

**Successful Skills Training
in Relation to Women's
Home Management Practices
and Household Attributes**

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ABSTRACT

Women engaged in skills training courses were surveyed to determine if selected home management and household attribute variables influenced women's attendance and successful completion of training. The common (and wide) use of literacy as *the* entry requirement for women's income orientated skills and entrepreneurship training courses was challenged. The predominance of Black women in South Africa's informal sector, and the prevalence of illiteracy among female informal sector participants in particular; demand more appropriate, precise and impartial entry criteria for such courses than literacy levels alone.

A sample of 161 women engaged in skills training courses offered by NGO's in Kwa-Zulu Natal were surveyed through use of a questionnaire. The dependent variables were: course attendance, rate of successful completion of training and education levels. The independent variables were grouped into three sections: variables related to training course characteristics (such as course duration and skill type taught), variables thought to indicate women's home management practices (such as participation in household production and child care), and household demographic attributes (for example household size). Logistic regression analyses were used.

It was concluded that the significant home management and household attribute variables may be more impartial and appropriate predictors of attendance and successful completion of skills training. The absence of significant relationships between attendance, successful training and education level may challenge the use of literacy as the sole training prerequisite. However, the course related variables did influence attendance and success rates, which inferred that the attendance and success variables may have been reliable predictors. Further refinement of these variables and greater control of the course related variables is recommended.

Declaration

I hereby declare that the research in this thesis is of my own investigation. Where use was made of the work of others, this has been duly acknowledged in the text.

A handwritten signature in black ink, appearing to read 'SL Hendriks', written in a cursive style.

SL Hendriks

*“The Lord is my strength and shield;
my heart trusts in Him and I am helped.*

*My heart leaps with joy and
I will give thanks to Him in song”.*

Psalm 28:7

New International Version

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CHAPTER 1 THE PROBLEM AND ITS SETTING

1.1 Importance of the study

Skills training for income generation and entrepreneurship training courses, offered by Non-Governmental Organisations (NGO's), have abounded in KwaZulu-Natal. Education and training based organisations that have attempted to meet the needs for adult education and employment creation have offered a large number of skills training courses (Lee 1993). On the other hand, it has been reported that: "South Africa has an abundance of entrepreneurs, but most of them are poorly equipped for the task of starting, running or expanding a small enterprise". Yet, current training efforts have not addressed specific training needs in effective ways (Anon 1995a, p 12). Perhaps the dependence of these organisations on literacy as an entry requirement has marginalised many Black women, who have consequently not been able to benefit from enterprise orientated skills training.

A study by Harper (1984b), found that 62% of training organisations worldwide required at least basic literacy as an entry requirement. Informal discussions with local Non-Governmental Organisations (NGO's) have suggested a similar trend. In 1994 it was estimated that 58% of the adult population in KwaZulu-Natal was illiterate (Anon 1994), in other words, not able to read at all (Robinson 1982). It has been reported that approximately 70% of KwaZulu-Natal's Black population is considered functionally illiterate (Anon 1995a), ie do not possess basic literacy and numeracy skills to read, write or make sense of written materials (Ballara 1991). International figures have shown that two thirds of the world's illiterate are female (Ballara 1991), while 40.7% of Black women in KwaZulu-Natal were reported to be illiterate in 1991 (Harley, Aitchison, Lyster & Land 1996, citing the Central Statistic Service 1991). The wide use of literacy as an entry requirement for training in income generating skills and entrepreneurship has therefore excluded those who have been illiterate, while literacy based entry requirements have marginalised women from many training opportunities.

If training is to be effective in addressing the needs of adult education and employment creation (Lee 1993), it must be directly linked to the socio-cultural environment from which the adults come; and is compelled to accommodate the background and experience of the trainees (HSRC/NTB 1989). This demands a revisitation of the entry requirements for skills training. Alternative entry criteria should recognise the dilemmas faced by Black women regarding the reasons for their lack of education, their household dynamics and cultural constraints.

Some factors cited in explanation of women's higher rates of illiteracy have been: a lack of time to improve their education levels, fatigue, husbands' disapproval of educational advancement, restrictive child care responsibilities, labour and time intensive domestic chores, frequent and early pregnancies, and a lack of access to transportation to attend courses (Lee 1993, Ballara 1991, Epstein 1990). The same factors have been cited by (Ballara 1991) as reasons why women's attendance at training courses has been irregular and dropout rates have been high.

Despite the above factors, poverty has been cited as the main factor preventing women from active participation in educational activities in general (Ballara 1991). Similarly, poverty has forced women into participation in the informal sector (Epstein 1990). Women have predominated in the South African informal sector; but have concentrated their efforts in a narrow range of the least lucrative activities as "desperation strategies" to resist poverty (Preston-Whyte & Nene 1991, p 241). A factor that has attracted women to this sector has been that no specific level of education has been required (Okello 1989). In addition, women have found a market for their existing skills (Carr 1993, Preston-Whyte & Nene 1991). Despite its suitability to women's situations, women in the informal sector have been limited in their progress by factors such as the following: a shortage of finance, lack of marketing skills, inadequate access to technological information, weak accounting, lack of basic managerial skills to keep records, social values and attitudes of women and towards women, family commitments and responsibilities, lack of appropriate domestic technology that has lead to labour and time intensive housekeeping, lack of time, limited mobility, and inadequate experience beyond

their own environments (Preston-Whyte & Nene 1991, Epstein 1990, Hall 1990, Okelo 1989). These factors clearly relate to either women's illiteracy (or functional illiteracy) or to those factors furnished for women's lack of education. There is, therefore, considerable overlap between the factors that contribute to women's illiteracy, poverty, entry into the informal sector and the low economic return of their activities within the sector. It is further proposed that the overlapping factors that characterise constraints in each of these fields could be used as predictors of women's potential for training in income generation skills. The reasons for this are described below.

Women have faced cultural restrictions, have carried multiple roles and responsibilities (household, reproductive, productive, and community), have actively managed scarce resources, have had high levels of illiteracy, and have experienced a general lack of access to formal education (Bullock 1994, Moser 1993, Ballara 1991, Epstein 1990, Cornia 1988). Yet, women in developing countries have developed management skills to cope in these extremely demanding situations (Balkrishnan, Firebaugh & Stafford 1986). Rogers (1990) has explained that all development has involved the introduction of some social and environmental changes, which in turn have created demands to be met by the participants. It is therefore also postulated that women's home management parameters could be used as determinants of their ability to adapt to the demands of a training situation, and therefore could be used as predictors of attendance at training courses and achievement within the courses.

As discussed, many factors would play a role in women's opportunities to undertake development training (such as a skills training course) away from home. An appreciation of the relationships between poverty (lack of resources), women's literacy (or lack of it), their informal sector participation and women's management, could lead to valuable insights in the selection of alternative, appropriate, and more contextually sensitive entry criteria for skills training courses. These four areas hinge mainly on:

- ▼ the roles and responsibilities of women within households,
- ▼ household factors (such as number of small children, household size, and available labour force),
- ▼ household functioning characteristics (such as division of labour),
- ▼ and women's home management practices.

Use of a more universal means (rather than literacy) as an entry requirement for training selection could grant opportunities for training to those women presently excluded due to illiteracy. As has been highlighted, women have been marginalised through limited access to formal education, and further by the entry demands of adult education courses. Through more effective selection, training could be targeted at women whose management practices and household attributes would facilitate their attendance and successful completion of training.

Multiple benefits could be derived from greater access to training for illiterate women. Firstly, women may be alerted to the need for literacy. Ballara (1991) has reported that the acquisition of income generating skills has been seen to motivate women towards a more active role in literacy activities. Secondly, through the acquisition of new or improved skills, women may gain a competitive advantage over those already in the informal sector. Since product inconsistencies (Hirschowitz, Slabbert, Clark & van der Walt 1989) and the lack of product diversity (Manning 1993) have been cited as failings within the informal sector, skills training could lead to increased economic return, and a subsequent reduction in female poverty. Thirdly, participation in the program would take women out of their home environment, expose them to new ideas, and may raise their status within the household. It has been observed that where women have produced goods, they have tended to have more power and prestige than those women who do not (Huber 1988). Fourthly, the income generated by using the acquired skills, and the status so gained, may make literacy education affordable for women.

NGO's that could use such selection criteria may be able to secure funding more readily if the above factors could ensure successful training and promise greater benefit to the communities the NGO's serve. In addition, the selection instrument may be extended to the selection of woman candidates for other training or for some vocations such as field workers where management skills would be important.

1.2 Statement of the problem

This study has set out to establish the relationships of home management parameters, and selected household attributes, to the attendance and achievement of Black women engaged in skills training courses in KwaZulu-Natal, with the view to determining the variables' value as more precise and impartial entry requirements than literacy.

1.3 Measurement parameters

The dependent measurement parameters used for this study were: attendance at the course, successful completion of the course, and education level attained. The independent parameters have included course related factors, home management practices and household attributes. Variables were derived from responses to a questionnaire.

Attendance: the number of lessons attended, as a percentage recorded by course teachers.

Successful completion of the course was measured by the symbol assigned to each women by teachers or institutions upon termination of the courses. This was also given a binomial rating for statistical analysis of successfully met course requirements against unmet requirements.

Education was treated as a dependent variable in analyses for the first four hypotheses to isolate its influence from the independent variables measured. Education level was derived from answers recorded by the women.

Variables related to the course were included to control for variations between courses and institutions. These have included: if overnight accommodation was provided for course participants, if the course was income generation orientated or not, type of skill taught, the duration of the course, and the day on which the interviews were conducted.

The *home management parameters* used for this study consisted of selected women's activities representative of management practices, and factors related to household management. These were grouped into four categories: demands, resources, throughput activities (planning, delegating and decision making) and throughput related activities (management style, busyness, task and time orientation).

Household attributes have included variables for household composition and demographic factors. The household composition variables included were: the number of men, women, school boys and school girls. Household demographic variables represented: household size and number of earners. A further two demographic variables were used as indicators of distance of the home from the training centre. These were: transport mode used by women to get to the courses, and the time taken for travel.

