poor 3. Good 4. Excellent	Ordinal	IV
Goal (NFE) Acceptance	Mean score	Interval	IV
Means (NFE) Acceptance	Mean score	Interval	IV
Mother's ed.	No. of years of formal education	Ratio	IV
Father's ed.	No. of years of formal education	Ratio	IV

Figure 7. Variables used in the study.

* DV: Dependent variable, IV: Independent variable.

Scoring the Data

The completed questionnaires were given identification numbers. All four questionnaires completed by one individual received one number and were kept together. Scoring was done as follows:

1. Measurement of motivation (appendix-III)

This instrument had five open ended questions. A respondent could get a lowest score of 1 and a highest score of 5. To begin with, 10 questionnaires of each measure were scored independently by the researcher and another scorer trained by the researcher. No significant differences were found in their scores. As such, the researcher scored the rest of the questionnaires and mean scores were computed for each individual.

A mean score for a respondent was computed by adding all the five scores and dividing the sum by 5.

2. Measurement of Goal(NFE) Acceptance (Appendix IV)

This instrument had 24 Likert-type items. The lowest and the highest possible scores were $24 \times 5 = 120$, and $24 \times 1 = 24$. A mean score was calculated by dividing the sum of all the 24 scores by 24.

Using the scores checked by the respondents, mean scores were computed by using a calculator. However, mean scores were later computed on a computer also. The calculator computed means were used as a check for accuracy of data entered into the computer:

3. Measurement of Means(NFE) Acceptance (Appendix V).

This instrument had 8 Likert-type items. The lowest and the highest possible scores were $8 \times 5 = 40$, and $8 \times 1 = 8$. A mean score was calculated by dividing the sum of all the eight scores by 8.

Using the scores checked by the respondents, mean scores were computed by using a calculator. However, mean scores were later computed on a computer also. The calculator computed means were used as a check for accuracy of data entered into the computer.

Data from the four questionnaires were posted on the Transfer Sheet (Appendix-VII) and double checked for accuracy of the data entered. These sheets were then used for keying the data into a computer file using the SPSS PC+ (version 3.0) program.

Statistical Procedures Used

Descriptive statistics

Mean, mode, and Median were used as measures of central tendency. Standard Deviation and Standard Error were used as measures of dispersion for the quantitative data pertaining to variables measured as interval and ratio levels.

Correlations

To study linear associations between two variables, Pearson's coefficients of correlation were calculated. Such calculations were made only for the variables measured as ordinal, interval and ratio levels. The strength of association between two variables was determined on the basis of the descriptors proposed by Davis (1971) (Figure 8).

Coefficient(r)	Description
.70 or higher	Very strong association
.50 to .69	Substantial association
.30 to .49	Moderate association
.10 to .29	Low association
.01 to .09	Negligible association

Figure 8. Descriptors of correlations.

Hypothesis # 1 was tested using the multiple linear regression procedure at an alpha level of 0.05. Two regression models were constructed taking the 10 personal variables listed in the hypothesis as independent

variables and motivation and participation as the dependent variables.

The categorical variables, sex, caste, area of residence, marital status, health, and occupation were transformed into dummy variables before entering into the regression equations. Dichotomous variables such as sex can be used as independent variables if they are numerically coded (Glass and Hopkins, 1984). Ott (1988) suggests that, "the presence of dummy variables present no major problem for ascertaining the adequacy of the fit of a polynomial model. The important thing to remember is that when quantitative and dummy variables are included in the same regression model, by substituting any combination of 1s and 0s for dummy variables, we obtain a regression in the quantitative variables".

For each model an F-test of homogeneity of variances was performed as multiple regression analysis works best when the variables entered into the equation have homogeneity of variances. The results of F-tests are presented along with the regression analyses.

A correlation matrix for all the independent variables was calculated. It was noted that there were no

multicollinear variables among those entered into the regression models.

The variables were tested for normality.

The method used in the regression analysis is known as 'ENTER' in the SPSS PC+ statistical program. Under this method all the specified independent variables gain entry into the equation at one time.

The F value in the analysis of variance, a part of the results of regression, is a test of the hypothesis that $\text{Beta}(\text{sex}) = \text{Beta}(\text{age}) = \dots = 0$.

The T significance given for each variable in the equation is for the hypothesis that the Beta value in the population is zero.

Beta values are standardized regression coefficients or regression weights. Each Beta value represents the effect that a standard deviation in the corresponding independent variable would have on the standard deviation in the dependent variable.

R-Square is the portion of the variance in the dependent variable associated with the variance in the independent variables and indicates the explanatory power of the

regression model (Hedderson, 1987). The goodness of fit of the linear model is also indicated by the R-Square value.

The adjusted R is a measure of goodness of fit of the model in the population.

The Multiple R is the correlation between the dependent variable and the entire set of the independent variables used in the model.

Hypothesis # 2 was subjected to the analysis of variance procedure to test for equality of means of participation/motivation for all the four levels: G+M+, G+M-, G-M+, and G-M- of the variable 'response pattern'. Scheffe's multiple range test procedure was used to identify groups significantly different from others. For both the procedures the significant level was kept at 0.05 alpha. Barlett-Box F test was also performed for testing homogeneity of variances, an assumption needed for applying analysis of variance procedure.

Hypothesis # 3, 4, and 5 were tested using the cross tabulation procedure. A chi-square statistic was calculated to test independence of the variables.

Hypothesis #6 was verified using a qualitative approach. The researcher spent 20 days with two communities in the sample area collecting field notes. The field notes were analyzed and studied for drawing inferences which were then related to the hypothesis.

Qualitative Study Design

The qualitative or the field study focussed on investigation of social interaction and the cultural activities of three communities in Ranchi district in Bihar and 24-Parganas district in West Bengal. This was done by the researcher participating in the daily lives of the people, watching what was happening, listening to what was said, asking questions, and in fact, by collecting what ever data were available to throw light on the issues with which the study was concerned. As Mead (1977) stated, "every thing that happens will become data." The researcher looked for answers to questions like, "How does what is happening here compare with what happens in other places?" "How is culture passed on to the next generation?"

CHAPTER IV

DATA ANALYSIS

Introduction

This chapter presents the analyses of data obtained from the questionnaires and the results of statistical testing of all the six hypotheses. In so doing, the relevant data, the results of statistical analyses and the statistical interpretations are arranged in a logical sequence. The results of the analyses and statistical interpretations are organized around the hypotheses tested. The tables and figures contain the relevant information needed for interpretation of the test results. The entire analysis of data in this report has been done using the statistical program called SPSS PC+ version 3.0.

The chapter is divided into the following six sections:

1. Characteristics of the sample
2. Computed variables
3. Descriptive statistics
4. Statistical procedures for testing the hypotheses
5. Tests of hypotheses
6. Results of additional statistical analyses

Characteristics of the Sample

For better understanding of the analytical results of this study, certain demographic characteristics of the sample in terms of sex ratio, economic levels, caste system, regional groups etc. considered relevant for the study are presented in this section.

The sample, composed of 261 participants, was drawn from the Ranchi district of Bihar, the Bhubaneswar district of Orissa, and the 24-Parganas district (including the Calcutta region) of West Bengal. The distribution of participants by district is presented in Table 3.

Table 3. Distribution by district:

District/State	No. of participants	(%)
Ranchi/Bihar	97	(37.2)
Bhubaneswar/Orissa	55	(21.0)
24-Parganas/W.B.	109	(41.8)
Total	261	(100.0)

Women accounted for 30.7% and men for 69.3% of the distribution in the sample (Table 4).

Table 4. Distribution by sex:

Sex	Number of participants	(%)
Men	181	(69.3)
Women	80	(30.7)
Total	261	(100.0)

Hindu society, which constitutes about 80% of the Indian population, is highly caste-structured as explained in chapter III. Harijans and Tribals sometimes known as Untouchables, are at the low end of the line while the brahmins are at the upper end. In between are Kshatriayas, Vaishyas, and Sudras. In this study, Brahmins, Kshatriyas, and Vaishyas and their sub-castes were grouped together under one category 'upper caste.' Sudras with all their sub-castes were categorized as 'backward castes.' Even though Muslims do not come under the Hindu caste system, on the basis of local understanding they were included in the backward castes/class category. All the tribal communities, irrespective of their religion, were put under the category 'tribals.' Table 5 gives the caste distribution of the participants. The highest number of participants

(45.2%) were from the upper castes and the lowest (6.9%) from Harijans.

Table 5. Distribution by caste:

Caste	Number of participants	(%)

Harijans	18	(6.9)
Tribals	74	(28.4)
Backward caste	51	(19.5)
Upper caste	118	(45.2)
	-----	-----
Total	261	(100.0)

The occupational patterns of the participants in the sample are given in Table 6.

Table 6. Distribution by occupation:

Occupation	Number of participants	(%)

Daily-wage laborers	22	(8.4)
Small scale farming	81	(31.0)
Large scale farming	8	(3.1)
Small scale business	40	(15.3)
Service	110	(42.2)
	-----	-----
Total	261	(100.0)

Daily laborers included in the sample were mostly illiterates and lived on wages they earned on a daily basis. Most of them could find employment only for about 8 months in a year. During the remaining period of 4 months, known as the 'off season,' they either migrated to nearby cities or lived on savings, on charity, on loans or on a combination of these.

The daily wage for men ranged from Indian rupees 8.00 to 15.00 depending on the type of work they did and the employer (One US dollar = Rs. 16.40 in April 1989). Wages for women were 50 to 80 percent of men's wages depending on the nature of the work done and the employer.

Small farmers owned agricultural lands of 0.5 acres to 3.0 acres. Most of those lands were rain fed or had inadequate irrigation facilities and therefore were generally cultivatable only once a year. Large farmers included in the sample were not from the landlords communities but were those who had lands ranging from 4 acres to 10 acres in area. The business class in the sample were those who worked as hawkers, grocery shop owners, and other small scale businesses. The service holders were those who worked for the government of India, for commercial agencies, for religious organizations, and

for agencies of the state government. Their average salary was estimated at Rs. 900.00 a month.

It was supposed in this study that high school graduation would take 12 years of formal education, college graduation 14 years, and master's degree 16 years. Education levels of the subjects varied. Illiterates accounted for 4.2% and college graduates 20.3% of the sample. Distribution by formal education is given in Table 7.

Table 7. Distribution by formal education:

Ed. level	Frequency	(%)
Illiterates	11	(4.2)
Below 8 grade	47	(18.0)
8 - 12 grade	146	(56.0)
College graduates	53	(20.3)
Graduates (Masters level)	4	(1.5)
Totals	261	(100.0)

The training programs covered by this study were classified under 8 different categories. These categories are listed in Table 8. In the sample, the

highest number of participants (24.2%) were in typing and shorthand training programs. The least (3.1%) were in literacy programs.

Table 8. Distribution by type of training:

Type of NFE	Frequency	(%)

Literacy	8	(3.1)
Carpentry	9	(3.4)
Driving	16	(6.1)
Tailoring & Embroidery	29	(11.1)
Electrical jobs	34	(13.0)
Handicraft	47	(18.0)
Mechanical works	55	(21.1)
Typing and short-hand etc.	63	(24.2)
	-----	-----
Totals	261	(100.0)

An age breakdown of the sample is given in Table 9. A majority of the participants (72%) were in the interval 20-25 years of age; only 28% were 26 years of age, or older. This indicates that fewer adults take up learning projects after attaining the age of 25 years, which may be their culturally based attitude towards adult learning.

Table 9. Distribution by age group:

Age group	No.	(%)
Between 20 - 25	188	(72.0)
Between 26 - 50	73	(28.0)
Total	261	(100.0)

Computed Variables

The following variables were computed for the purpose of testing the hypotheses:

Response Pattern

Response pattern was computed using the variables 'goal(NFE) acceptance' and 'means(NFE) acceptance' in different combinations. Scores above and below the mean (3.26) of 'goal(NFE) acceptance' were denoted by the symbols G+ and G- respectively. Similarly, the scores above and below the mean (3.85) of 'means(NFE) acceptance' were denoted by the symbols M+ and M- respectively. A response pattern was a combination of G+, G-, M+, and M- taken two at a time. Thus four response patterns were computed as shown in Figure 9.

Response pattern	Computation formulae:
(G+M+)	Goal(NFE) acceptance scores ≥ 3.26 and Means(NFE) acceptance scores ≥ 3.85 .
(G+M-)	Goal(NFE) acceptance scores ≥ 3.26 and Means(NFE) acceptance scores < 3.85 .
(G-M+)	Goal(NFE) acceptance scores < 3.26 and Means(NFE) acceptance scores ≥ 3.85 .
(G-M-)	Goal(NFE) acceptance scores < 3.26 and Means(NFE) acceptance scores < 3.85 .

Figure 9. Computation of response patterns:

Participation levels

Participation was categorized into three groups or levels; high participation, medium participation, and low participation. These levels were computed using the following intervals:

Low level: Scores < 74.0

Medium level: Scores ≥ 74.0 and < 90.0

High level: Scores ≥ 90.0

Scores of 74 and 90 were scores 10% below and 10% above the participation mean (82). Based on the discussions

with some nonformal educators in India, it was assumed that 10% below the mean could be considered as low and 10% above the mean as high participation.

Motivation levels

Motivation was categorized into three levels: high, medium and low. The rationale and the procedure used to compute these levels were exactly the same as those used for computing participation levels. The intervals used in this computation were as follows:

Low level: Scores < 2.91

Medium level: Scores ≥ 2.91 and < 3.56

High level: Scores ≥ 3.56

Dummy variables in the regression equations

All the dichotomous variables such as sex, are numerically coded (0,1) for use as independent variables in the regression equations. These variables which may be called dummy variables, are given in Figure 10.

Variable -----	Code-0 -----	Code-1 -----
Sex	Male	Female
Caste	Harijans and Tribals	Backward and upper castes
Marital status	Unmarried	Married
Occupation	Laborers and small farmers	Others
Health	Good health	Poor health
Area	Urban	Rural

Figure 10. Dummy variables in the regression analysis:

Descriptive Statistics

Table 10 gives the basic statistics for the variables measured in ratio levels listed in Figure 7. These statistics indicate that except for economic status all the variables closely conformed to normality. The standard deviation for the variable economic status is 161,800 which reflects the nature of variation in the distribution of economic levels of the participants. The large standard deviation indicates that the distribution has scores which are a long way from the mean and suggests large economic disparities among participants.

Table 10. Statistics for the variables:

Variable	Min.	Max.	Mean	Median	Mode	S.D.	Skewness
Participa.	40.0	99.0	82.0	85.0	90.0	12.0	-0.95
Motivation	1.6	4.6	3.2	3.2	3.0	0.6	-0.13
Age	20.0	49.0	24.2	23.0	20.0	4.4	1.79
Education	00.0	17.0	10.1	10.0	10.0	3.3	-1.13
Economic status(Rs.)	5.0 x1000	190.0 x1000	75.9 x1000	25.0 x1000	10.0 x1000	161.8 x1000	6.99
Mother's education	00.0	14.0	4.9	5.0	00.0	4.1	0.09
Father's education	00.0	22.0	7.4	9.0	10.0	5.0	-0.19
Gaol acceptance	1.8	4.7	3.3	3.3	2.9	0.6	0.15
Means acceptance	1.6	5.0	3.8	4.0	4.3	0.7	-0.78

Pearson's correlational matrix for all the variables other than categorical variables used in the data analyses is given in Figure 11.

VARIABLES	Participation	Motivation	Age	Education	Economic Status	Media Exposure	Mother's Education	Father's Education	Goal Acceptance	Means Acceptance
Participation	1.00	0.37 *	-0.05	0.04	-0.09	0.03	-0.03	-0.02	0.25 *	0.30 *
Motivation		1.00	0.07	0.21 *	0.01	0.25 *	0.06	0.12	0.49 *	0.43 *
Age			1.00	0.16 *	0.11	0.10	0.04	0.05	-0.15 *	-0.08
Education				1.00	0.20 *	0.40 *	0.40 *	0.45	-0.02	0.00
Economic Status					1.00	0.17 *	0.30 *	0.35 *	0.03	0.00
Media Exposure						1.00	0.40 *	0.43 *	0.17	0.06
Mother's Education							1.00	0.80 *	0.08	0.04
Father's Education								1.00	0.04	0.10
Goal Acceptance									1.00	0.32 *
Means Acceptance										1.00

* Significant: $p < 0.01$

Figure 11: Pearson's correlation matrix for the variables

Most of the correlation coefficients in Figure 11 are below 0.45. As Borg and Gall (1990) has suggested, correlations in the range of 0.2 to 0.4 may be all that should be expected for relationships between variables studied in educational research; the reason being that many factors influence most of the behavioral patterns and personal characteristics.

For interpreting the correlations in Figure 11, Davis' (1971) descriptors given in Figure 8 are followed.

The correlation between participation and mean(NFE) acceptance ($r=.30$) indicates moderate association; but the association between participation and goal(NFE) acceptance is low as indicated by the low correlation ($r=.25$). This observation suggests that there is some possibility of adult learner's participation being associated with his/her means(NFE) acceptance while no association with goal(NFE) acceptance may be expected.

The correlation between participation and formal education (0.04) is negligible. This suggests that formal education has no relationship with adult participation.

The association between motivation and participation is moderate ($r=.37$) indicating that a variance in motivation predicts only 1.4% ($r^2=0.14$) of variance in participation. This also suggests that motivation is not a good predictor of participation in rural adult learning situations, which in turn suggests that participation for the most part may depend on non-psychological factors.

Means and standard deviations of participation and motivation by economic level are given in Table 11.

Table 11. Participation and motivation by economic levels:

Economic level	Participation		Motivation	
	Mean	S.D.	Mean	S.D.

Annual income plus value of property:				
I. Less than Rs. 10,000 (\$610)	79.6	11.6	3.2	0.69
II. Between Rs. 10,000 - 50,000 (\$610 - 3,500)	83.1	11.1	3.3	0.57
III. Between Rs. 50,000 100,000 (\$3,500-6,100)	82.6	10.2	3.4	0.60
IV. Above Rs. 100,000 (\$6,100)	79.1	16.3	3.1	0.69
	-----	-----	-----	-----
Total	81.7	12.1	3.3	0.62

The mean values noted in Table 11 suggest that participation of the economically very poor participants (79.6) and that of the comparatively rich (79.1) are almost the same. Participation level of the middle groups is some what higher (83.1) than other economic groups. However, the motivation means of different economic groups (3.2, 3.3, 3.4, and 3.1) are almost equal. This suggests that while motivation may not be affected by adult learner's economic status, participation might.

Table 12 gives the mean and standard deviation for participation and motivation by marital status.

Table 12. Participation and motivation means for unmarried and married participants:

Marital status	Participation		Motivation	
	Mean	S.D.	Mean	S.D.
Unmarried	81.9	12.0	3.2	0.63
Married	81.3	12.3	3.4	0.55

From Table 12 it is noted that unmarried participants' motivation (3.2) is slightly lower than that of married

participants (3.4); but their participation means are almost equal (81.9 and 81.3). The variation in participation (S.D = 12.0) is almost the same for both the married and unmarried participants. In the case of motivation, the variance is noticeable; the standard deviation in motivation for unmarried participants is .63 and that for married is .55.

Table 13 presents the mean and standard deviation for participation and motivation for men and women, and Table 14 for urban and rural participants.

Table 13. Participation and motivation means for urban and rural participants by sex:

Category	Participation		Motivation	
	Mean	S.D.	Mean	S.D.
Men	80.6	12.0	3.2	0.62
Urban men	77.8	15.0	3.1	0.72
Rural men	82.4	9.0	3.2	0.54
Women	84.0	12.3	3.4	0.61
Urban women	83.2	12.3	3.4	0.58
Rural women	87.2	11.9	3.1	0.71

Table 14. Participation and motivation means for urban and rural participants:

Category	Count	Education		Participation		Motivation	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Urban	136	11.3	2.5	80.4	14.0	3.3	0.67
Rural	125	8.8	3.6	83.1	9.5	3.2	0.56
Total	261	10.1	3.3	81.7	12.1	3.2	0.62

From Tables 13 and 14 it is noted that rural adults' participation (83.1) is higher than that of urban adults. Within the rural group, the participation of rural women (87.2) is higher than that of rural men (82.4).

Within the urban group, the participation of urban women (83.2) is higher than that of urban men (77.8). Between the rural and urban participants, the rural women and men had higher participation means (87.2; 82.4) than those of their urban counterparts (83.2; 77.8). One possible reason for this could be that, because fewer learning alternatives are available for rural adults than what is available for urban adults, the rural adults tend to stick to the available training programs.

Table 15 gives the means and standard deviations of participation and motivation for men and women of Bihar, Orissa, and West Bengal states.

Table 15. Means for education, participation, and motivation, by sex and by state:

Participants Count		Education		Participation		Motivation	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Bihar	97	8.8	3.9	80.3	11.2	3.1	0.55
Men	71	8.7	3.7	80.5	10.2	3.2	0.51
Women	26	9.0	4.7	79.8	13.8	3.0	0.63
Orissa	55	10.0	2.4	84.3	10.3	3.6	0.60
Men	41	9.8	2.5	84.5	9.1	3.6	0.60
Women	14	10.7	2.1	83.9	13.6	3.4	0.58
West Bengal	109	11.3	2.6	81.5	13.6	3.2	0.64
Men	69	11.3	2.6	78.4	14.4	2.9	0.60
Women	40	11.8	2.7	86.8	10.1	3.6	0.50
Total	261	10.1	3.3	81.7	12.1	3.2	0.62
Men	181	9.8	3.1	80.6	11.9	3.2	0.6
Women	80	10.7	3.6	84.0	12.3	3.6	0.6

Bihar adult learners are at the bottom of the list in terms of education, participation, and motivation (Table 15).

Table 16 contains means and standard deviations of participation and motivation by type of nonformal education program.

Table 16. Participation and motivation means by type of nonformal education programs:

Participants	Count	Education		Participation		Motivation	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Carpentry	9	7.9	3.3	75.3	12.6	3.0	0.4
Driving	16	9.1	2.7	77.7	9.1	3.7	0.6
Elec. works	34	11.4	2.5	82.8	12.1	3.1	0.5
Handicrafts	47	9.7	3.1	81.8	15.5	3.0	0.7
Literacy	8	0.0	0.0	70.1	4.2	2.9	0.3
Mechani. jobs	55	9.8	1.2	83.0	8.1	3.1	0.6
Typing & shorthand	63	10.1	3.3	82.5	11.3	3.3	0.6
Tailoring	29	13.3	1.4	83.1	15.1	3.6	0.6
Total	261	10.1	3.3	81.7	12.1	3.2	0.6

From Table 16 it is seen that both participation and motivation levels are the lowest for adult learners in literacy programs. All the participants in this program are from rural areas and most of them belonged to the lowest economic category. Tailoring, mechanical, and

electrical training programs have higher participation and motivation levels when compared with other types of training.