1.4 Hypotheses

Hypothesis one: Variables related to the courses themselves do not affect women's attendance and training success.

Hypothesis two: Significant relationships exist between women's home management parameters and their attendance and successful completion of skills training.

Hypothesis three: The selected household attribute variables are significantly related to women's attendance and successful completion of skills training.

Hypothesis four: Women's education levels do not significantly affect the course related, home management and household attribute variables included in the study.

Hypothesis five: The variables used as indicators of women's home management practices and household attributes could be used as more precise and impartial entry guidelines for successful skills training than education level.

1.5 Study limitations

The study did not allow for an assessment of whether the participants in the separate courses at participating institutions differed from those in institutions not included in the study. Whether the women who were surveyed differed from those who did not register for skills training, was also not investigated. No evaluation was carried out regarding the comparative effectiveness or quality of training between courses and institutions.

A language barrier existed between the researcher and the women. This demanded the use of a trained assistant. Use of a questionnaire with standardised responses controlled for this, but limited the dialogue between the women and the researcher. The use of the questionnaire tended to lead to forced response situations that may have limited the insight into women's responses.

1.6 Definition of terms

The term *developing countries* has been used in preference to 'Third World countries'. As discussed by Hurley (1990), neither term has satisfactorily described the group of countries (with varying environments, size and economies) embraced. However, so termed "developing countries" have certain important factors in common. Primarily these countries were former colonies in the empires of powerful European nations during the first half of this century (Beddis 1989). Although now independent, most developing countries have relied on the patronage of former colonial powers and emerging influential nations. Some developing countries have experienced dramatic industrialisation processes, but many remain in poverty and face enormous international debt (Beddis 1989).

The *informal sector* has been taken to include “any form of economic activity that has occurred outside of the sphere of official rules and regulations” (Kirsten 1991, p 149).

Home management: has been defined as purposeful use of household and personal resources to achieve specific goals through everyday decisions, and purposeful actions (Rice & Tucker 1986).

Home management practices: activities carried out during management: decision making, prioritising, planning, and organising (Rice & Tucker 1986).

The term “*home management parameters*” has been used to refer to activities and factors that make up the above processes or which could imply that they have taken place (for example: delegation, task orientation etc.).

Household has been taken to indicate the unit where children and adults reside permanently together, in one or more houses at the same location, but belong to a family or an extended family. Although family management researchers and theorists (Heck, Winter & Stafford 1992, Deacon & Firebaugh 1988, Rice & Tucker 1986, Walker & Woods 1976) have preferred the term ‘family’, the term ‘household’ has been preferred for this study.

Non-Governmental Organisation: any autonomous organisation that has been privately funded (in part or full), whose mission has aimed at development of the community it serves (Hirschowitz *et al* 1989). Women were surveyed at courses offered by NGO’s at *training institutions* run by these organisations. The terms have been differentiated as the location of the institution and the NGO’s administrative centre differed in some cases.

Skills training is that in which a trainer has imparted skills to a group of people so that they could use what they have learnt after the course (Hirschowitz *et al* 1989). The skills selected for the study were any skills taught to women that could have lead to income generating activities.

1.7 Abbreviations

ABE:	Adult Basic Education
ABET:	Adult Basic Education Training
CSD:	Centre of Science Development
HSRC:	Human Sciences Research Council
IT:	Intermediate Technology
NTB:	National Training Board

1.8 Assumptions

It was assumed that all women participating in the project had complied with the course prerequisites and that reading and writing skills were not required during the course. In addition, it was assumed that management practices and household attributes were not directly related to literacy skills, and therefore the participants in the courses would have displayed varied levels of management and assorted household attributes.

It has been assumed that the differences between courses and institutions did not bias the results, and that the courses included in the study represented skills training courses in KwaZulu-Natal.

Data was collected via questionnaires in either English and Zulu. It was assumed that the questions were unambiguously phrased and that translation into Zulu did not alter the meaning or interpretation of the questions. The assumption was also made that where women were assisted with reading and answering the questions, the questions were not rephrased or interpreted by the trained assistant.

It was assumed that the answers given by the women were an honest indication of their situations, and that the grades given by the institutions were true reflections of skill mastery achieved by the participants and were not influenced by a need to compete with

other institutions in the study. To encourage honesty, assurance of the confidentiality of answers and results was given to all participants.

All women present in class at the time of the interviews were interviewed. It was assumed that no person was absent on the day of the interviews, but if so, it was assumed that those who were present represented the class.

A further assumption was that women surveyed were responsible for housework activities and that participation in training would alter their personal and household related demands.

Finally, it was assumed that the skill levels of women entering the courses were compatible, ie those entering a basic sewing course could not sew upon registration for the course.

1.9 Summary

The importance of appropriate entry criteria for skills training courses aimed at Black South African women has been outlined. To be effective, appropriate alternative entry guidelines for women's skills training courses for income generation must recognise women's lack of education, household dynamics and cultural restraints. It has been postulated that home management related factors could be used as more impartial, precise and contextually sensitive determinants of women's attendance and success at skills training courses than women's education levels. Therefore, this study has investigated the relationship between women's attendance and successful completion of training and selected home management variables. The sample was drawn from skills training courses in KwaZulu-Natal.

The background to this study has been outlined through the description of the study problem, conceptual parameters, hypotheses, limitations, assumptions and conceptual definitions. Further development of the argument for using home management related

variables has been presented in the review of the related literature. The procedures and techniques employed have been discussed in the methodology chapter. Following this, the sample has been described, and the results presented and discussed. Finally, conclusions have been drawn and recommendations for improvement of the study and for further research have been suggested.

CHAPTER 2 REVIEW OF RELATED LITERATURE

2.1 Introduction

To be effective, skills training for income generating opportunities must accommodate the background and experience of the participants (Lee 1993). Buvinic & Lycette (1988) have asserted that many factors have limited women's access to training: conflicts between instruction hours and inflexible work and family responsibilities, distance of training courses from women's homes and lack of cheap transport to get to courses. If these factors are taken into account in designing development and training programs targeted at women, women's access to such programs may be improved.

In addition to the above factors, educational prerequisites have barred many women from training courses (Buvinic & Lycette 1988). Harper (1984a) has reported that 62% of programs in an international study required basic literacy as a prerequisite for income generation or skills training. Using literacy as an entry prerequisite for skills training has further restricted women's skill development, ignoring the dilemmas surrounding women's need for income generation, and demands for skill development within the informal sector. The following factors highlight some examples related to the inappropriateness of skills training courses offered to women in developing countries:

- ▼ Income generation schemes (initiatives as diverse as small business promotion schemes, co-operative shops, job creation schemes, sewing circles and youth training programs) have failed because they have not addressed the most fundamental causes of poverty (education, health care provision, legal and political systems and socio-cultural factors) (Hurley 1990).
- ▼ Samarasinghe (1993) has described literacy as the result of complex, discriminatory and disadvantaging social practices: factors that have also contributed to the poverty experienced by women in developing countries (Buvinic & Lycette 1988). Yet literacy has been widely used as an entry requirement for training (highlighted above).

- ▼ Women's multiple roles and the priority their cultures have placed on familial responsibilities, have severely limited the radius within which women in developing countries have operated. This may have limited their effective participation in training courses unless women and their households have adapted to the resultant changes (Epstein 1990).
- ▼ Ballara (1991) has described women's illiteracy, poverty, frequent pregnancies and their lack of time as major barriers to their enrolment and attendance at training courses.

The principal actor in the training process should be the trainee with his aspirations, problems and innate ability (HSRC\NTB 1989). However, women have been marginalised from skills and entrepreneurship training through selection prerequisites that have demanded literacy. Effective selection procedures should make it possible to adjust training programs to suit the experience and abilities of those selected for training (HSRC\NTB1989). Women's predominance in the informal sector (Preston-Whyte & Nene 1991), the limited range of skills employed (Friedman & Hambridge 1991), the large number of trading and handcraft-based enterprises (Hirschowitz, Accutt & Koch 1991), and the low income derived from their informal sector activities (Preston-Whyte & Nene 1991), could suggest a need for training in marketable skills.

In addition, Rogers (1990) has suggested that the likelihood of project success can be improved if the dynamics governing the allocation of resources and responsibilities within households are understood and taken into account in the planning process. So too, Balakrishnan *et al* (1986, p 185) have claimed that: "Family resource management relevant to rural families in Third World countries can produce useful information for development projects". Women in developing countries have cultivated resource allocation strategies (practices central to family management) to cope with the demanding situations caused by their lack of personal and household income (Balakrishnan *et al* 1986). Should women engage in skills training courses away from their homes, they might be expected to carry their normal household roles and responsibilities besides coping with the added demands associated with the training. Participation in development

programs (ie participation in a training course) involves the introduction of some economic or environmental changes that, in turn, create demands to be met by the participants and their households (Rogers 1990).

It follows that an understanding of household functioning, particularly the role and responsibilities of women within the household, would permit a more accurate prediction of the outcome of women's participation in development programs. This would include an appreciation of the allocation of goods and responsibilities among members of households, which influences the capability of the women to adapt to and manage change. An understanding of why women have been attracted to the informal sector and the associated problems is developed in the sections which follow. A reassessment of the validity of using literacy as an entry prerequisite may be necessary.

This review of related literature sets out to briefly outline women's involvement in the informal sector. The factors which attract women in developing countries to informal sector involvement will be explored to highlight aspects planners need to take into account when planning skills training programs for women. This section will also provide insight into why literacy prerequisites may disadvantage women in need of skills training. Literacy as a training prerequisite will be discussed. Aspects for designing women centred development and training programs will be outlined with a view to establishing the validity of using family management factors as selection determinants in place of literacy. The structure followed in the development of this argument is illustrated on the next page.