Table 17 presents the mean and the standard deviation of participation and motivation for each occupational group of participants.

Table 17. Participation and motivation means for different occupational groups:

Participants	Count	Participation		Motivation	
		Mean	S.D.	Mean	S.D.
Labor/min.wage	22	80.4	13.5	3.5	0.7
Small farming	81	83.3	10.0	3.2	0.5
Large farming	8	81.4	13.4	3.0	0.7
Small business	40	79.0	14.8	3.3	0.6
Service	110	81.7	12.1	3.3	0.6
	-----	----	----	---	----
Total	261	81.7	12.1	3.2	0.6

From Table 17 it is seen that the participation of the laborers group (80.4) is lower and their motivation (3.5) is higher compared to most other occupational groups. The small farmers group has higher participation.

Means and standard deviations of participation and motivation, by caste are given in Table 18.

Table 18. Participation and motivation means by caste:

Participants	Count	Education		Participation		Motivation	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
Harijans	18	9.5	1.7	82.4	11.4	3.3	0.6
Tribals	74	8.2	3.8	81.8	11.4	3.2	0.6
Backward ca.	51	10.3	3.1	80.5	10.7	3.1	0.6
Upper caste	118	11.3	2.5	82.0	13.3	3.3	0.7
	---	----	---	----	----	---	----
Total	261	10.1	3.3	81.7	12.1	3.2	0.6

Participation and motivation slightly varied by caste. The means for these two variables are high for Harijans and upper caste groups compared to Tribals and backward castes (Table 18). Mean education of tribal participants is the lowest (8.2) in the sample.

Table 19 presents the mean and standard deviation of participation and motivation for each educational group.

Table 19. Participation and motivation means for different educational levels:

Education levels	Count	Participation		Motivation	
		Mean	S.D.	Mean	S.D.
Illiterates	11	74.4	8.1	2.8	.39
Below 8 grade	47	83.1	11.8	3.1	.67
8 - 12 grade	146	81.5	12.2	3.2	.59
College grads. (B.A/B.Sc/B.Com)	53	81.6	12.6	3.4	.62
Masters level (M.A/M.Sc/M.Com)	4	93.3	5.0	4.0	.50
	---	----	---	---	----
Total	261	81.7	12.1	3.2	.62

From Table 19 it is noted that illiterate participants have lower participation and motivation than others. Those with higher education appear to have higher motivation, but the correlation between these two variables ($r = 0.2$; sig. $p < 0.01$) (Figure 11), though statistically significant, may not be practically significant. The group 'below 8 grade' seems to have higher participation than 'college graduates'. These observations suggest that learners from the illiterate group tend to be less involved with learning compared to the educated.

Statistical Procedures for Testing Hypotheses

Statistical procedures used for testing hypotheses are described in chapter III; A few key steps are noted here.

Hypothesis # 1 was tested using a multiple linear regression procedure at an alpha level of 0.05. Two regression models, one with participation as the dependent variable and the other with motivation as the dependent variable, were constructed taking all the 10 sociodemographic variables as independent variables.

For each model, an F-test of homogeneity of variances was performed. The F value in the analysis of variance, a part of the results of regression, is a test of the hypothesis that $\text{Beta}(\text{sex}) = \text{Beta}(\text{age}) = \dots = 0$.

The T significance given for each variable in the equation is for the hypothesis that the Beta value in the population is zero.

R-Square is the portion of the variance in the dependent variable associated with the variance in the independent variables, and indicates the explanatory power of the

regression model (Hedderson, 1987). The adjusted R-Square is a measure of goodness of fit of the model in the population. Betas are standardized values; they can be used for comparing relative importance of different independent variables.

The Multiple R is the correlation between the dependent variable and the entire set of the independent variables used in the model.

Hypothesis # 2 was subjected to the analysis of variance procedure to test for equality of means of participation and motivation for all the four levels: G+M+, G+M-, G-M+, and G-M- of the variable 'response pattern'. Scheffe's multiple range test procedure was used to identify groups significantly different from others. For both the procedures, the significance level was kept at 0.05. The Barlett-Box F test was also performed for testing homogeneity of variances, an assumption needed for applying the analysis of variance procedure.

Hypotheses # 3, 4, and 5 were tested using a cross tabulation procedure. A chi-square statistic was calculated to test independence of the variables.

Hypothesis #6 was verified using a qualitative approach. The researcher spent three weeks with three different communities. Field notes were analyzed and studied for drawing inferences which were then related to the hypothesis.

Tests of Hypotheses

Hypothesis # 1

Hypothesis #1 states that there is a linear relationship between participation/motivation and the sociodemographic variables, age, sex, caste, education, area of residence, marital status, economic level, media exposure, health, and occupation.

Null hypothesis: $\text{Beta}(\text{age}) = \text{Beta}(\text{sex}) = \dots = 0.$

Taking participation and motivation as dependent variables and the sociodemographic variables as independent variables, the hypothesis was subjected to a least squares multiple regression procedure. The results are shown in Tables 20 and 21.

Table 20. Results of multiple regression with participation as the dependent variable:
(Equation Number 1)

Multiple R	.2634	R Square	.0694		
Adjusted R Square	.0322	Standard Error	11.9237		
F =	1.864	Signif. F =	.050		
Variable	B	SE B	Beta	T	Sig T
Area of resi.	5.5433	2.2165	.2289	2.501	.0130
Health	.7301	2.4229	.0190	.301	.7634
Marital status	-2.5185	1.9864	-.0871	-1.268	.2060
Eco.status	-5.3579	4.9864	-.0715	-1.075	.2836
Education	.3208	.2610	.0874	1.229	.2203
Age	.0239	.1862	.0086	.128	.8982
Sex	5.8788	1.8488	.2241	3.180	.0017
Media exposure	.4312	.8263	.0390	.522	.6023
Caste	.8572	1.9179	.0338	.447	.6553
Occupation	-.7588	2.0093	-.0307	-.378	.7060
(Constant)	72.9795	5.8879		12.395	.0000

It is noted from Table 20 that the value 1.864 of the test statistic F is significant at $p < 0.05$. Therefore, the null hypothesis that $\text{Beta}(\text{area}) = \text{Beta}(\text{Marital}) = \dots = 0$ or that no linear relationship exists between participation, the dependent variable, and the independent variables is rejected in favor of the alternative hypothesis that a linear relationship does exist with $p < 0.05$.

The R-Square value 0.0694 suggests that the goodness of fit of a linear model is rather weak. The adjusted R of

square 0.0322, a measure of goodness of fit of the linear model in the population, is also low indicating a weak fit.

The R-Square value of 0.0694 suggests that only 6.90% of the variance in participation is predictable from a combination of all the 10 independent variables in the equation.

In equation # 1, the beta value 0.2289 of area of residence is significant with $p < 0.0130$ and 0.2241 of sex is significant with $p < 0.005$. The beta values of marital status, economic status, and education are significant only with $p < 0.300$. These results indicate that among the above set of variables, area of residence appears to be the best predictor of participation. Rural adults coded 1 under the variable 'area' appear to have higher motivation than the urban adults (coded 0) as indicated by the positive beta value. Also, the participation mean for rural adults (83.1) is higher than that of urban adults (80.4) as shown in Table 14 indicating higher motivation for rural participants, as above.

Sex appears to be the next best predictor of participation; women's participation (coded 1) appears to be higher than men's participation (coded 0) as suggested by the positive beta value 0.2241. This observation concurs with the observation that the participation mean

for men (80.6) is lower than the mean for women (84.0) as shown in Table 13.

Impact of education on an individual's participation level is very small (Beta = .0874) and statistically insignificant ($p = 0.22$). This finding indicates that there is no difference in participation based on one's level of education. Beta for economic status is -0.0715 and is statistically insignificant ($p = 0.28$), suggesting that no relationship can be expected between these variables.

Table 21. Results of multiple regression with motivation as the dependent variable: (Equation Number 2).

Multiple R	.3575	R Square	.1278		
Adjusted R Square	.0929	Standard Error	.5916		
F = 3.663		Signif. F = .0001			
Variable	B	SE B	Beta	T	Sig T
Area of resi.	.0936	.1100	.0754	.851	.3955
Health	-.0950	.1202	-.0481	-.790	.4303
Marital status	.2109	.0986	.1423	2.140	.0333
Eco.status	-7.8672	2.4742	-.0205	-.318	.7508
Education	.0368	.0129	.1957	2.844	.0048
Age	2.9539	9.2404	.0209	.320	.7495
Sex	.0723	.0917	.0538	.788	.4315
Media exposure	.1471	.0410	.2596	3.587	.0004
Caste	-.0674	.0952	-.0519	-.708	.4794
Occupation	-.1116	.0997	-.0880	-1.120	.2640
(Constant)	2.39356	.29216		8.193	.0000

From Table 21 it is noted that the value 3.663 of the test statistic F is significant at $p < 0.0001$. Therefore, the null hypothesis that $\text{Beta}(\text{area}) = \text{Beta}(\text{Marital}) = \dots = 0$ or that no linear relationship exists between the dependent variable motivation and the set of independent variables is rejected in favor of the alternative hypothesis that a linear relationship exists with $p < 0.0001$.

The sample R-Square value of 0.1278 suggests that the goodness of fit of the linear model for motivation as the dependent variable, is rather weak but slightly stronger than what it was with participation as the dependent variable, shown in Table 20. The adjusted R-square value 0.0929 suggests that the goodness of fit of the linear model in the population with motivation as the dependent variable though not very strong, is higher in strength than what it was with participation as the dependent variable.

The R-Square value 0.1278 suggests that 12.8% of variance in motivation may be explained by the 10 independent variables taken together.

In the equation #2 (Table 21), the beta value 0.1423 of marital status is significant with $p < 0.05$; beta value

of 0.1957 of education is significant with $p < 0.005$ and 0.2596 of media exposure is significant with $p < 0.0005$. These results suggest that media exposure, education, and marital status impact adult motivation more than the other variables in the equation. It appears, married adults (coded 1) have higher motivation than unmarried adults (code 0) as indicated by the positive beta value 0.1423. The positive beta value 0.1957 for education suggests that adults with higher education appear to have slightly higher motivation than those having comparatively lower education. This concurs with the motivation means for different education levels given in Table 19. Media exposure seems to impact motivation more than any other variable in the equation; higher exposure appears to be related to higher motivation as indicated by the positive beta value 0.2596.

Media exposure, education, and marital status which have high statistical significance in the prediction equation for motivation have no statistical significance in the prediction equation for participation.

These results suggest the possibility that the variables which impact participation may not impact motivation.

Hypothesis # 2

Hypothesis #2 states that adult learners differ in their participation and motivation with respect to their response patterns G+M+, G+M-, G-M+, and G-M-.

Analysis of variance (ANOVA) procedure was used to test the null hypothesis that $\mu(G+M+) = \mu(G+M-) = \mu(G-M+) = \mu(G-M-)$. The results are given in Tables 22 and 23.

Table 22. Analysis of variance for participation by response pattern:

Source	df.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between groups	3	4603.128	1534.376	11.739	0.0000
Within groups	257	33590.872	130.704		
Total	260	38194.000			

Barlett-Box F = 5.276, p <0.001

Table 23. Participation means for response patterns:

Group	No.	Mean	S. Dev.	Standard Error
(G+M+)	87	84.94	9.7	1.04
(G+M-)	40	80.95	10.4	1.65
(G-M+)	66	84.68	10.3	1.26
(G-M-)	68	74.97	14.7	1.78
Total	261	81.67	12.1	0.75

The Scheffe a priori comparison indicated that the response pattern G-M- significantly differed from patterns G+M+ and G-M+ at an alpha value of 0.05.