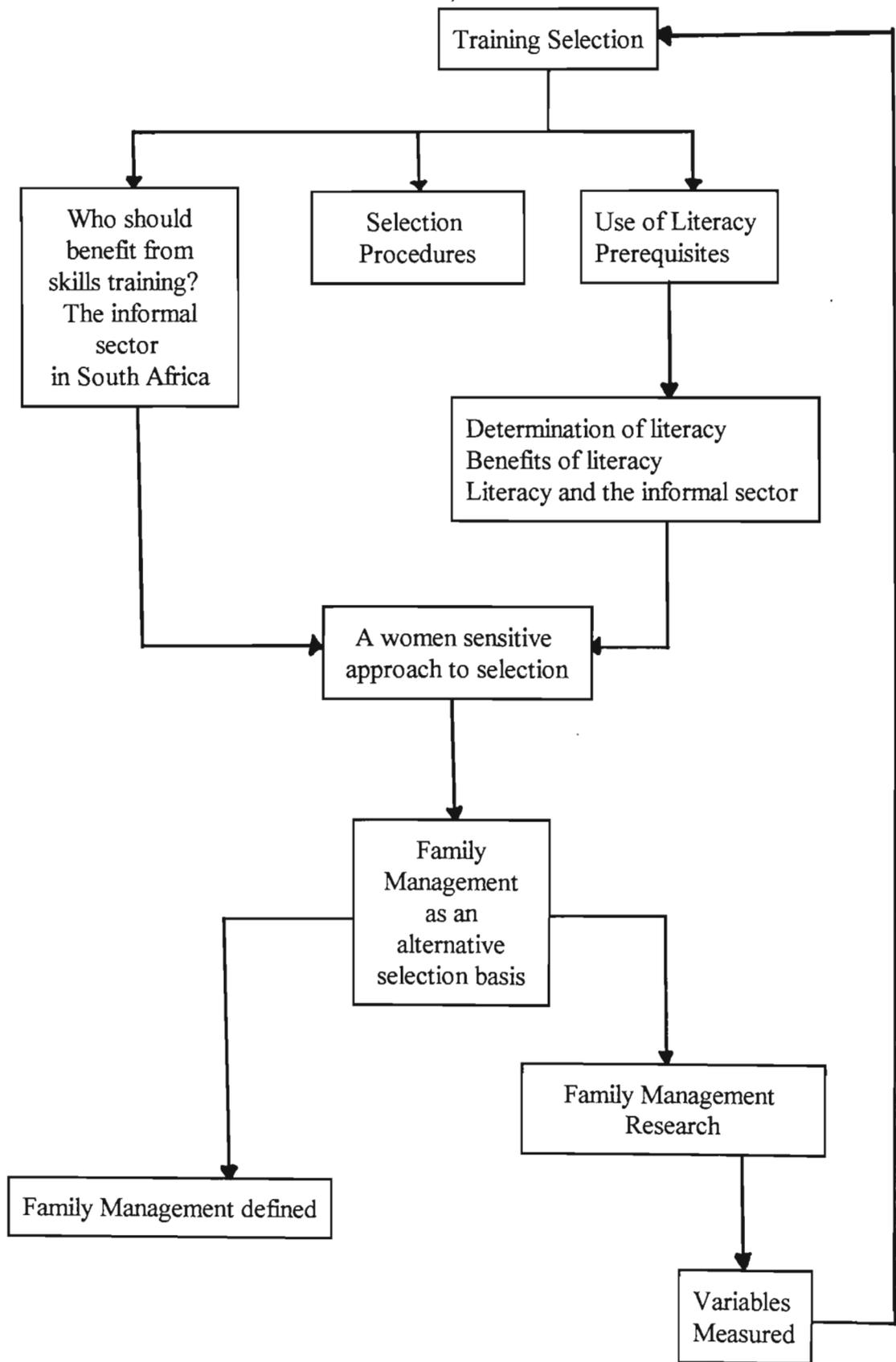


Figure 1 Schematic outline of review of related literature

2.2 Selection procedures for skills training courses

During the past few years skills training courses for income generation and self-employment have mushroomed in South Africa (Lee 1993). Training of this nature has been costly, and despite the proliferation of NGO's providing training, facilities have been scarce (Lee 1993, HSRC\NTB 1989). Although self-selection, based on achievement motivation, has been proposed as the best model for selection of income generation orientated training candidates (HSRC\NTB 1989), the majority of trainers interviewed in a South African study (HSRC\NTB 1989) favoured trainee selection. The methods employed by training institutions and organisations have varied considerably (as discussed below) but no consensus has been reached regarding the best selection criteria to apply, or what procedure would be most accurate in determining if applicants satisfy the criteria. The major selection methods are discussed below.

2.2.1 Selection based on entrepreneurial potential

A lack of consensus regarding what has characterised 'entrepreneurship' has compounded the determination of selection criteria for participants of entrepreneurship training courses (Chell 1990). The idea proposed by Kaunda & Katabaro (1995) that an entrepreneur is someone who has perceived profitable opportunities, taken risks and organised business enterprises (in other words, all who have established business enterprises are entrepreneurs) has been opposed by authors such as Macleod (1995), Hirschowitz *et al* (1989), and Martin (1982). These authors have asserted that the practice of *innovation* has differentiated *entrepreneurial activity* from *business enterprise*. If innovation is taken to mean any change, however small, in the skills, techniques, processes, equipment type or organisation of production, that enables people better to cope with or take advantage of particular *business* circumstances (definition adapted from Appleton's (1995) definition of technical innovation), then many informal sector activities in developing countries (to be discussed later), could be classified as entrepreneurial activities.

In addition, researchers have not yet successfully isolated the personal characteristics that distinguish an entrepreneur from other business people (Gasse 1982). The table below outlines the broad *attributes* associated with an entrepreneur.

Table 1 Personal attributes associated with entrepreneurship

Initiative	Strong persuasive powers
Flexibility	Moderate risk taking
Creativity	Independence/autonomy
Imagination	Problem solving ability
Leadership	Belief in control of one's destiny
Hard working	Need for achievement

(Gibb 1988, cited by Erwee 1989)

It has been suggested then that entrepreneurship is not something either present in an individual or absent from his/her make up, but rather, it has been proposed that a continuum exists between non-entrepreneurship and entrepreneurial ability (HSRC\NTB 1989). Consequently, the entrepreneurship training programs designed by Harper (1984b), have given preference to those who: firstly have had a clear idea of the nature of the business they want to start, and secondly, have had some relevant experience. The HSRC\NTB (1989) and Harper (1984a) have stressed the role of previous business exposure as a prerequisite for entrepreneurship training. Harper (1984a) has reported that the success rates of programs that have relied heavily on participants' experience as a basis for selection, have been higher than those that placed more weight on interview and test based selection.

More specifically, courses designed by Krause-Harper & Harper (1992) have focussed on those who had already identified a market and had begun selling a few sample products (motivated by their experience that starting a small enterprise has been seen as a far more positive indicator of entrepreneurial potential than any kind of test or interview). Furthermore, trainers surveyed in the HSRC\NTB (1989) study felt the following aspects would also be important in selection for income generation skills training: interest in business, initiative, ability to start a new project, high need for achievement, self-

confidence, and a willingness to take risks, learn and persevere. Harper's (1984a) interview schedule has been used to render a cumulative, subjective score of entrepreneurship potential based on responses to questions related to entrepreneurial characteristics, resourcefulness and business ideas. In line with Harper's experience, additional points have been assigned to the cumulative score, if:

- ▼ the person was more than 30 years of age,
- ▼ single woman were more than 20 years old,
- ▼ vocational training had previously been completed, and
- ▼ the applicant's father was a self-employed artisan (Harper 1984a).

2.2.2 Psychological tests

Krause-Harper & Haper (1992) have proposed that psychological tests may be more effective, less complicated, and less prone to error, than sophisticated selection methods that may demand a great deal from the assessor in terms of subjective evaluation. However, psychological tests for entrepreneurial potential have been notoriously difficult to administer and interpret. A trained and experienced psychologist is required to be present for these tests (Krause-Harper & Harper 1992). Harper's (1984a) experience of small enterprises in Nepal has been that participants who performed well on psychological tests used for selection were less likely to start businesses after the program than those who performed badly in the tests! Therefore, such tests may not be appropriate for use by NGO's in selection of participants for skills or entrepreneurship training.

2.2.3 Written tests

Similarly, Krause-Harper & Harper (1992) have reported that some trainers have used written tests as part of the selection procedure, but experience has suggested that these have been a poor indicator of a person's potential for income generation from the skills taught. It has been observed that women with more education performed better in such tests, but were not necessarily the best businesswomen (Krause-Harper & Harper 1992).

This has been supported by Harper's (1984a) findings that education has had no apparent bearing on business success. Samarasinghe's (1993) observations of women's home based income generating activities in Sri Lanka, was that the activities did not demand any specific level of education. It seems then, that written tests for income generation potential would provide a measure of literacy, more so than a measure of entrepreneurial potential. In addition, illiterate women would be immediately excluded.

2.2.4 Other criteria

The above considerations (especially those of Harper 1984a, and Krause-Harper & Harper 1992) have shown the significance of situational aspects: specifically the applicants' backgrounds, skills and personal circumstances. Factors in addition to those above have been included in an entrepreneurial selection program called 'Select' used in Britain by Page & Willmer (1990). Their program was developed to reduce the losses and risks involved in starting a small business (ie. not for training applicant selection). The computer aided test has attempted to identify transferable skills that might be appropriate in a new venture, and to identify areas where further training would be appropriate. Forty-six questions were included under the following headings: work activities (preference for), personal abilities (assessment of), personal values and conditions sought in work. Although not specifically used for applicant selection, this program further highlights the influence of situational factors in the selection of candidates for training.

2.2.5 Contextually sensitive selection considerations

Besides the above factors, the criteria applied in the selection of Black women for training in South Africa has to be contextually sensitive (HSRC\NTB 1989). In as much as a person's domestic environment has a marked influence on him/her as a worker (or a trainee), so too in selection for skills and entrepreneurship training, the multiplicity of difficulties experienced by Black people in daily life must be taken into account (HSRC\NTB 1989). The absence of parental control during childhood, inferior schooling, poverty, poor housing, deprivation, hunger and many other difficulties have made life for

many Black trainees particularly complex, and affect learning and educational achievement (van Niekerk 1996, HSRC\NTB 1989). Education could be a stepping stone to economic self-sufficiency, but most education systems have been irrelevant concerning the needs of people, especially women (Roodkowsky 1983). A strong academic bias that has done little to prepare children for the world of work has characterised the South African education system; more so in the apartheid era because of shortages of facilities and well-educated teachers in Black schools (HSRC\NTB 1989).

In the light of the above discussion, is it then fair to use literacy as *the* sole entry requirement for women's skills and entrepreneurship training in South Africa? To design development and training programs that meet the needs of women's income generation orientated skill training, an understanding of why skills and entrepreneurship training is important. Such an understanding can only develop following an appreciation of the role of women in South Africa's informal sector, and the difficulties encountered.

2.3 Women's participation in South Africa's informal sector

Women predominate in the informal economy (Friedman & Hambridge 1991), yet it has been reported that women's backgrounds and skills have been judged as not conforming to those associated with the "ideal entrepreneur". This in turn, has lead to an underestimation of the entrepreneurial capacity of women (Hall 1990). Consequently, Roodkowsky (1983) has described the skills training offered to women by development agencies as "female prone" (a term used to describe the skills at which women are supposedly best at: such as sewing, knitting, embroidery). These skills have had low economic return and are easily replaced by the products of the formal sector. This will be further addressed in the discussion regarding the range or skills and their economic return within the informal sector.

Epstein (1990) has proposed that poverty, accompanied by lack of income earning opportunities, rather than profit incentives, have together motivated a great many rural women to become 'petty entrepreneurs'. In fact, women's informal sector activities have

been vital to household survival in developing countries. However, their activities have generally not progressed beyond subsistence levels and have therefore been seen as 'desperation strategies' (Preston-Whyte & Nene 1991, p 229).

Given the multiple roles women have performed, and the priority placed on familial responsibilities by their cultures, the radius within which many women have operated has been constrained, and so too, have the kinds of activities they have performed (Epstein 1990). Women's participation in the informal economy is discussed below as an aid to understanding the reasons for women's predominance in this sector and highlight the need for skills and entrepreneurship training for women. The nature and scope of women's involvement, and constraints that have limited their activities, will be outlined, and the attractiveness of the informal sector to women will be investigated. Where possible, South African studies have been referred to.

2.3.1 Women's activities in the informal sector

The informal sector has made up the bulk of Africa's economy and has become the backbone of the non-agricultural sector (Dessing 1990). In addition, informal sector activities have accounted for 75% of urban employment in Sub-Saharan Africa (World Bank 1990). Despite the seemingly low (3%) contribution of the informal sector to the Gross Domestic Product (Kirsten 1991), a study of households in KwaZulu-Natal revealed that 73% of the households had gained some income from informal sources, while 89% generated income from non-agriculture related informal sector activities (Preston-Whyte & Nene 1991). Most participants have either combined local wage work with informal sector activities; or entered several lines of informal businesses (McIntosh 1991). Involvement has therefore not always been constant, but has provided a source of income when needed. This has been the trend in developing countries, where most women have engaged in informal income generating activities at some time, to increase household resources (Epstein 1990).

In 1984 it was estimated that 70% of small businesses owned by Black South Africans were owned by women (Mkalipe 1984, cited by Erwee 1989). Therefore women have played a major role in this sector, but again, due to the 'hidden nature' of the sector, quantifying the exact contribution of women in this sector has been difficult. So too, comparisons of women's contribution with those of men have been limited (Kirsten 1991).

Range of informal sector activities: The bulk of micro-enterprises in Africa has been concentrated in the production of simple consumer goods and services, catering primarily for the needs of low income urban and rural households (Desing 1990). These enterprises have included a wide range of manufacturing, trade and service activities (Okelo 1989). The following figure reflects the range of activities and comparative involvement in these activities by Black women in South Africa.

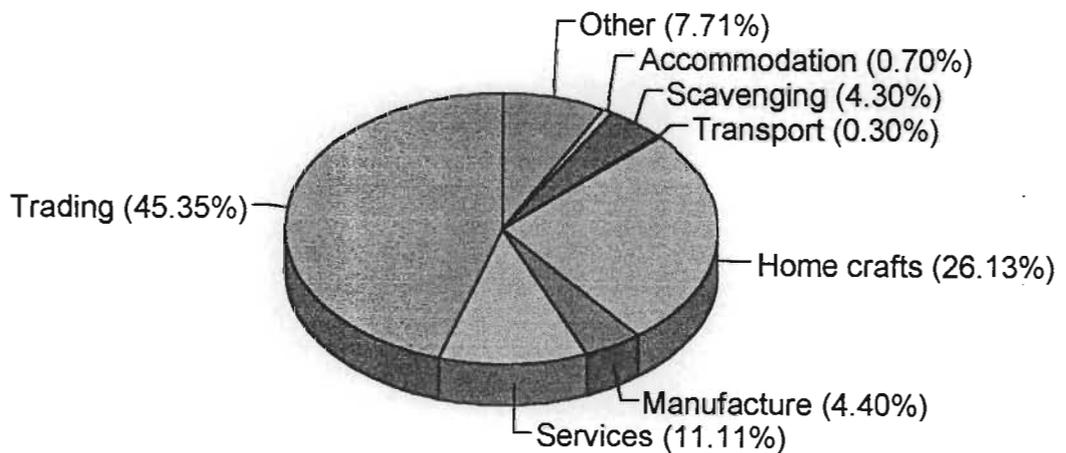


Figure 2 Black women's activities in South Africa's informal sector (after Hirschowitz *et al* 1991)

As illustrated above, trading activities have predominated among informal sector activities (Okelo 1989). Muller (1987, cited by McIntosh 1991) has reported that approximately 70% of households involved in the informal sector have made money through producing and selling food, clothing and local craft items on a small, not very lucrative scale.

Carr (1984) has reported that women have tended to become involved in activities that have stemmed primarily from their domestic roles and skills. A study conducted among Black women in KwaZulu-Natal by Preston-Whyte & Nene (1991) has supported this. It was found that in 80% of businesses, the women had found a market for existing skills. Only 17% of the women interviewed had learnt a new business skill. Apart from domestic related skills, trading has secured the greatest share of activities. Trading agricultural produce has traditionally been a female activity (Saito, Mekonnen & Spurling 1994), which may explain the predominance of this activity in the informal sector. Epstein (1990) has reported that in many developing countries, most rural women have had some experience of trading or were traders at one time or another. This author has cited the example of a study in Kenya where approximately 70% of peasant women were involved in trading and 50% marketed their own crops.

The prevalence of home crafts within the sector may be related to many circumstances within the women's environments, for example: limited mobility, illiteracy, socioeconomic prescriptions, and household dynamics (Carr 1984). These factors will be discussed later. Often women's productive activities have been confined to handcrafts. This business has been risky, at the mercy of fashion and dependent on the establishment of markets outside the community, yet women have had to rely on the income generated from handcraft production for household survival (Car 1984). Whether this has suggested that women have not had the creativity to employ other skills has not been clear. Preston-Whyte & Nene (1991) have reported that the two major constraints that have limited the income generating potential of the rural informal sector have been the limited variety of skills and services offered by informal sector participants; and the general lack of money in circulation within this sector, especially for women.

To summarise: women have predominated in the informal sector but their activities within the sector have demonstrated the limited range of skills at their disposal, producing products which lack diversity. Skills training is necessary to:

- ▼ introduce women to skills other than those related to their domestic activities,
- ▼ upgrade existing skills and
- ▼ expose women to ideas which could lead to imaginative product diversification.

However, Hall's (1990) claims that women's backgrounds and skills have been judged as not conforming to those of the 'ideal entrepreneur' may account for the lack of sensitivity portrayed in the design of skills training programs for women. Despite program planners' assumptions, women have predominated in the informal sector and are in need of appropriate skills training for income generation. An appreciation of why women have been attracted to this sector may dispel some misconceptions and provide clues to designing appropriate training programs.

2.3.2 Attractions and constraints

Women have primarily been attracted to the informal sector for the reasons cited in the table below. Preston-Whyte & Nene (1991) and Carr's (1984) findings (namely that women have concentrated in areas of economic activity that have been compatible with their traditional and reproductive roles), have confirmed these factors. The roles and responsibilities of women in developing countries are explored later.

Table 2 Attractions of the informal sector

<p>Ease of entry. The flexible and informal structure. Low start-up capital required. Little or no education has been required. Certain activities have been associated with low financial risk. Participation has been found to be highly flexible in terms of time and activities.</p>

(Carr 1993, Okelo 1989)

Three major aspects emerge from the list of attractions: the minimal capital investment and financial risk associated with informal sector involvement, the flexible nature of activities and the lack of educational prerequisites. Money in many South African rural communities has been scarce, while the burden of financial survival has fallen disproportionately on women (Preston-Whyte & Nene 1991). Many women have entered the informal sector out of necessity. Harper and Kavura (1982) have confirmed that often a need for self-help has motivated entrepreneurs. Women and households have been dependent on the income from women's informal sector activities.

Constraining factors at the structural, community and household levels, in relation to women's reproductive and productive roles have led to their predominance in the informal sector (Friedman & Hambridge 1989). The major constraints have been outlined in the table below. Selected factors related to the research problem are discussed below.

Table 3 Constraints to women's informal sector participation

<p>Shortage of finance (especially their own). Lack of marketing skills. Inadequate access to technological information. Weak accounting. Lack basic managerial skills to keep records. Restrictions by government policies. Social values and attitudes of women and towards women. Family commitments and responsibilities. Women with families are not considered "creditworthy". Lack of appropriate domestic technology. Labour and time intensive housekeeping. Lack of time. Limited mobility. Inadequate experience beyond their own environments. Costs relative to the business are hardly ever quantified and costed.</p>
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(Preston-Whyte & Nene 1991, Epstein 1990, Hall 1990, Okelo 1989)

Epstein (1990) has proposed that the multiple roles women perform and the priority many cultures have placed on familial responsibilities has imposed constraints not only on the radius within which women have operated, but also the kinds of entrepreneurial activities they have performed. Within many cultures, men have regulated women's economic

activities. “Women’s success in the rural informal sector demands male cooperation, for which the tradeoffs may be their continued subordination” (Preston-Whyte & Nene 1991, p 230). Women have been required to gain the permission of their husbands to sell items outside their homes; they have frequently required the financial backing of men to secure loans or purchase stock; and have often been restricted in their realm of decision making and business affairs by men (Jaquette 1993). In addition, men have frequently taken over control of the incomes earned by women (Dwyer & Bruce 1988).