Since the F value 11.739 (Table 22) is significant at $p < 0.0000$, the null hypothesis that $\mu(G+M+)=\mu(G+M-)=\mu(G-M+)=\mu(G-M-)=0$ is rejected with $p < 0.0000$.

It is therefore unlikely that adult learners of different response patterns have the same participation mean. As such, the hypothesis that adult learners differ in participation with respect to their response patterns is retained with $p < 0.0000$.

The mean 84.94 ± 1.04 of group G+M+ is the highest and the mean 74.97 ± 1.78 of the group G-M- is the lowest which is also below the average mean 81.67 ± 0.75 (Table 23). These means also indicate that adult learners with response patterns G+M+, G-M-, and G+M- differ in terms of participation levels. The means of the G-M+ and G+M+ groups (84.94 and 84.68) are almost equal and are higher than those of other groups. It appears, the factor M+ which is common to these two groups may be responsible for this equal and higher participation.

Table 24. Analysis of variance for motivation by response pattern:

Source	df.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between groups	3	23.71	7.90	26.51	0000
Within groups	257	76.62	0.30		
Total	260	100.34			

Barlett-Box = 5.072, $p < 0.005$

Table 25. Motivation means for response patterns:

Group	No.	Mean	S.Dev.	Standard Error
(G+M+)	87	3.62	.41	0.04
(G+M-)	40	3.22	.66	0.10
(G-M+)	66	3.16	.59	0.07
(G-M-)	68	2.84	.57	0.07
Total	261	3.24	.62	0.04

The Scheffe a priori comparison indicated a statistically significant difference between G-M- and the other three response patterns; between G-M+ and G-M-; and between G+M- and G+M+ groups.

The F value 26.51 is significant at $p < 0.0000$.

Therefore, the null hypothesis that $\mu(G+M+) = \mu(G+M-) = \mu(G-M+) = \mu(G-M-) = 0$ is rejected with $p < 0.0000$. It is therefore unlikely that adult learners of different response patterns have the same motivation mean.

Therefore, the hypothesis that adult learners differ in motivation with respect to their response patterns is retained with $p < 0.0000$.

The mean 3.62 ± 0.04 of group G+M+ is the highest and the mean 2.84 ± 0.07 of the group G-M- is the lowest and is also below the average mean 3.24 ± 0.04 (Table 25).

These differences though numerically small, are considered important in view of the very small standard errors. These observations suggest that learners with different response patterns may have different motivation levels.

Hypotheses # 3, 4, and 5

Hypothesis # 3(a) states that high level participation has correspondence with response pattern G+M+.

Hypothesis # 3(b) states that high level motivation has correspondence with response pattern G+M+.

Hypothesis # 4(a) states that medium level participation has correspondence with response patterns G+M- and G-M+.

Hypothesis # 4(b) states that medium level motivation has correspondence with response patterns G+M- and G-M+.

Hypothesis # 5(a) states that low level participation has correspondence with response pattern G-M-.

Hypothesis # 5(b) states that low level motivation has correspondence with response pattern G-M-.

Cross tabulation and Chi-square test procedures were applied to test these hypotheses. The results of these procedures are presented in Tables 26 and 27. Table 26 has the results of crosstabulation of participation by response pattern and Table 27 of motivation by response pattern.

In these tables, the first entry in each cell is the number of cases or frequency; the second entry is the row percentage of that frequency; and the third entry is the column percentage. Row percentages indicate the distribution of response patterns for low, medium, and high participation/motivation. Column percentages

indicate the distribution of participation/motivation levels for each of the response patterns.

Table 26. Results of cross tabulation: participation levels by response pattern:

Count Row Pct Col Pct	(G+M+)	(G+ M-)	(G-M+)	(G-M-)	Row Total
Low Participa.	11 17.7 12.6	11 17.7 27.5	10 16.1 15.2	30 48.4 44.1	62 23.8
Medium Participa.	52 36.9 59.8	24 17.0 60.0	37 26.2 56.1	28 19.9 41.2	141 54.0
High Participa.	24 41.4 27.6	5 8.6 12.5	19 32.8 28.8	10 17.2 14.7	58 22.2
Column Total	87 33.3	40 15.3	66 25.3	68 26.1	261 100.0

Chi-Square	D.F.	Significance
27.44508	6	.0001

In Table 26, the Chi-Square value 27.445 significant with $p < 0.0001$ indicates that the two variables, participation and response pattern, are not independent of each other.

Table 27. Results of cross tabulation: motivation by response pattern:

Count Row Pct Col Pct	(G+M+)	(G+ M-)	(G-M+)	(G-M-)	Row Total
Low Motivation	2 2.8 2.3	11 15.3 27.5	21 29.2 31.8	38 52.8 55.9	72 27.6
Medium Motivation	29 31.5 33.3	17 18.5 42.5	24 26.1 36.4	22 23.9 32.4	92 35.2
High Motivation	56 57.7 64.4	12 12.4 30.0	21 21.6 31.8	8 8.2 11.8	97 37.2
Column Tot. and pct.	87 33.3	40 15.3	66 25.3	68 26.1	261 100.0

Chi-Square	D.F.	Significance
71.39174	6	.0000

In Table 27 the Chi-Square value 71.39 with $p < 0.0001$ indicates that the two variables, motivation and response pattern, are not independent of each other.

Hypothesis #3(a)

It is noted from the high participation row in Table 26 that 41.4% of all the 58 high participation participants are from the G+M+ response pattern group, while the

percentages of those under the other three response patterns are 8.6, 32.8, and 17.2 only. From the column G+M+, it is noted that the highest percent (59.8%) of adult learners are medium level participants and only the next highest percent (27.6) are the high level participants.

These results indicate that the largest percentage of adults with high participation belong to G+M+ group; but most adults with the response pattern G+M+ had a medium level of participation.

Taken together, the medium and high participation groups account for 97.4% of all the 87 participants in column G+M+, suggesting that the group G+M+ has a high degree of correspondence with this combined group.

From the table of means (Table 23) it is seen that the participation of the group G+M+ (84.94 ± 9.7) is higher than the means of the other three groups, which suggests correspondence between group G+M+ and higher participation.

The above results provide some evidence in support of the hypothesis # 3(a) that high participation has

correspondence with the response pattern G+M+. However, there appears a strong evidence of correspondence between the response pattern G+M+ and a combination of medium and high level participants.

Hypothesis 3(b)

From the high motivation row in Table 27, it is noted that the highest number (57.7%) of the 97 high motivation participants are from the G+M+ group. Also, looking at the column G+M+, it is noted that the highest percent (64.4%) of all the 87 learners of the G+M+ response pattern have high level motivation.

Also, from the means table (Table 25) it is seen that the group G+M+ has the highest mean (3.62).

These results indicate that most of the high participants belong to G+M+ group. Therefore, the hypothesis # 3(b) that high motivation has correspondence with the response pattern G+M+ is retained with $p < 0.0000$.

Hypothesis # 4(a)

In Table 26, looking at the column G+M- which gives the distribution of all the 40 participants of G+M- group

participation levels, it is observed that the highest percent (60.0%) are medium level participants. In the column G-M+, out of the 66 participants of the group G-M+, 56.1% are medium level participants, 15.2% low participants, and 28.8% of high participants.

Looking at the 'medium participation' row (Table 26), it is observed that the combined percent of groups G+M- and G-M+ is 43.2, which is higher than the percentages of the other two groups. Also, the participation means (Table 23) of groups G+M- and G-M+ being 80.95 and 84.68 are between the highest (84.94) and the lowest (74.97).

These results indicate that the response patterns G+M- and G-M+ are associated ($p < .0000$) with medium level motivation. Therefore, the hypothesis # 4(a) that there is an association between medium level participation and the response patterns G+M- and G-M+ is retained with $p = 0.0000$.

Hypothesis # 4(b)

From Table 27 it is noted that of the 40 participants of G+M- group across motivation levels, the highest percent of participants (42.5%) have medium level motivation. In

the column G-M+ also, out of the 66 participants of the group G-M+ the highest percent (36.4%) of participants have medium level motivation. Looking at the 'medium motivation' row (Table 27), it is observed that the combined percent of groups G+M- and G-M+ is 44.6, which is higher than the percentages of the other two groups. Also, the motivation means (Table 25) of groups G+M- and G-M+ being 3.22 and 3.16 are between the highest (3.62) and the lowest (2.84).

These results indicate that the response patterns G+M- and G-M+ are associated ($p < .0000$) with medium level motivation. Therefore, the hypothesis # 4(a) that there is an association between medium level motivation and the response patterns G+M- and G-M+ is retained with $p < .0000$.

Hypothesis # 5(a)

Looking at the first row in Table 26 it is noted that the highest percentage (48.4%) of all the 62 low level participants belong to the response pattern G-M-. Looking at the column G-M- it is seen that the highest percentage of participants (44.1%) of G-M- group are low participants. The table of means (Table 23) concurs with

this finding; the participation mean (74.97) for the group G-M- is the lowest compared to those of other groups.

These observations indicate that low participation has correspondence with response pattern G-M-. Thus, the hypothesis # 5(a) that low participation has correspondence with response pattern G-M- is upheld.

Hypothesis # 5(b)

Looking at the first row in Table 27 it is observed that the highest percentage (52.8%) of all the 72 participants with low motivation belong to G-M- group. The distribution of G-M- across the motivation levels shows that the highest percentage (55.9%) of adult learners in this column are of low motivation. The motivation means for different response patterns (Table 25) concur with this finding; the motivation mean (2.82) for the group G-M- is the lowest compared to other groups. These observations indicate that low motivation has correspondence with response pattern G-M-. Thus, the hypothesis # 5(b) that low motivation has correspondence with response pattern G-M- is upheld with $p < 0.0000$.

Hypothesis #6(a)

This hypothesis states that participant's acceptance of goal(NFE) has positive correspondence with his/her community's acceptance of that goal(NFE).

Hypothesis #6(b)

This hypothesis states that participant's acceptance of means(NFE) has positive correspondence with his/her community's acceptance of that means(NFE).

For the purpose of an ethnographic investigation, the above hypotheses were restated as assertions. Under each assertion, one main question and two subsidiary questions were asked. These are listed below.

Assertion #1: What adult learners choose to learn is what their community considers worth learning.

Assertion #2: Adult learners tend to choose educational institutions which are appreciated and accepted by his/her community.

Research question I

Do the adult learners choose to learn what their communities regard worth learning?

Subsidiary questions:

- (a). Do the verbal and behavioral expressions made about the skills/knowledge taught in vocational training centers, by adult learners of those centers and by members of their communities, agree?
- (b). How do members of a community influence learner's acceptance of learning goals?

Research questions II

Do the adult learners choose educational institutions that are appreciated and accepted by his/her community?

Subsidiary questions:

- (a). Do the verbal and the behavioral expressions made about the teachers and about the physical facilities at vocational training centers, by adult learners of those centers and by members of their communities, agree?
- (b). How do members of a community influence their adult learners' acceptance of an educational institution?

The Setting

This ethnographic investigation was done at two sites. The first site was in the Ranchi district of Bihar and the second in the 24-Parganas district of West Bengal. The first site was a tribal area and the second a non-tribal area.

In this report, actual names of people and places are not used. Pseudonyms are used in descriptions of all the observations and discussions.