If women have engaged in informal sector activities, they have generated small incomes, mostly from local trading (clarification to follow). To extend their incomes, women have had to move out of rural areas or liberate themselves from the social structures imposed on them (Preston-Whyte & Nene 1991). For example Jaquette (1993) has reported that where women have earned their own money, they have strengthened their participation in household decision making and household bargaining positions. Entry into the informal sector may have been due to women’s attempts to liberate themselves from male domination.

In many rural cultures, migrancy has favoured men over women due to the nature of formal employment. Men have not permitted their wives and daughters to work away from home. Women’s lack of exposure to new ideas and innovations, their restricted access to labour and time saving devices and technologies, and their limited mobility has thwarted the ingenuity and creativity of women’s business ventures and limited product diversity (Friedman & Hambridge 1991). It has been observed that when women have travelled beyond their immediate environments and have returned to the local informal sector, they have carried out different activities from their neighbours in the community, and thus generated a higher return (Preston-Whyte & Nene 1991). Therefore, it can be concluded that socio-cultural factors have lead to women’s entry into the informal sector (motivated by a desire for economic liberation) and have also stifled women’s mobility and scope of involvement.

The incidence of households headed by women has increased (Bullock 1992). Buvinic & Lycette (1988) have estimated that between one-third and one-half of all rural households in the developing countries have women heads. In addition, women headed households have

been reported by these authors, to be poorer than those jointly headed or headed by a man. This may be attributed to the fact that women headed households have had fewer secondary earners and more dependants than other households (Buvinic & Lycette 1988). "In Latin America, the Caribbean, and Africa, female headed households are on average worse off" (Buvinic & Lycette 1988, p 151). The incidence of female poverty in general, but specifically among female headed households, may explain the predominance of women in the informal sector. Women's low earnings have been directly related both to their limited access to capital and modern technologies and the low production, labour intensive work they performed (Buvinic & Lycette 1988). Although women have turned to informal sector activities as a survival strategy, their incomes from these activities have been small (Preston-Whyte & Nene 1991). This may be linked to the constraints listed in Table 3 above (namely: women with families have not been considered 'creditworthy', limiting socio-cultural values, a lack of labour saving domestic technology, limited mobility).

Due to the flexibility of time and activities, and the ease of entry into the informal sector, women have moved in and out of the sector, as and when household incomes have required a boost: "For some women informal sector work has been necessary for survival, while others have engaged in these activities when money was needed, and so some women move in and out of the sector, depending on their specific needs, and the stage in the domestic life cycle" (Friedman & Hambridge 1991, p 172). Although the informal sector has attracted women in need of augmenting household incomes, some women prefer this type of work to formal wage work (Friedman & Hambridge 1991), and so not all women have entered the sector for reasons of survival or supplementation of household incomes.

2.5.3 Lessons from women's participation in informal sector activities

Women have been attracted to the sector because of its perceived flexibility of activities and suitability to their situations, household roles and responsibilities (defined later). Yet the same factors that have attracted women, have hindered their progress within the sector. These factors illustrate women's ability to overcome hurdles and manage in a diversity of situations. Some illustrative examples are given below.

First, the levels of skill and technology employed have led to the low start-up capital required by many businesses. Thus, women have operated at levels of activity best suited to their circumstances (McIntosh 1991). They have used available resources, family and personal savings. In this way, they have averted the problems experienced by women in accessing credit (Buvinic & Lycette 1988). Secondly, they have performed and produced most tasks on request (Ardington 1988), and so have catered for unregulated markets at prices agreed upon by the owner and customer. In addition, this has required less investment than other businesses, where stock levels have had to be maintained. Although skill levels and technologies applied have limited the scope of activities, they have also reduced the fixed costs of running a business. In contrast, the low level of skill may have contributed to the product inconsistencies associated with the informal sector, a further limitation to progress. Also, the lack of skill (especially skill variety) may account for the predominance of trading activities within the sector (see previous discussion).

Thirdly, the flexibility of informal sector activities has provided opportunities for income generation that have not necessarily conflicted with child care responsibilities. Women have organised the demands of informal production activities around their household tasks, roles and responsibilities, due to the type of activities carried out within the informal sector, and the flexible time demands involved in relation to formal employment. However, child care responsibilities have restricted women's activities (due to limited mobility) within the sector.

Finally, the informal sector has attracted women because of female illiteracy and the barriers related to a lack of education. Women's low education levels have often barred them from formal employment, have limited their access to technological information, impaired their skill development, and have reduced their access to household and community resources (Buvinic & Lycette 1988). Illiteracy has also limited business progress (Harper 1984a).

2.3.4 How could training help?

As discussed, women have predominated in the informal sector, but their activities have been confined to a narrow range of the least lucrative activities. Reasons for their predominance in this sector have been linked to socio-cultural factors, specifically the gender ascriptions that prescribe the roles and responsibilities of women in society. Therefore the flexible nature of activities in the sector and the ease of entry have attracted women to informal sector involvement, driven too, by the need for supplementary household income. Many women have entered the informal sector due to their exclusion from the formal sector, and their lack of education. However, women's lack of education has been a hindrance to their progress within the informal sector. Training in entrepreneurship and income generation skills could help women in making their ventures more viable and their products more diversified and marketable. Hurley (1990) has suggested that such training would improve women's income generating potential and develop human capital and skills.

2.4 Literacy as an entry criterion

Ballara (1991) has stated that one-third of the world's women are illiterate, compared to one-fifth for men. The lower level of female literacy has been attributed to complex socio-cultural systems of deprivation and discrimination (Suratwala 1992). Nonformal education has attempted to widen people's skills and their ability to use new knowledge and techniques for development purposes (Krause-Harper & Harper 1992). On the

contrary, Harper (1984a) has confirmed that many small scale entrepreneurs have gone into business because they lacked the educational qualifications for secure employment. In addition, it has been common belief that entrepreneurs have less education than the public (Boshoff, Bennett & Owusu 1992). This may be substantiated by findings reported by Harley *et al* (1996), as illustrated in Table 4 (opposite).

Table 4 Illiteracy per economic activity

Economic activity	Illiteracy
Formal sector	32%
Informal sector	67%
Unemployed	57%

(Harley *et al* 1996)

Since informal income generation has been a survival strategy for those who have little or no education (Cornia 1988), why exclude these people (in particular, women) from opportunities to gain new marketable skills and develop existing skills, through using literacy as an entry requirement? Ballara (1991) has observed that the acquisition of income generating skills has often motivated women to take a more active role in literacy activities.

The use of literacy as *the* entry prerequisite for skills and entrepreneurship training may seem a clear cut alternative to the methods outlined above (refer to section 2.2), but determination of literacy itself has been complicated. The following subsections describe the lack of consensus over the measurement standards for literacy; the benefits of being literate, and why reported female illiteracy rates have been higher than those for men.

2.4.1 How is literacy determined?

May (1995) has explained that at the least, a literate person should possess the reading and writing skills necessary to work and live in their society. A person who has been exposed to training which could develop literacy, but has remained unable to read, write or make sense of written materials required for proper functioning within society has been termed functionally illiterate (Cleaver undated). It has been estimated that 58% of the adult population of KwaZulu-Natal is illiterate (DBSA 1994, cited by Anon 1994), while

as much as 70% of the Black population in KwaZulu-Natal has been considered functionally illiterate (Anon 1995b). A national study by May (1995) has estimated the adult *literacy* rate to be 59,3% (ie 40.7% of the South African population was found illiterate). Within these studies, there has been a lack of consensus over how to assess literacy (May 1995). Table 5 (below) illustrates the lack of agreement and the variation in standards used.

Table 5 Number of years of schooling for literacy

Reference	Length of schooling	Criteria
Coetzee (1991)	4 - 6 years	Literate
van Heerden (1991)	5 years	Literate in countries where one dominant language spoken
HSRC (1989, cited by May 1995)	6 years	Literate
May (1995)	6 years	Literate
van Niekerk (1996)	6 years	Literate
DBSA (1994, cited by May 1995)	7 years	Literate (over 13 years old)
van Heerden (1991)	8 years	Literate in South Africa

Determination of a measurement standard for literacy has been more complex in multi-cultural societies where large proportions of a population have spoken many different languages (Coetzee 1991). Five years of schooling (equated with standard three level) has been used as the standard to classify people as literate in countries with one dominant language (van Heerden 1991). The following factors have complicated the establishment of a standard for literacy measurement in South Africa:

- ▼ Eleven official (recognised) languages have been declared (van Niekerk 1996).
- ▼ It has been estimated that 33% of Black pupils have dropped out of school at standard three level, equitable with the five years of schooling discussed above (Anon 1994).

- ▼ In addition, many Black people, illiterate in their home languages, live in a society for which literacy in English and/or Afrikaans has also been required for proper functioning within the society (HSRC\NTB 1989).

Most often, the number of years of schooling completed has been used to estimate literacy rates (May 1995). This has not however, accurately reflected the level of literacy, reading ability, nor schooling quality (van Niekerk 1996, van Heerden 1991, Behrman 1990). Attendance at school has also not guaranteed that a person has acquired the necessary skills for literacy (May 1995). Despite the problems outlined above, the number of years of schooling has been used for the determination of literacy (as seen in Table 5 above).

Some definitions of literacy have encompassed numeracy (van Niekerk 1996). Numeracy has been defined as the ability to cope confidently with the mathematical demands of adult life (Tomlin 1985). Numeracy may be more important than literacy for small business success (Schofield 1989). Many women entrepreneurs have lacked the skills necessary to manage the financial aspects of a business (Hurley 1990).

2.4.2 The benefits of being literate

Undeniably, literacy has facilitated access to information, granted access to new knowledge, allowed for better understanding of a wider range of views, and has led to a wider range of activities within the informal sector (Coetzee 1991, Oppong & Abu 1987). Women's empowerment in general, has depended on literacy (Ballara 1991), and has been essential for economic empowerment (Coetzee 1991). For many people, education has indicated socioeconomic well-being (Evans 1992). Improved literacy rates have had many effects. The trends listed in Table 6 (below) have been observed in societies with comparatively high rates of female literacy.

Table 6 Factors attributed to high rates of female literacy

<p style="text-align: center;"> More efficient use of resources. Higher incomes. More equitable distribution of income. Increased use of family planning. Greater school enrolment and attendance especially for daughters. Augmented participation in the labour force. Improved production and increased self-employment in the informal sector. Greater agricultural productivity. Reduced the birthrates. Decreased infant mortality rates. Fewer malnourished children. </p>

(Ballara 1991, Coetzee 1991, Evans 1990)

It has not been coincidental that poverty (or lack of resources) and illiteracy have been closely linked, interconnected and interrelated. Suratwala (1992) has proposed that people have not been poor because they are illiterate, but illiterate because they have been poor. Ballara (1991) has cited poverty as the major factor that has prevented women from taking an active part in educational activities. In addition, women in developing countries have not always regarded literacy as an immediate and important need: their condition of oppression and poverty have often been an obstacle to understanding the benefits of being literate (Ballara 1991).

Illiteracy has limited access to training, in that literacy has been used as a determinant of 'trainability' in the labour market (Coetzee 1991). Literacy has also been a prerequisite for vocational and technical training (van Niekerk 1996). Even at the level of extension, often the poorest and smallest farmers have been excluded from the benefits of extension services because extension officers have found it easier to work effectively with educated farmers who operate larger farms (Middleton, Ziderman & van Adams 1993). Literacy has also been used as a requirement for entry into skills training and training for entrepreneurship (Harper 1984a) as previously discussed. Krause-Harper & Harper (1992) have explained that illiterate people would be unlikely to take full advantage of the entrepreneurship training courses designed by them. However, they have cautioned that this should not be taken to infer that illiterate people cannot make a success of their

own business. As previously discussed, their observation has been that formal educational qualifications have not been a necessary criterion for business success.

Literacy is not a precondition for an intelligent understanding of a problem or a situation in practical life. Suratwala (1992, p 123) has stated: “The contribution of the silent illiterate worker as the producer of goods and services has been remarkable. They have produced positive indigenous materials, techniques and products, which survive, satisfy and enrich basic human needs and human life”. However, human resource development has been linked to literacy, knowledge and skill in a society (Ballara 1991), and has been shown to increase people’s ability to allocate resources (Coetzee 1991).

2.4.3 Education and informal sector involvement

Suratwala (1992, p 121) has stated: “....historically speaking, there is no evidence to prove that literacy is a prerequisite condition for economic and social development”. Reports on the affect of education on informal sector productivity have been scarce, but the following trends regarding the relationship of education to informal sector involvement and progress have been documented.

- ▼ Women’s education has increased their labour productivity in economic activities (World Bank 1995). Literacy and numeracy have been identified as essential skills in agricultural production rates (World Bank 1990). Increased wages, increased household income and decreased poverty have also been linked to improved literacy levels (Subbarao & Raney 1993). As previously discussed, poverty has been cited as a common factor for women’s entry into the informal sector.
- ▼ People with higher education levels have had greater opportunity to choose more profitable alternatives within the informal sector (Coetzee 1991, World Bank 1990).

- ▼ It has been generally accepted that earning capacities have increased with increased levels of education in both the formal and informal sectors (World Bank 1990). In Harper's (1984b) experience, entrepreneurial success has not depended on education beyond primary or lower secondary level. World Bank (1990) studies have shown that post-primary education has generated relatively high payoffs for women in the informal service sector (a 14% higher return). In Peru, the returns on one additional year of educational training have been estimated to be as high as 33% for self-employed women in the retail textile trade. So, although a specific level of education has not inhibited entry into the informal sector, evidence has suggested that a lack of education could limit financial returns. Furthermore, Preston-Whyte & Nene (1991) have asserted that some formal education is required for informal sector participation, but that experience of similar situations (which allow women the insight to act) has been important (for example experience in trading agricultural produce). This has been previously dealt with.

- ▼ Widespread low levels of literacy in Africa have been a serious obstacle to enterprise growth and development, both in terms of women's management abilities and in production skills for more complex products (Mead 1989, cited by Hirschowitz *et al* 1991). A Columbian study of small and medium sized enterprises has supported Mead's claim: the entrepreneur's background (skills, education and previous experience) has been shown to strongly influence the technical efficiency and probability of business success (World Bank 1990). Even if illiteracy or a lack of education have not barred entry to the informal sector, they have inhibited the technical and business efficiency, range of skills applied and the types of products produced.

2.4.4 Is literacy based selection then invalid?

Women, in particular, have been less literate than men due to socio-cultural factors (beyond the scope of this study) and poverty. Their situation of poverty has limited their access to education. A lack of education (particularly women's low level of literacy) has limited potential for economic and social empowerment. These factors have in turn further restricted women's access to educational resources. Suratwala (1992) has stated that it has been wrongly believed that illiteracy has been the cause of impoverishment and oppression of the poor. Literacy is not the panacea for all social ills. Yet, education has played an undeniable motivating role in women's involvement in the informal sector (as discussed previously). Women have been attracted to the sector because of their general lower levels of literacy (linked to poverty); lack of other employment opportunities (Epstein 1990); and a limited range of skills due to their educational disadvantage (World Bank 1990). Therefore, women's low education levels have been a contributory factor in the attraction of the informal sector. Yet women's lack of education (and related factors) has limited their development within the sector; evidenced in their low financial gains, and limited technological and business efficiency (Preston-Whyte & Nene 1991).

To function in a literate society, it is necessary to possess reading, writing and numeracy skills, but the complex relationship between poverty, illiteracy, empowerment, societal and socio cultural factors (gained through an understanding of the above aspects related to literacy and education), must be understood to plan appropriate development programs targeted at women. Illiterate women have found their options limited and their lives more difficult (Ballara 1991). One attraction of the informal sector has been that education has not been a prerequisite. Therefore, if skills and entrepreneurship training programs are to empower the socially disadvantaged, the use of literacy based criteria may be invalid.

2.5 Considerations for women centred development and training programs

Chell (1990) and Rogers (1990) have called for situational and contextually appropriate paradigms for entrepreneurship training and development programs, respectively. Chell (1990) has questioned the notion that behaviour (specifically behaviour said to characterise entrepreneurship) should be thought of as simply a function of an individual's personal traits. This author has suggested that behaviour should be thought of as a complex consequence of a personality in interaction with the situation. Chell's contingency approach has therefore depended on various specific contextual variables. Consequently, the central argument in the development of Chell's contingency model for entrepreneurial behaviour has been that these contextual variables (particularly environmental and personal characteristics of the entrepreneur) have impacted on economic performance, and therefore on the success of a business.

Household environment may have the greatest impact on women's entrepreneurial potential. Therefore, when planning development projects for women, planners should develop an understanding of how household systems have affected household relations, and have involved different (and possibly unequal) obligations and rights to differential power and control (Young 1992). As Bullock (1994, p 54) has stated: "Most women in most rural areas have a tough time. Rural women have earlier marriages, more children and poorer health, both infant and maternal mortality are higher than in urban areas. School enrolments are lower in rural areas and illiteracy higher. Rural women have poor wages, more insecure employment, and longer hours of work. Customs and traditional practices often have a tighter hold, which may disadvantage women. Isolation may be greater because of distance and poor roads".

Rogers (1990) has suggested four areas concerning households, which should be considered in planning development projects: time available to household members; the allocation of tasks within the household (the degree to which they may transfer these tasks among members); access to resources; and control over resources. These factors, as well as the roles and responsibilities of women in developing countries are discussed below,

in relation to the need for women sensitive development planning. Due to the close relationship of these factors to family management, principles within this discipline are proposed for isolating alternative selection criteria.

2.5.1 The roles and responsibilities of women in developing countries

To be successful, development projects ought to take into account the ways in which households allocate both goods and responsibilities among members (Buvinic & Lycette 1988). The household has functioned not only as the framework for specialisation of effort and redistribution of goods, but also as a mechanism for limiting women's access to productive resources and instituting the disproportionate allocation of work and its returns (Rogers 1990). The allocation of goods and responsibilities to women within the household would play an important role in their access and ability to participate in training programs away from their homes.

Moser (1993) has proposed that women in developing countries have performed a triple role within households. Women's work has included reproductive work, productive work and community management activities. Traditionally, women have been responsible for childbearing and the care, socialisation and maintenance of children (Moser 1993). 'Motherhood' has had the implication that mothers alone have full responsibility for childbearing and all other related household caring and domestic work. For the most part, and within economic constraints, women have fulfilled these roles well and have found them rewarding and satisfying, but not without high costs to themselves (O'Connell 1994). Ballara (1991) has indicated that time spent in caring for children, frequent pregnancies and fatigue have limited women's participation in educational courses. In addition, Epstein (1990) has asserted that the lack of appropriate services and domestic technology for rural households has made domestic chores (including collecting fuel and water) extremely labour intensive and time consuming, which has compounded the problem of fatigue for women.

Cultural norms have restricted women's fields of activity to the domestic sphere, where, in addition to their reproductive roles, women have continued to shoulder the responsibility for management of their homes (Moser 1993). For example, should women aspire to expand the resources available through, for example entrepreneurial activities, these activities have often been confined to the home, where they have not conflicted with the primary duties of watching children and maintaining the household (Epstein 1990). A general barrier to women who would like to engage in any activity outside the household has been their lack of time (Ballara 1991). Yet, beyond performing domestic duties, the majority of rural women have also been involved in productive activities to increase household economic resources. They have worked on their own or family farms, have been employed, or have traded as petty entrepreneurs (Epstein 1990).