Site 1

Maran and Smithna were villages not far from each other; each had about 75 families. All the people in those villages were tribals and over 80% of them were illiterates. They lived by daily labor related to agriculture. Very close to these villages were two grassroots development agencies, Center A and Center B, offering vocational training courses to rural adults. Their training covered tailoring, carpentry, and welding. Center A had about 60 and Center B about 30 adult students, including men and women. Teachers, who were also tribals, lived in adjacent towns and went to these

Centers every day at about 9 A.M., Monday through Saturday. Classes were conducted from about 9 A.M. to about 3 P.M.

Site 2:

Khatghat was a suburb of a city inhabited by about 150 nontribal families who, by occupation, were hawkers and daily laborers. A vocational training center located in Khatghat offered courses to women in tailoring and knitting. About 40 women were enrolled for this course. Classes were conducted from 10 A.M. to 3 P.M., Monday through Friday.

Data sources and collection methods

The field researcher and Bhaskar his companion lived close to Maran and Smithna for ten days and in Khatghat for another ten days. They participated in community functions, festivals, and weddings; had tea or meals with different families. After getting acquainted with the people for about three days, the researcher and Bhaskar gained opportunities to enter into conversations with them. They made field notes about what was happening, how the happenings were organized, and what those happenings

meant to the people. The notes included statements made, questions asked, and answers given by the people among themselves and in conversation with the researcher.

Description of data

Six field events were noted. First, the events are described and at the end, a brief discussion and interpretation of the events are presented.

Event 1:

One day, in Moran, at about 10 A.M., the researcher and his associate Bhaskar were at a road side tea stall. Bhaskar said, "I know a family that lives behind this tea stall; the young man Shur in that family recently dropped out of the local vocational training school." Thinking that a conversation with Shur would be helpful, the researcher responded saying, "Let's visit them." As soon as they were through with taking tea, they walked down to Shur's house. It was a small house with a tile roof. That was a Saturday and Shur was home. Shur's aunt and younger sister were also present. They were received into the house with the usual traditional courtesy. After a few minutes of their conversation, the researcher asked: " Shur, why did you drop out from the training

program?" Shur's reply came without any delay: "No point in going there." "Why?" said Bhaskar. Shur replied, "I don't like to be a typist the rest of my life... I rather continue my college education." After a while, as the researcher and Bhaskar were leaving Shur's home, both his aunt and another young man remarked almost simultaneously, "We know, typists can't make their two ends meet... they are also not respected well in the community."

Event 2:

During the period of this study, a private voluntary agency was constructing an additional building at their nonformal education center located nearby Maran. The researcher observed on several occasions, small groups of men and women of the nearby village walking to the nonformal education center; they would go there and sit under a shady tree and talk.

One afternoon, Bhaskar and the researcher visited the vocational center; there were, as usual, a number of men and women sitting in the shade of the building; Bhaskar and the researcher greeted them and sat down near them and listened to their conversation. Some of their statements noted are listed below:

"We are lucky that a center like this is near our village."

"The teachers and staff are honest and hard working."

"This is a good place for learning."

After a while, the researcher went to the manager's office where he and Bhaskar were served with tea over a friendly conversation. The researcher asked the manager, "How often do you visit this place." The manager replied, "Several times a week, but the teachers and other staff are here every day." "How many hours a day?" asked the researcher, to which two of the teachers who were also present there responded, "Oh, we don't count hours; we are here morning to evening; often we join their family celebrations, festivals, and weddings."

The tailoring and carpentry teachers were from the same tribal community and therefore spoke their language and shared their cultural values. From the way the teachers, students, and the other villagers greeted each other and moved around, it could be noted that the teachers were friendly not only with the learners but also with others in the village. Later, Bhaskar and the researcher had some informal talk with the learners and noted the following statements made by them:

"Our teachers are very friendly."

"It is a nice place to learn new things."

"The manager is totally dedicated for service to the poor."

"I like coming here."

Event 3.

Near Moran was another small village, Smithna, where an adult literacy center was operated by another voluntary agency. The program was to help the villagers to become functionally literate. The teacher lived about 10 miles away from the center and was frequently absent from the classes he was to teach. The researcher had several rounds of talks with the learners and others in the village. Informal conversations with the villagers and the learners indicated that both the learners and the others in the village were not very appreciative of the place where the classes were held. Some of the remarks made both by the learners and the others were:

"The roof leaks when it rains."

"The kerosene lamps are quite inadequate."

"The teacher doesn't spend time with us."

"The teacher has no interest in us."

"What is the use of learning to read and write?"

"Is our condition going to be better than what it is now?"

The researcher observed that only a couple of adult learners were attending the classes at this center.

Event 4.

One afternoon, the researcher was standing near the vocational training center at Moran; soon three men walked to him and greeted and a conversation started. It must have been about 110 degrees F, and every one was sweating; there was no fan. All of them walked into the nearby room that had an asbestos roofing, and sat down near a window. One member of the group, by name Saran, remarked, "We walk in this hot sun from our tola (part of a village) to this center." The researcher asked, "Why do you take this trouble?" Bhandari, another one in the group replied, "Well, we like to learn masonry jobs." "Why did you choose to learn masonry?" asked the researcher. Bhandari replied, "Well, our people have been masons for a long time and we believe it is a good skill and it can help us to support our families."

Event 5.

This was at Khatghat; it was humid and hot; the researcher was at a road side cool drinks shop. The shop was in a small bamboo structure with a jute cloth roof; the cool drink bottles were kept in a metal box containing ice. He bought a Gold Spot drink and while drinking it he said to the vendor, "Sir, do you know what is taught at this center? (a vocational center was adjacent to the shop). The vendor promptly replied, "Yes, tailoring and knitting;" he continued saying, "You see, in our culture, it is important that women learn these skills." The researcher asked, "Why?" The vendor replied, "Well, the women who have these skills are well respected in the community; they can also earn some additional money with this skill on hand; we believe, a woman must learn these skills."

After talking to the vendor, the researcher went into the vocational training center where he had already been a couple of times. All the students at this center were women; they welcomed the researcher and offered a seat. Some of the remarks made by those women during their conversation with the researcher are listed below:

"A woman must learn how to stitch clothes at least for her children."

"Girls having skills like tailoring will have more respect in the community."

Event 6.

It was about 2 P.M. on a sunny day, the researcher was once again at the Khatghat training center. The students and the researcher were informally talking. The teacher was not there at that time. Janaki, a middle aged female learner said, "It is nice to be here with didi (a sister; also used to address a teacher)." Some of the women in the group almost simultaneously remarked, "That's the reason why we come here daily." The teacher, Shusma was a qualified tailoring teacher; pleasant to talk to; she spent a great deal of time with the learners.

The researcher, on several occasions found the teacher surrounded by the learners asking her questions or saying something to her.

On another occasion, the researcher had sometime of informal talk with the people of Khatghat and noted the following statements they had made:

"Sushma visits our homes."

"She takes a lot of pain to help our people."

"She is a good teacher."

Most learners at this center attended classes every day.

Discussion

The above six vignettes provide some answers to the four research questions under the assertions. These answers and their relevance to the assertions are discussed below:

Assertion #1: What adult learners choose to learn is what their community considers worth learning.

The events 1, 3, 4, and 5 show similarities between learners' and the other villagers' verbal and behavioral expressions with respect to the goals(NFE). At Moran (Event 1), Shur's decision to discontinue attending the local vocational training program appears to have been influenced by the low appreciation for type-writing training from his aunt and friends of his community. Event 3 indicates that the people of Smithna were thoroughly dissatisfied, both with the institution and

with the literacy classes. Most of them had no idea how literacy would help them in solving their economic and social problems. The opinion of the learners was similar to that of others in the village. At Moran (Event 4), the men who were pursuing masonry training were convinced that their community would respect that skill and that they would be successful in making economic gains through it. This suggests a positive relationship between their opinion and that of their community about masonry training. In the event 5, it is seen that the acceptance of tailoring and knitting training by the women trainees at Khatghat, was influenced by their community's high regard for women who were good at tailoring and knitting. Remarks like, "Women should know tailoring," were made both by the learners and also by other members of that community.

The above information provides the following answers to the two subsidiary questions:

- 1(a). It appears that the verbal and the behavioral expressions made about the skills/knowledge taught in a vocational training center, by adult learners and by the other members of their communities do agree.

1(b). There is a possibility that communities influence the learners' acceptance of learning goals by their verbal and behavioral expressions about those goals and through reinforcement of their cultural values.

The above evidence provides support to the assertion #1 that, what adult learners choose to learn is what their community considers worth learning.

Assertion #2: Adult learners tend to choose educational institutions which are appreciated and accepted by his/her community.

The events 2, 3, and 6 have some information which provides answers to the subsidiary questions under this assertion. At Maran (Event 2), the villagers were very much attached to the vocational center. This was evident from their volunteering to help in the construction work and from the friendly relations they had with the teachers and with the other staff there. Thus, they expressed their appreciation for that training center. Statements made by the learners also suggest that they had a great appreciation for that center. At Smithna (Event 3), the village community was not appreciative of the institution that was running a

literacy program as was evident from their verbal expressions like, "The kerosene lamps are quite inadequate; "The teacher has no interest in us." Such expressions and the attitude of the villagers towards the institution appears to have influenced learners' institutional acceptance. This could be noted from their verbal expressions which were similar to those of the villagers and from their poor attendance in the classes. At Khatghat (Event 6), Janaki's remarks, "It is nice to be here with didi," and the remarks of others, "That is the reason why we are here," are indicative of the learners' acceptance of the institution. The acceptance of the institution by the community was evident from their remarks like, "Sushma (The teacher) visits our homes whenever the students delay going to school."

The above information provides the following answers to the two subsidiary questions:

- 2(a). It appears that the verbal and the behavioral expressions made about the teachers and the physical facilities at training centers, by adult learners and by the other members of their communities do agree.
- 2(b). There is a possibility that communities influence the learners' acceptance of institutions by their verbal

and behavioral expressions about those institutions and through reinforcement of their cultural values.

The above evidence provides support to the assertion #2 that adult learners tend to choose educational institutions which are appreciated and accepted by his/her community.

Results of Additional Statistical Analyses

Investigation of participation and motivation means in the population for categories: caste, sex, and occupation.

The statistical analyses and interpretations are presented in section (a), (b), and (c) below:

(a). Participation and motivation for different caste groups were examined using analysis of variance. The results are presented in Tables 28 and 29.

Table 28. Analysis of variance for caste categories and participation.

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	99.0096	33.0032	.2226	.8806
Within Groups	257	38094.9904	148.2295		
Total	260	38194.0000			

Barlett-Box F = 1.33, p < 0.2

Table 29. Analysis of variance for caste categories and motivation.

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	2.4863	.8288	2.1768	.0912
Within Groups	257	97.8505	.3807		
Total	260	100.3369			

Barlett-Box F = 1.32, p < 0.2

The results presented in Tables 28 and 29 indicate that people of different castes do not significantly ($p < 0.1$) differ either in their participation or in their motivation.

(b). Participation and motivation for different occupational categories were examined using analysis

of variance procedure. The results are presented in Tables 30 and 31.

Table 30. Analysis of Variance for the five occupational categories and participation:

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	544.2798	136.0699	.9252	.4498
Within Groups	256	37649.7202	147.0692		
Total	260	8194.0000			

Barlett-Box $F = 2.32$, $p < 0.0.05$

Table 31. Analysis of Variance for the five occupational categories and motivation:

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	2.1399	.5350	1.3947	.2362
Within Groups	256	98.1970	.3836		

Barlett-Box $F = 0.939$, $p < 0.4$

Results shown in Tables 30 and 31 indicate that there is no significant difference between different occupational groups with respect to participation ($p = 0.45$) and motivation ($p = 0.24$).