At the community level, women have been involved in activities to ensure the provision and maintenance of collective consumption items such as water supplies, health care provision and community facilities such as schools. Moser (1993) has reported this mobilisation and organisation at the community level as a natural extension of women's domestic work, but nevertheless, has added to women's responsibilities and tasks, especially in the absence of men engaged in migrant labour.

In order to plan effective women centred programs, the capacity for women to adjust to environmental changes within the household must be assessed. Many demands would be created by women's participation in training courses away from their homes. This would require assessment of the household management strategies employed by the women, the resources available to them and those controlled by them.

2.5.2 Time available to women for participation in projects and training

Becker (cited by Jaquette 1993), has identified that: "Not only money, but also time, especially women's time, is a scarce resource and an important factor in family decision making". The multiple roles (as discussed above) carried by women in most households have complemented each other in some ways, but have caused conflicts in time usage and

the allocation of responsibilities (Bennett 1990). Gellen (1994) has highlighted the role of women in development: women have laboured 15 - 20 hours per day, grown 80% of Africa's food, and ensured the health, education and overall well-being of their families and communities. This diversity of activities has created conflicts in time allocation.

Consistently, women in all parts of the world have put in more hours (paid and unpaid) than men of the same age (Dwyer & Bruce 1988). Children affect women's time use. It has been shown that an increase in the number of children has decreased women's leisure time and lessened sleep time (Dwyer & Bruce 1988). In large households, the labour burden per person has been reported to be lower (Jaquette 1990). However, the amount of extra work involved in maintaining additional household members has been smaller than the net contribution. Research has shown that at the age of six, the labour time of children would begin to lower the per-member household work burden (Jaquette 1993). Therefore, household size would play a role in the time available to women for participation in programs: the greater the household size, the more small children, the less time available to women. This would also depend on how many women form part of the household and the transfer opportunities for task and child care responsibilities between women within the household. However, cultural norms have influenced the task load carried by women, and restricted their chances of delegating or transferring responsibility (Dwyer & Bruce 1988).

Most programs affect the total amount of time available to households, or alter how this time is spent (Rogers 1990). Nevertheless, development projects that target women (in an attempt to increase their productive activities and incomes), have often assumed that women's labour time has been infinitely elastic (Bernstein 1992). Many projects have failed due to the unacceptable time burdens created (Dwyer & Bruce 1988). In addition, time use has directly affected the use of other resources such as money, energy and knowledge (Deacon & Firebaugh 1988). Time itself, even though a resource, cannot be managed, but rather, other resources with respect to time must be managed (Rice &

Tucker 1986). If, as discussed above, resources are scarce, then women would lack flexibility in terms of time use. If time is limited, participation in another activities would also be restricted.

2.5.3 The allocation or transferability of household tasks to different members

Linked to the availability of time for women to engage in training, is the allocation of tasks within the household. In most cultures, different kinds of work have been considered suitable for different household members, divided by age, sex and status (Rogers 1990). Studies such as that conducted in the Philippines by Reynolds (1983, cited by Rogers 1990) have indicated that household work burdens have not necessarily been allocated equitably. For example, Reynolds found that when women worked in the market, for up to six hours a day, they did not reduce their work time at home; while men whose wives worked outside the home did not increase their contributions to household tasks. It has, therefore, been alleged that women would assimilate men's tasks more readily than men might adapt to those traditionally reserved for women (Reynolds 1983, cited by Rogers 1990). "The direct result of the sexual division of labour is that most women have too much to do" (O'Connell 1994, p 53). Yet, the capacity for households to adapt to changing circumstances has been observed (Rogers 1990). For example, if one member has been traditionally responsible for a household task and cannot do it, someone else would take the task over, but adaption has not always been rapid, and has not always happened in the most beneficial ways. In addition, particular tasks have not always been transferable among members and, once transferred, may not revert (Rogers 1990).

For resources to be managed they must be accessible to the manager (Rice & Tucker 1986). Therefore, the transfer of tasks from women or by the women would be related to access to resources (particularly the availability of other labour resources either within or outside the household, and economic resources) and cultural norms. In many societies gender has been the deciding factor in household level resource allocation (Baker & Nelson 1987). Gender role ascriptions have also been related to concepts of power and exchange in decision making about resource allocation. Power has been interpreted in

terms of particular spheres of influence and the extent to which exchanges can be made or controlled by one or more people in resource exchanges (Baker & Nelson 1987).

2.5.4 Differential access to resources, both for production and consumption

In many parts of the world, household income from various sources has been combined (not always literally), and then re-allocated to meet household needs (Jaquette 1993). Even though most household incomes have formed a composite of individual incomes, economic resources have been allocated unequally within households, and access to these resources has been unequal (Buvinic & Lycette 1988). Rogers (1990) has explained that goods have often been allocated according to the 'perceived' contribution of household members. Individuals in the family have not bargained solely on the grounds of self-interest or utility. Instead, individuals' bargaining strategies have depended on perceived notions of what they have been entitled to.

Where resources have been scarce, as in poorer households, the situation of women has been particularly precarious. Men and older women have had the power to allocate resources, but have shared the view that women have been entitled to less (Rogers 1990). No matter how much time and energy women have expended on behalf of the household, women's entitlements have been proportionately less than other members. For example, when the household has earned income from selling the products of 'woman's work' performed in the wife's spare time, the women's economic situations have improved little or not at all (Jaquette 1993). Income earned in this manner has not improved their 'perceived' contribution due to the low status ascribed to activities seen as extensions of women's work (Buvinic & Lycette 1988).

As a result, Jaquette (1993) has found more benefit in increasing women's control over income (especially through work outside the household). Women's self-perceptions and their perceived contributions to family welfare (key determinants to household allocation) have improved as their income has increased. Once women have had the option of working outside the house, their bargaining positions have improved, as has their access

to other non-household resources, including involvement in women's or community groups (Jaquette 1993). Nonetheless, experience has shown that women's positions within households have not improved in proportion to their increased contribution to household income (Huber 1988).

The World Bank (1995) has reported that economic growth and rising incomes have affected the type of work households do, the incomes they have received, and the way they have managed their time. It therefore seems that training courses (particularly those that could lead to income generation in areas not associated with household skills or crafts) could improve the bargaining position of women and grant them increased access to household resources. The problem of access to, and control of resources (to enable women access to training) has been linked to women's positions within households before engaging in training (Rogers 1990). Bullock (1994, p 54) has stressed this point: "It is essential to understand gender-specific priorities for expenditure and the degree to which men and women control or influence various areas of decision making; as the long term goal of development must be to both increase the women's control over their means of production and to reduce their multiple burdens".

2.5.5 Differential control over resources

Young (1992) has pointed out that recent interest in entrepreneurship has focussed attention on the barriers to women's entrepreneurship created by their lack of control over household resources. Although women have made up half the world's population, they have controlled only 1% of its capital (Epstein 1990). Women have managed the family economy: "There is no doubt that in most rural communities, women are more likely to be the managers, in a day-to-day sense at any rate, than men" (Harper & Vyakarnam 1988). Traditionally, the task of managing poverty and stretching the household income has fallen on women (Young 1992). However, management of household finances need not infer control over them (Roldan 1988, cited by Rogers 1990). Control has mainly been exercised at the point where the money has entered the household. Here the household allocation system has been prescribed; who has the say

on major financial issues has been decided; and the extent to which each spouse has control over personal spending and access to joint money has been determined by whoever has control over household resources (Young 1992).

When incomes have become sufficient to permit some degree of flexibility, women have been given greater decision making power, particularly if they have been wage or income earners themselves (Dwyer & Bruce 1988). Overall, women have exercised considerable authority and expertise within the household (O'Connell 1994). However, the degree of control over surplus allocation has been found more important than control over subsistence in determination of male/female economic power (Blumberg 1988), since most income generated by women has traditionally gone to meeting the needs of children or the family (Dwyer & Bruce 1988).

Although power within households has been difficult to access (due to different opinions within the household and women's hesitancy to admit true influence in a traditionally patriarchal society), Jaquette (1993) has proposed that project success may be dependent upon understanding how households make decisions. Rice & Tucker (1986) has defined decision making as the process of choosing among alternatives. Should a woman acknowledge decision making power within the household, it could be assumed that she also has access to, and control over some household resources (Jaquette 1993). When the wife has been an earner, she has had greater say in the total budget, but experience has shown that this has not meant that the greater her contribution, the greater her say (Huber 1988). Rather, the greater a woman's relative economic power, the greater her control over her own life and household decisions. As economic power increases, so does participation in household decision making (Blumberg 1988).

A further hurdle to gaining control over financial resources has been the 'invisible' nature of women's incomes within the household. Safilios-Rothschild (1990) has proposed that women in low income households (particularly in rural areas) have contributed as much as 40 to 50% of the total household income. However, they have usually earned this income in small amounts from a variety of sources, without regularity. This money has

often been spent immediately on food and necessities for the household, rendering no proof of income (as with a pay cheque). Therefore this income has been practically 'invisible' in the overall household economy. Acknowledgement of the true value of this income in the household's economy would threaten the 'breadwinner' status of men (Safilios-Rothschild 1990).

The contribution of women's income (compared with household income) would therefore play a vital role in the determination of resource control. Moreover, whether the household head is male or female would also determine women's control over resources. Financially secure women headed households are a minority (Buvinic & Lycette 1988). Dependence on women as the primary source of financial support has increased household vulnerability to poverty (O'Connell 1994). This could infer that although female headship would grant women access to resources and control over them, resource levels could restrict the opportunity for exercising control.

2.5.6 Increasing the likelihood of project success

In planning programs that take women into account, an appreciation of the targeted women's situations, the socio-cultural norms that ascribe their roles and responsibilities and govern their access to and control over resources, is vital. Moreover, economic and social change cannot be understood unless the impact of change on women and their households is quantified (Masini & Stratigos 1991).

Not only have women's income levels, their contributions to household income, income sources, and the 'perceived' values of these incomes been found important considerations in planning development programs that consider women, but as seen above, the composition of the household has also been important. To make training accessible to women, training programs for women must be designed in ways that accommodate women's roles, responsibilities, needs and constraints (ie. sensitive to women's situations). As a start, the selection procedures for women's training must take the aforementioned factors into account.