(c). Results of t-test (separate variance estimate) investigating differences between scores of men and women for participation, motivation, goal(NFE) acceptance, and means(NFE) acceptance by sex are given in Table 32.

Table 32. Results of t-tests:

Variable	t-value	DF	2-Tail prob.	Men Mean(SE)	Women Mean(SE)
-----	-----	---	-----	-----	-----
Participation	-2.09	148	0.04	80.6(.88)	84.0(1.4)
Motivation	-2.04	152	0.04	3.2(.05)	3.4(0.1)
Goal(NFE) acceptance	-1.32	163	0.19	3.2(.04)	3.3(.06)
Means(NFE) acceptance	-6.83	210	0.00	3.7(.05)	4.2(.06)

The results presented in Table 32 suggest the following possibilities:

- (i). There is a significant ($p < 0.05$) difference between men and women with respect to their motivation. Women appear to have higher motivation (mean = 3.36 ± 0.1) than men (mean = 3.19 ± 0.05). From Table 13 it is noted that urban women's motivation is higher (3.4) than that of the rural women (3.1).

- (ii). There is significant ($p < 0.05$) difference between men and women with respect to their participation. The mean participation for women (mean = 84.0 ± 1.4) is higher than that of men (mean = 80.6 ± 0.88). From Table 13 it is observed that rural women's participation mean (87.2) is higher than that of urban women's participation (83.2).
- (iii). There is no significant difference between men and women with respect to their goal(NFE) acceptance; but there is a significant difference ($p < .0000$) between them with respect to means(NFE) acceptance. Women seem to accept the means(NFE) more readily than men. The mean of means(NFE) acceptance for women is 4.2 ± 0.06 while that of men is 3.7 ± 0.05 . It appears that women participants look for more institutional acceptance than for goal acceptance.

CHAPTER V
SUMMARY AND DISCUSSION

Introduction

This study was initiated to understand factors that contribute to effectiveness of adult nonformal education. In so doing, the impact of certain selected sociodemographic variables on participation and motivation considered crucial to effectiveness in adult nonformal education was studied; the possibility of finding a model that could help explain adult participation and motivation using Merton's (1959) paradigm, Social Structure and Anomie, was explored; and influence of communities visualized as social systems, on learners' participation and motivation was examined.

This chapter presents an overview of the research problem, purpose, research design and methodology, discussion of selected findings, implications of the findings to practice, limitations, and recommendations.

The problem

Two of the variables that have been looked at so far, as explaining differential levels of effectiveness of adult

nonformal education are participation and motivation. The problem is that past studies had conceptualized and explored these two variables mostly in terms of sociodemographic factors such as age, sex, income level etc. and were conducted mostly in industrialized countries. However, those studies have explained only about 10% of the variance in participation which suggests that past approaches are unsatisfactory for understanding participation/ motivation and that we cannot claim generalizability for theories and concepts of adult learning derived from the previous studies. It may be, as Cross (1983) points out, the real explanation for participation appears to lie elsewhere.

Since who people are is sometimes less important than the cultural and social surroundings in which they operate, it seems logical to take a social systems approach to understand participation and motivation. Merton's (1957) paradigm, 'social structure and anomie' which is firmly based on concepts relating to social systems and cultures, appears to provide an alternative approach to understanding these two variables.

Also, as Young (1956) suggests, man is always a part of a larger system and only in that wider context can his

conduct be understood; therefore, we need to examine the influence of the cultures adults carry with them.

The purpose

1. examine the interrelationships of selected sociodemographic factors such as age, sex, income and their aggregate and individual impact on participation and motivation of adults enrolled in nonformal education programs in a developing country.
- 2(a).lay out a theoretical model to enable a further understanding of adult participation/motivation drawing upon Robert Merton's(1957) theory of social structure and anomie.
- 2(b).examine ways that the social and cultural context influence the learning orientation of adults.

Research design and methodology

The design of the study was exploratory. Reid and Smith (1989) state that, "research has an exploratory purpose when it is used to gain preliminary understanding of phenomena or to stimulate the development of concepts, hypotheses, and technology." According to Babbie (1989),

"exploratory studies are essential when ever a researcher is breaking new ground, and they can almost always yield new inputs into a topic for research."

Since this study aims at exploring the possibility of finding a model that would explain participation and motivation based on Merton's (1957) paradigm in sociology, an exploratory design was considered appropriate for this study.

The methodological approach the study adopted was basically quantitative but was supplemented by a qualitative approach. According to Vidich and Shaprio (1955) "such a combination will allow us to gain a more complex theoretical picture of the variables under study."

The sample

The sample was drawn from an experimentally accessible population using a multistage sampling design (Babbie, 89) from Bihar, Orissa, and West Bengal states of India. The sample consisted of 261 adult learners from 24 nonformal education centers in those districts operated by agencies engaged in rural development programs. The sample represented about 15% of the experimentally accessible population.

The variables

In this study, motivation and participation were used as dependent variables. The researcher in consultation with adult education experts working in rural development in India, selected the sociodemographic variables sex, age, marital status, caste, occupation, economic status, health, education, area, and media exposure as the independent variables.

Statistical procedures used

Hypothesis # 1 was tested using the multiple linear regression procedure at an alpha level of 0.05. Two regression models were constructed taking all 10 personal variables listed in the hypothesis as independent variables and using motivation and participation as the dependent variables. The categorical variables, sex, caste, area of residence, marital status, health, and occupation were transformed into dummy variables before entering into the regression equations.

Hypothesis # 2 was subjected to the analysis of variance procedure to test for equality of means of participation and motivation for all the four levels: G+M+, G+M-, G-M+,

and G-M- of the variable 'response pattern'. Scheffe's multiple range test procedure was used to identify groups significantly different from others. For both the procedures the significant level was kept at 0.05 alpha. The Barlett-Box F test was also performed for testing homogeneity of variances, an assumption needed for applying the analysis of variance procedure.

Hypothesis # 3, 4, and 5 were tested using the cross tabulation procedure. A chi-square statistic was calculated to test independence of the variables. Means of the variables relevant to these hypotheses were also calculated.

Hypothesis #6 was verified using a qualitative approach. The researcher spent three weeks with three communities in the sample area. Field notes were analyzed and studied for drawing inferences which were then related to the hypothesis.

Qualitative study design

The qualitative or the field study focussed on investigation of social interaction and the cultural activities of two communities in Ranchi district in Bihar

and 24-Parganas district in West Bengal. This was done by the researcher participating in the daily lives of the people, watching what was happening, listening to what was said, asking questions, and in fact, by collecting whatever data were available to throw light on the issues with which the study was concerned. In fact, as Mead (1977) stated, "every thing that happens will become data." The researcher looked for answers to questions like, "how does what is happening here compare with what happens in other places?" "How is culture passed on to the next generation."

Findings

All 6 hypotheses were accepted. Selected findings and discussion relevant to each hypothesis are presented below.

Hypothesis # 1

The hypothesis that there is a linear relationship between participation/motivation and the set of the sociodemographic variables: age, sex, caste, education, area of residence, marital status, economic level, media exposure, health, and occupation was retained on the basis

of results of regression analyses presented in Tables 20 and 21, with $p < 0.05$.

All 10 sociodemographic variables listed in the hypothesis together accounted for only 7% of the variance in participation and 13% in motivation. The amount of 7% is lower than the amount of 10% that Anderson (1979) and others found in their studies of adult participation. Boshier's (1976) study indicated that 10.9% of the variance associated with dropping out. It appears that the highest amount of variance in participation that researchers have so far found as explained by personal variables is only about 10%.

Area of residence and sex are found to be associated with participation, but do not show any association with motivation. Also, marital status, formal education, and media exposure which are found to be associated with motivation do not appear to have association with participation. These findings suggest that participation and motivation may be independent of each other when considered from a sociodemographic variables perspective. This possibility is further supported by the observation that the correlation ($r = .4$) between these two variables is not very high. Between motivation and participation,

motivation seems to be more impacted by the personal variables as indicated by the R-Square values 0.6 and 0.13.

An important indication of these observations is that these variables have very little to tell us about participation and motivation. In their study of adult participation, Douglass and Moss (1968) observed that, factors which may be related to an individual's participation can be thought of as being of two types: positional factors such as sex, age employment etc. and psychological factors which may influence the manner in which roles associated with the various positions are performed. The above noted observation of this study concurs with Douglass and Moss(1968) in that, the personal factors offer only a part, probably a small part, of the explanation for participation suggesting that we need to look elsewhere for understanding these two vital factors in adult learning.

The regression analyses (Tables 20 and 21) have shown not only the degree of impact made by each variable on participation and motivation, but also the direction of impact on them. The potential and direction of each impact are discussed below:

Area of residence appears to be the best predictor of participation with .23 beta, significant with $p < .05$. Rural adults appear to have higher participation. Johnstone and Rivera (1965) reported that in their studies participation rates were highest in suburban areas and lowest in rural communities which they attributed to higher education in suburban areas. This finding is in disagreement with the above observation made by this study. Motivation however, does not appear to have any association with this variable.

The reasons for higher participation of rural adults in India may be that they have fewer alternatives than those available to urban adults, and that urban adults may be involved in more than one learning activity at the same time.

Age does not appear to have any significant relation to either participation or to motivation which also is in disagreement with what Anderson and Darkenwald (1979) have reported that all American national surveys show that young adults under 25 do not participate at the same rate as those aged 25-34. In this study most learners were below 28 years. There appears to be a cultural tradition that learning is generally not for those above that age.

Adult educators in India therefore, have the task of motivating and enabling adults of all ages to participate in learning projects.

Health, caste, and occupation dichotomized as shown in Figure 10, do not appear to have any significant relationship with either participation or motivation. In place of the dichotomized levels, when all the levels of these variables (Figure 7) were considered, ANOVA results also (Tables 30 and 31) indicated no significant relationships. It therefore appears that participation does not depend on caste or occupation which is contrary to the traditional view held by some in India that people of lower castes and lower occupations do not come forward for learning.

Economic status does not appear to impact participation (Beta = $-.071$). However, when economic status, a continuous variable, was categorized into three groups of low, medium, and high levels, the participation mean of the lowest and the highest economic groups (79.6; 79.1) were at a low level compared to the means of the middle class groups (83.1; 82.6) (Table 11). One possible explanation for this is that the very poor adults seem to suffer from apathy and the upper class from lack of

interest in nonformal learning which is normally geared to low paying jobs. It also suggests the possibility of a nonlinear relationship between participation and economic status. This observation differs from that of Anderson and Darkenwald (1979) that in all American national studies, income exhibited a strong linear association with participation.

Marital status appears to make some impact on motivation (Beta = .142; $p < .05$) but not on participation (Beta = -.087; $p < .21$). Married adults have higher motivation than the unmarried. One reason for the observed higher motivation among adults with families may be their belief that higher incomes are possible through learning new skills; but because they also need to attend to meeting their immediate economic needs, they may find it difficult to maintain higher participation consistently. In their study in India, Bhandari and Mehta (1973) also found that learners dropped out of classes predominantly because of unavoidable circumstances such as illness or family problems.

Formal education in Anderson's (1979) study in the United States, was found to be the best predictor of participation where as, in the present study, impact of

education on participation is not significant ($\text{Beta} = .087$; $p < .022$) suggesting that there is no linear relationship between them. However, when education was categorized into four groups (Table 19), the illiterates group and the masters degree holders group were the least and the highest participation groups. It was also noted that education impacted motivation ($\text{Beta} = .20$; $p < .005$) suggesting that those with higher formal education may have higher motivation. This finding while reinforcing the observation of Cross (1981) that "educational attainment exerts its powerful impact on adult educational participation relatively independently of other components of socioeconomic status, such as income and occupation," suggests that the impact may not be linear in nature.

One possible explanation for this observation is that participants with higher educational attainment have higher media exposure and so, they are likely to receive more information about opportunities for employment once they complete their learning projects. Another reason could be that in India, illiterates tend to be the economically poor and are therefore more concerned with day-to-day survival needs than with long term learning projects which only the well-to-do adults who are normally educated, can afford. Until their basic needs are met, as

suggested by Maslow (1970), they may not pay more attention to other needs, learning being one of them.

Sex appears to be closely associated with participation (Beta = .224; $p < .005$) but not with motivation. Women's participation is likely to be higher than that of men. It may be taken to mean that being a female is not a hindrance to participating in learning activities.

Media exposure: It is observed that a positive relationship exists between media exposure and motivation (Beta = .26; $p < .0005$); among the variables considered in this study, media exposure appears to be the best predictor of motivation. Lerner (1963) considered mass media as a mobility multiplier and Rao (1963) as a facilitator of smooth transitions from traditional to modern ways of development. Mass media exposure was found to be highly correlated with empathy considered important for innovation adaption among peasants of Columbia and India (Roger 1969). If we assume that empathy is related to motivation which, as found in this study is related to media exposure, we can see that the above results are in agreement with Roger's thesis.

However, no relationship appears to be present between media exposure and participation (Beta=.039; $p<.60$).

Participation appears to be associated more with means(NFE) acceptance than with any other independent variable in this study.

Hypothesis # 2

The hypothesis that adult learners differ in their participation and motivation with respect to their response patterns G+M+, G+M-, G-M+, and G-M- was retained on the strength of results of the analysis of variance (Tables 20 and 22).

It therefore appears that adult learners with different response patterns are likely to have significantly different levels of participation ($p < .0000$) and motivation ($P < .0000$) levels. Formation of response patterns, a concept new to adult education, takes into account goals of learning and means available to achieve those goals; therefore, intrinsic to this variable are implications of the very learning which make it a potential predictor of learner's participation and motivation.

Hypotheses # 3, 4, 5

The hypotheses 3,4, and 5 which state that response patterns G+M+, G+M-, G-M+, and G-M- are associated with low, medium, and high levels of participation/ motivation respectively, are upheld on the basis of the results of crosstabulation and Chi-Square, presented in Figures 24 and 25. These results indicate possibility of Merton's (1957) paradigm 'social structure and anomie' providing an alternative approach to explaining adult learner's participation and motivation in nonformal education. The approach views nonformal education as composed of goals and means offered to learners and assumes that every learner responds to these two factors in varying degrees. A combination of learner's responses to each of these factors is termed 'response pattern.' Grouping of responses to each factor into low and high groups, taking the mean response as the dividing point, yields four different patterns of combination; symbolically these are: G+M+, G+M-, G-M+, and G-M- where G+, M+, denote high acceptance of goal and means and G- and M- denote low acceptance of goal and means.

The model that emerged out of this alternative approach may be described as follows:

Learners with response patterns G+M+ are likely to have association with high participation/ motivation;

Learners with response patterns G-M- are likely to have association with low participation/ motivation;

Learners with response patterns G+M- and G-M+ are likely to have association with medium participation/ motivation;

The above model which may be called "Response Pattern Model" suggests that for understanding learning orientations we need to look at learner's goal acceptance and means acceptance levels in conjunction with each other.

The concept of 'response pattern' appears to be similar to Miller's 'force field,' a sociologically developed theory which suggests that, positive and negative forces existing in the individual and in the environment when combined form a resultant motivational force. The factors G+, M+, G-, and M- may be taken as representative of Miller's positive and negative forces internal and external to the individual.

The response pattern G+M+ may be taken as Rubenson's (1977) "greatest degree of pleasure" in his Expectancy-valency paradigm because, G+ is indicative of learner's higher level of satisfaction with the expected

application of what is being taught, and M+ indicative of the system that carries out the job of teaching.

The factor M- may be considered as indicative of self-institution incongruence, a status in which the learner tends to drop out as Roger Boshier (1973) proposed. Then, G- may be taken as indicative of self-goal incongruence.

Merton suggests that for those in the groups G+M- and G-M+ there is a disjunction between the prescribed goals and the available means which exerts pressure and produces anomia, a condition of relative normlessness leading to deviation from the expected behavior. If Merton's 'expected behavior' is assumed to mean high participation/ motivation in an educational context, the behavior in terms of participation/ motivation fluctuates between low and high levels, which is what the observations in this study have suggested.

However, the above model appears to explain motivation better than participation as is evident from the results of crosstabulations (Tables 26 and 27).

Hypothesis # 6

This study has provided some evidence for the possibility that learner's acceptance of goals and means have

correspondence with the community's acceptance of the same. The indication here is that adult learner's participation and motivation are closely related to the response of his/her community to what is taught and to the institution that is responsible for teaching that, in a nonformal educational setting in or nearby the community. Adults of a community that has high appreciation or high positive response to a nonformal education program are likely to have high levels of participation and motivation. One possible explanation for this appears to be in Horton's (1965) suggestion that a young person looking for a career may feel he has a free choice, but he will choose one of the lines of work his culture has taught him to value. These findings in essence would mean that the social and cultural context influences the learning orientations of adult learners.

Conclusion

The findings of this study are summarized under three titles corresponding to the three components in the purpose set forth for this study as outlined in chapter I.

Relationship between personal variables and participation
/motivation

Past studies have explained about 10% of the variance in adult participation. The present study has shown that sociodemographic variables account for only 7% of the variance in participation and 13% in motivation of adult learners in North India. The apparent lack of adequate explanation of such variables suggests that neither participation nor motivation depend on them heavily, and so, for further explanation we need to look elsewhere using alternative approaches.

Learner's area of residence, rural or urban, and sex, appear to make greater impact on participation than other variables. Adult learners in rural areas appear to have higher levels of participation and motivation compared to those in urban areas. The possible explanation for this is that rural adults' economic needs are far greater than those of their urban counterparts. They are capable of effectively participating in learning projects when opportunities are available. Nonparticipation of rural adults cannot therefore be taken to mean that they are not motivated to learn; it could mean that external factors like sickness in the family and the need to take up work

for meeting immediate basic needs, are real reasons that negatively contribute to their participation in learning activities.

Female learners' participation levels appear to be higher than those of males. Female learners appear to be less than men in number but are more persistent than men. The study also indicated impact of media exposure, education and marital status on motivation, impact of media exposure being the highest. Media exposure and formal education being channels of information about employment opportunities and related socio-economic benefits of nonformal learning appear to play a role in building up learners' motivation. The study indicated higher motivation in the married group. One reason why marital status appears to be related to motivation could be that married adults carry the responsibility of providing economic support for their families, and so, look for ways to improve their earning capacity. One way they see for achieving is learning a skill that can make them more gainfully employable.

Caste, occupation, and age appear to have no relation to either participation or motivation.

The study suggests that adults at the lowest and highest economic levels appear to have low participation and motivation. The lower middle and middle economic class groups tend to have higher participation and motivation. It may be that the type of nonformal education that is practiced in North India appeals more to these groups than to the poor and rich groups of adults.

Relationship between participation and motivation

This study indicated that variables that may have association with participation may not have any association with motivation and vice versa. Higher motivation does not necessarily mean higher participation. Formal education appears to have a linear relationship to motivation but not to participation. Motivation appears to be more understandable than participation which may be considered a more complex variable.

A theoretical frame for explaining participation and motivation

This study has supported the possibility of Merton's (1957) paradigm 'social structure and anomie' providing an alternative approach to explaining adult learner's

participation and motivation in nonformal education. The model that emerged out of this alternative approach may be described as follows:

Learners with response patterns G+M+ are likely to have high participation/ motivation;

Learners with response patterns G-M- are likely to have low participation/ motivation;

Learners with response patterns G+M- and G-M+ are likely to have medium participation/ motivation;

The above model suggests that we need to look at a learner's goal acceptance in conjunction with means acceptance for understanding his/her learning orientations. In accepting or rejecting a goal(NFE) and an institution as a means(NFE), the learner takes into consideration factors that are internal and external to him/her and therefore, the decision and action taken are sociologically and psychologically oriented. The variable goal(NFE) acceptance and means(NFE) acceptance are in essence resultants of interaction of several forces such as, economic needs, family responsibilities, learning opportunities, and personal abilities. In this respect, the concept of Response Pattern in this model appears to be similar to Miller's sociologically developed 'force field' theory which suggests that positive and negative forces existing in the individual and in the environment when combined form a resultant motivational force.

The response pattern G+M+ may be taken as Rubenson's (1977) "greatest degree of pleasure" in his Expectancy-valency paradigm because G+ is indicative of a learner's higher level of satisfaction with the expected application of what is being taught, and M+ indicative of the system that carries out the job of teaching.

The factor M- may be considered as indicative of self-institution incongruence, a status in which the learner tends to drop out as Roger Boshier (1973) proposed. Then, G- may be taken as indicative of self-goal incongruence.

In the groups G+M- and G-M+ there is a disjunction between the prescribed goals and the available means which exerts pressure and produces anomia, a condition of relative normlessness leading to deviation from the expected behavior or from the expected motivation and participation in an educational activity. The behavior in terms of participation/ motivation fluctuates between low and high levels which is what the observations in this study have suggested.

This study also suggests that learners who have greater institutional acceptance tend to have higher participation even if their goal acceptance is comparatively low. In other words, between education and the institution that

provides the education, the learner's participation is more closely related to institutional acceptance than to educational acceptance.

The model may explain motivation better than participation. The sociodemographic variables used in this study explain comparatively a larger percent of variance in motivation than in participation. This implies that learner motivation may be more understandable than participation which appears to be a complex variable.

Influence of learner's community/ social system on adult learner's participation and motivation

The social and cultural context influences learning orientations of adults. Learners' participation and motivation are variables related to their communities which may culturally differ from one another, and therefore, to understand these variables we need to first understand the communities and their cultures. Learners from communities having higher congruence with both the education and the institution that provides it, are likely to have higher levels of participation and motivation. This observation suggests that it may be necessary for research in adult education to direct its focus to

understanding communities and cultures of adult learners as a necessary step in understanding their learning orientations. Effective adult education may be considered community-based in addition to being learner-based.

Viewing both the Response Pattern Model and the above construct, 'influence of learner's community on participation/motivation,' it may be postulated that participation(P) and motivation(M) is a function of the learner's response pattern(RP) and the learner's RP is a function of the community's RP; symbolically:

$$\begin{aligned} P \text{ and } M &= \text{Function of (learner's RP)} \\ &= \text{Function of (Community's RP)} \end{aligned}$$

Implications

The potential contributions of this study to theory and practice are as follows:

To Theory

It appears that the findings of past studies in developed countries cannot always be generalized as applicable to

all the countries, for the main reason that the factors that were found to be impacting participation and motivation in developed countries do not appear to impact or impact in the same direction, the participation and motivation of adults in North India. It is possible that this observation may be applicable to the adult learners in other States of India also. The major differences identified by this study relate to economic status, formal education, age, area of residence, and sex of the learner. While prior studies indicated a strong linear relationship between participation and income, this study did not; rather it indicated the possibility of a nonlinear relationship. Formal education was found to be the best predictor of participation, whereas, in this study linear association between these two variables was not significant. In this study, rural adults were found to have a higher participation level compared to their urban counterparts contrary to the finding of some of the earlier studies. This study did not show significant association between age and participation, whereas, earlier studies showed that participation was impacted by age. Women's participation according to this study is higher than that of men, but according to earlier studies differences between their participation is negligible.

Therefore, there may be some danger in applying concepts and theories developed by those studies to education in North India and may be in other other states of India too. As such, there is a need to further emphasize research on adult education in developing countries.

This study, established the finding of other studies that personal variables do not explain more than 10% of variance in participation. This study observed that such variables account for only 6% of the variance in participation and 13% in motivation.

This study has also indicated the possibility of Merton's theory of social structure and anomie providing a theoretical model for explaining participation and motivation. This model that may be called "Response Pattern Model" suggesting that participation/ motivation may be understood as a function of an individual's response pattern formed as a combination of his/her responses to the goals offered and to the institutional means made available to achieve those goal. Learner's response pattern in turn is a function of a community's response pattern. Out of this theoretical model may emerge new insights into adult learning orientations.

To Practice

This study has suggested that participation and motivation are variables rooted in the cultures of adult learners. An important implication of this is that adult education programs need to focus on communities of which learners are a part. This finding leads us into having a "community focus" in addition to having an "individual focus" for more effectiveness in adult teaching in India and possibly in other developing countries, and thus emphasizes a "Community Based Education" for rural development.

Since media exposure appears to be significantly related to motivation, practitioners need to give higher priority to facilitate participants' access to media.

Another implication is that to understand adult participation and motivation we need to understand the cultures adults carry with them.

For higher levels of participation/ motivation it is not enough that a learner has accepted or internalized the goals offered by a program, it is also necessary to ensure that he/she has accepted/internalized the institution that serves as a means to achieve those goals. For example, if

the aim of an adult nonformal education program is to train participants as carpenters, it is necessary to ensure that they have accepted or internalized carpentry as a gainful career and also accepted the institution as an appropriate means for attaining that goal. This will perhaps clarify why participants in learning programs operated by voluntary agencies which work with a community perspective have higher levels of participation and motivation than others. One possible reason is that participants in such programs generally have high self-institution and self-goal congruence which is equivalent to the response pattern G+M+.

In the end, the findings of this study may help meet the challenge of developing theoretical grounding of adult education to make it a conceptually rich field of education; and to plan and operate adult education programs as community based programs rather than mere learner based programs to achieve more effectiveness in developing countries vis-a-vis rural development.

Limitations

The extent to which the findings of this study can be generalized is restricted by the following limitations:

1. The sample was drawn only from three districts of North India.
2. It was assumed that participants would give correct responses to all the items in the questionnaires.
3. Participants were aware of their participation in this study; this might have affected their answers.
4. Quantified data was assumed to represent the behavioral reality that is being studied.

Recommendations for Further Study

1. Since this is an exploratory research, the hypotheses studied need to be further investigated and therefore it is recommended that this study be replicated in other states of India and in other developing countries which are concerned with effectiveness in adult education for rural development.
2. Similar studies may be undertaken drawing samples from other professional education programs like nursing, polytechnic training etc.

3. In this study correspondence was found between response pattern G-M- and low participants. A study to investigate correspondence between dropouts and the response pattern G-M- may be undertaken.
4. In this study certain theoretical frames were used for constructing instruments to measure motivation, goal acceptance, and means acceptance. Different theoretical frames may be used to construct these instruments for use in future replicative studies.

APPENDICES

LETTER FROM MICHIGAN STATE UNIVERSITY

MICHIGAN STATE UNIVERSITY

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING
HUMAN SUBJECTS (UCRIHS)
206 BERKELEY HALL
(517) 353-9738

EAST LANSING • MICHIGAN • 48824-1111

February 22, 1989

IRB# 89-088

Gollapalli Prakasa Rao
1643 H Spartan Village
East Lansing, MI 48823

Dear Mr. Rao:

Re: "A CULTURAL APPROACH TO UNDERSTANDING ADULT
MOTIVATION AND PARTICIPATION IN NONFORMAL EDUCATION
PROGRAMS: A CASE STUDY OF INDIA IRB# 89-088"

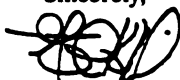
The above project is exempt from full UCRIHS review. I have reviewed the proposed research protocol and find that the rights and welfare of human subjects appear to be protected. You have approval to conduct the research.

You are reminded that UCRIHS approval is valid for one calendar year. If you plan to continue this project beyond one year, please make provisions for obtaining appropriate UCRIHS approval one month prior to February 22, 1990.

Any changes in procedures involving human subjects must be reviewed by the UCRIHS prior to initiation of the change. UCRIHS must also be notified promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

Thank you for bringing this project to our attention. If we can be of any future help, please do not hesitate to let us know.

Sincerely,



John K. Hudzik, Ph.D.
Chair, UCRIHS

JKH/sar

cc: S.J. Levine

LETTER TO THE RESPONDENTS

Dear

The purpose of this study is to understand through a scientific research, why the nonformal education programs operated by several organizations in rural areas are not as affective as they should be. Once we understand the reasons, we can make attempts to improve this situation which in turn can help the rural people in their efforts to develop their societies, both economically and socially.

To conduct this study, the researcher needs to obtain some information from at least 150 adults who are participating in nonformal education programs. For this purpose the researcher has contacted some of the nonformal education centers in India seeking their cooperation and participation in this study. I am glad to tell you that yours is one of those centers. The information needed by the researcher will be gathered as per the questions on the attached questionnaires.

The responses that you will give on the questionnaires will remain with the researcher only. I assure you that all the results of this study will be treated with strict confidence and the subjects will remain anonymous in the report of research findings. It is estimated that you will need to spend about 45 minutes for completing the questionnaires.

However, your participation is voluntary and you have the freedom to discontinue participation in the middle or choose to leave certain questions unanswered if you so wish, without any penalty.

You indicate your voluntary agreement to participate by completing and returning these questionnaires.

If you have any questions in respect of this study or the questionnaires, please feel free to raise them with me.

Thanks.

Yours sincerely,

G.P. Rao, c/o M.v.d. Bogaert s.j., Xavier Institute of
Management, Bhubaneswar, Orissa 751-013, India.

MEASUREMENT OF MOTIVATION

=====

1. In your opinion, what factors are responsible for your joining this program?

2. Why have you chosen to participate in this program at this time in your life? (Why not before now? why not at a later date?)

3. What of your background do you feel, helps you most in learning the skills in this program?

4. How do you plan to use what you are learning after the completion of this program?

5. Do you have any specific problem/s which you think will be solved by learning what you are learning?

=====

MEASUREMENT OF GOAL(NFE) ACCEPTANCE

=====

TO WHAT EXTENT ARE THE FOLLOWING REASONS TO LEARN
FULFILLED BY PARTICIPATING IN THE LEARNING ACTIVITY?

Answer this question by indicating your position in the
continuum NOT FULFILLED to FULFILLED in respect of each
statement given below:

S.No.	REASON	Not fulfilled..... Fulfilled				
1.	To enrich or make my life more lively and interesting.	1	2	3	4	5
2.	To earn a diploma/certificate.	1	2	3	4	5
3.	To comply with recommendations of those who have influenced my life.	1	2	3	4	5
4.	To improve my ability to serve the society.	1	2	3	4	5
5.	To become a more effective citizen.	1	2	3	4	5
6.	To compete with others with a purpose of acquiring or maintaining social status.	1	2	3	4	5
7.	To become eligible for the new jobs announced in the area	1	2	3	4	5
8.	To gain opportunity to interact with other students.	1	2	3	4	5
9.	To feel a sense of belonging to a group.	1	2	3	4	5

Contd.....

Contd.

10.	To enjoy a change from my normal or routine way of life.	1	2	3	4	5
11.	To take my mind off some difficulties.	1	2	3	4	5
12.	To fulfill a requirement from family or others.	1	2	3	4	5
13.	To comply with the regulations of the employer.	1	2	3	4	5
14.	To learn a specific trade or skill to put to use.	1	2	3	4	5
15.	To improve my spiritual well being.	1	2	3	4	5
16.	To make my position more secure in life.	1	2	3	4	5
17.	To upgrade personal competence in order to be able to change my present vocation.	1	2	3	4	5
18.	To become eligible for a job promotion.	1	2	3	4	5
19.	To satisfy a desire to know something new.	1	2	3	4	5
20.	To gain new spiritual insight.	1	2	3	4	5
21.	To gain opportunity to participate in group/social activities.	1	2	3	4	5
22.	To become a better informed or trained person.	1	2	3	4	5
23.	To meet a religious goal.	1	2	3	4	5
24.	To become eligible for benefits such as loans, grants from the govt. and others.	1	2	3	4	5

MEASUREMENT OF MEANS (NFE) ACCEPTANCE

=====

How satisfied are you with the following aspects of the learning program you are attending?

S.No.	Statement	Not at all satisfied	1	2	3	4	Very satisfied
1.	The rules that pertain to enrollment and operations.	1	2	3	4	5	
2.	The schedule of classes.	1	2	3	4	5	
3.	The support systems that are available, like, creches for baby sitting, recreation rooms etc.	1	2	3	4	5	
4.	The relevance of the material being taught to the skill I want to learn.	1	2	3	4	5	
5.	The financial and other material support the institution gives to enable me to participate in this program.	1	2	3	4	5	
6.	The way the teachers teach me the skill I want to learn.	1	2	3	4	5	
7.	The way the teachers and the staff treat me.	1	2	3	4	5	
8.	The competence of the teachers who are doing the teaching.	1	2	3	4	5	

=====

PERSONAL DATA SHEET

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1. SEX: Male .. 1 Female .. 2 _____

2. AGE: Years _____ Mon _____

3. MARITAL STATUS:

Unmarried..1 Married..2 Divorced/Widowed..3 _____

4. CASTE:

Harijan/Scheduled caste	..	..	1
Tribal	..	..	2
Backward	..	..	3
Upper caste	..	..	4

5. OCCUPATION (of family or head of the family):

Daily labor	..	..	1
Small Farmer	..	..	2
Business	..	..	3
Landlord	..	..	4
Service	..	..	5

6. ECONOMIC STATUS:

Value of all properties(house, land etc) Rs.....

Annual income Rs.....

Total: Rs. _____

7. HEALTH:

Excellent	..	..	1
Good	..	..	2
Poor	..	..	3

8. RELIGION:

Hindu	..	..	1
Christian	..	..	2
Tribal	..	..	3
Muslim	..	..	4

Contd.

9. EDUCATION: Years of education _____

10. MEDIA EXPOSURE LEVEL:

Very poor	..	..	1
Poor	..	..	2
Good	..	..	3
Excellent	..	..	4

11. MOTHER'S EDUCATION: Years of education _____

12. FATHER'S EDUCATION: Years of education _____

13. AREA OF RESIDENCE:

Urban	..	..	1
Rural	..	..	2

14. CATEGORY OF TRAINING:

Carpenters, Masons	..	1
Drivers		2
Electrical jobs	..	3
Handicraft making	..	4
Literacy		5
Mechanical jobs	..	6
Tailoring/ Embroidery		7
Typing, shorthand etc.		8

DATA TRANSFER SHEET

[illegible]

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