2.6 Family management as an alternative predictor of success

“For women everywhere, daily life is a juggling act as they try to fit in a range of tasks and responsibilities.” Bullock (1994, p 39). As previously addressed, women in developing countries have fulfilled at least a dual household role: that of management of the household and generation of income through formal or informal means (Moser 1993). Despite scarce resources, high levels of illiteracy, and a general lack of access to formal education, women in developing countries have devised management practices to enable them to cope in extremely demanding situations (Balakrishnan *et al* 1986). Research has clearly shown that women’s coping strategies (informal sector participation being one strategy) have been a major adjustment factor in the face of economic crises (Cornia 1988). Women have been driven to develop these coping strategies for the four main reasons listed below. These have been discussed earlier but are highlighted here.

- ▼ Firstly, women have predominated among the world’s poorest people (Young 1992).
- ▼ Secondly, the average number of female headed households in Sub-Saharan Africa has increased (Bullock 1992).
- ▼ Thirdly, it has been reported that when household cash has become limited, the stress of coping has fallen disproportionately on women (O’Connell 1994).
- ▼ Finally, in low income households, women’s earned income and their ability to stretch this has been vital to the survival of many households (Buvinic & Lycette 1988).

Besides societal change, transformation and the advancement of technology, household circumstances do not remain static (World Bank 1995). A pervasive concern of all households has been how to manage a diversity of risks (unemployment, ill-health, crop failure etc.), in relation to the household’s stock and flow of resources and well-being (World Bank 1995). Resource allocation practices have therefore become household survival strategies (Balakrishnan *et al* 1986). The resource allocation strategies that have characterised the survival strategies employed by women in developing countries have been illustrated by the following examples.

- ▼ In many developing countries, most households, whatever their income source, have lived below the poverty line (Dwyer & Bruce 1988). Moreover, most descriptive accounts of women's expenditure in poor households have emphasised the very small quantities of money handled by women and the countless ways they have expanded their incomes by preparing food, selling handicrafts, providing services, buying animals and poultry for fattening, joining informal credit associations, lending at interest etc. (Young 1992).
- ▼ In addition, women in developing countries have traditionally mobilised and created resources through many different types of activities, for example: conserving access to resources, negotiating different types of social relations within and between households, and dealing with the effects of change and upheaval (Crehan 1992).

Women have developed resource allocation strategies and management skills through these activities. Development planners should not ignore women's circumstances as they may indicate the capacity of women to adapt to the resultant changes caused by development projects. Resource management is the primary activity of family management (Deacon & Firebaugh 1988), in which creating and transforming one resource to another, making choices among alternative resources, and determining the most satisfying use of resources have been described as central activities (Rice & Tucker 1986). Women in developing countries have been the household managers (Harper & Vyakarnam 1988). As discussed, household composition would affect training, control of resources, task and resource allocation patterns of women and their households (Rogers 1990). Therefore, perhaps measurement of the capacity for women and their households to adapt to changes (affected by women's participation in training situations), could be a more appropriate and women sensitive approach to selection for training programs designed for women. This may be especially appropriate for training designed to promote entrepreneurship. Women and their households would have to further adapt to accommodate the demands of the business venture.

2.6.1 Family management defined

Family management has been defined as the purposeful use of resources to achieve valued goals. This management is cognitive action directed, not only to the achievement of specific goals, but towards the collective achievement of many specific goals in relation to the environment (Deacon & Firebaugh 1988). The allocation system adopted is put into operation through management (Rice & Tucker 1986). The conceptual framework for family management was developed with the underlying assumption that effective allocation of scarce resources has attained satisfaction (with the results of family activities) in pursuit of family goals (Heck *et al* 1992). Therefore, management has helped people control the events of their lives, and influence control over the outcomes (Deacon & Firebaugh 1988). Note that the term 'family' has been taken to refer to the inhabitants of a household, whatever family form (ie nuclear, extended).

A critical component of family management has been the relationship of the family to the larger macro-habitat, namely the socio-cultural, economic, political and technical realities of society (Heck & Douhitt 1982). In the light of this, the systems approach to family management may provide appropriate avenues for the assessment of women's abilities to cope with demands in addition to their household roles and responsibilities (such as those that may arise due to participation in a training situation away from home).

2.6.2 The systems approach to family management

The systems approach to family management has claimed to offer professional insight into the unobserved throughput (managerial action) which has linked the observed inputs to outputs (Heck *et al* 1992). Deaco & Firebaughs' (1988) systems approach is illustrated below (according to Heck *et al* (1992) this framework was first published in 1975). The system exists as an integrated set of parts that function to accomplish a set of goals (Rice *et al* 1986). Through the managerial system (illustrated below), individuals and families strive to accomplish their goals by the acquisition and use of resources through planning and the implementation of plans (Deacon & Firebaugh 1988).

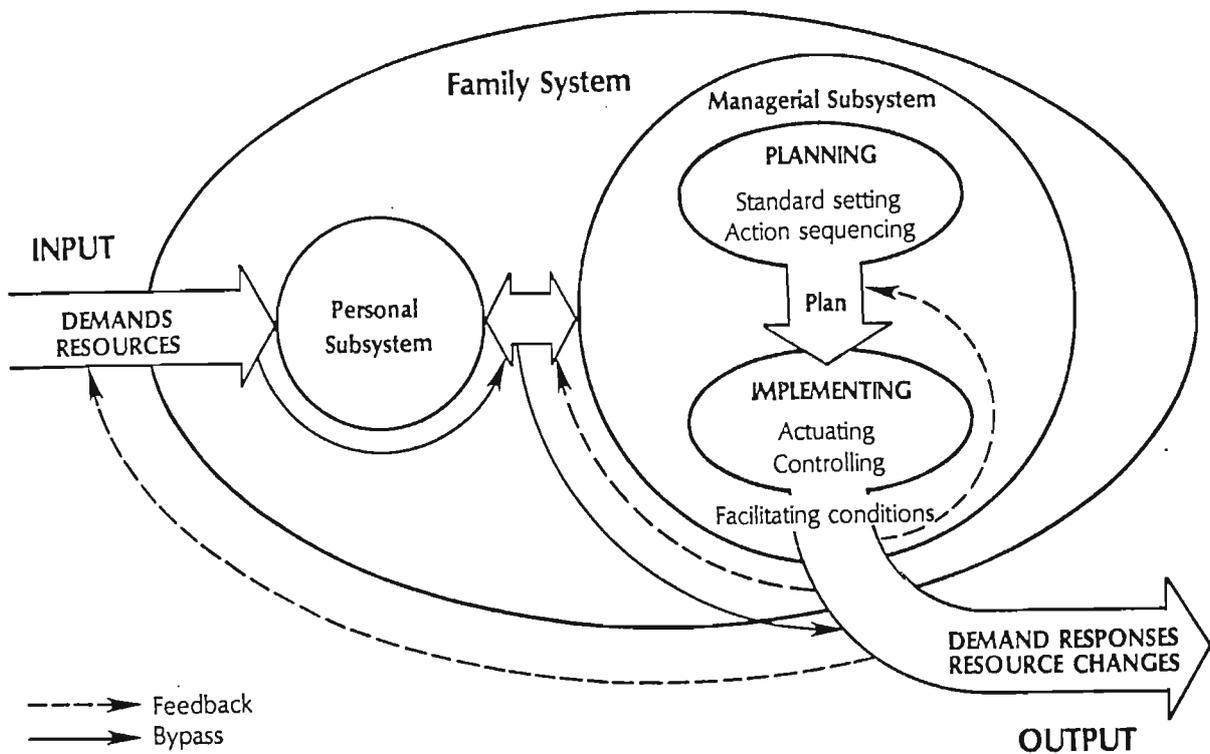


Figure 3 Framework for the family management systems approach (Deacon & Firebaugh 1988)

The family management system (as illustrated above) has been divided into four components: inputs, throughput, outputs and feedback (Rice & Tucker 1986). A system's *input* has been regarded as a stimulus from the environment, such as changes in demands. *Throughput* has included the transformations of, or reactions by the system to the environment by the family or an individual. *Output* has referred to the responses emitted by the system to the environment, such as solutions, transformed material goods, waste products, information, or purposeful changes in a situation (Rice & Tucker 1986). The inclusion of *feedback* in the model has indicated the dynamic nature of family management as the outputs of the system provide checks and new information in the system (Heck *et al* 1992).

Paolucci, Hall & Axinn (1977, cited by Heck *et al* 1992) have preferred to use the *ecosystems approach* to conceptualise the management process. Although the conceptualisations of the internal activities have differed, both the systems and ecosystems approaches have viewed planning and implementing as the major management activities (Heck & Kavura 1982). Yet, Garrison & Winter (1986) have explained that Deacon & Firebaughs' (1988) systems approach has lent more readily to empirical specification than other management frameworks. The framework's precise delineation of the managerial process has enabled the testing of specific relationships between and among elements, particularly in technical and economic decisions. Technical decisions have involved the attainment of a specific goal with limited resources, while economic decisions have dealt with the satisfaction of multiple goals with scarce resources (Rice & Tucker 1986). Most studies within the family management discipline have been based on the family management systems proposed by either Deacon & Firebaugh (1988 and earlier publications) or Paolucci *et al* (1977) (Heck *et al* 1992).

2.6.3 Does family management provide valid alternatives for selection criteria?

Heck (1983) has cited two types of conflicts that have motivated management: social conflicts (which have resulted from conflicts in values, goals, or roles), and economic conflicts (which have arisen from the allocation of resources). The objective of family living has been to maximise utility derived from the available resources, within a set of situational constraints and with a given level of managerial ability (Balakrishnan *et al* 1986). In isolating the four areas (concerning households) which should be considered in planning development projects, Rogers (1990) has indirectly highlighted the importance of resource allocation and management. These four areas are time (a resource in itself); the allocation of tasks within the household (labour is a resource) and the degree to which these tasks may be transferred among members (use of latent resources, related to the characteristics of resources); access to resources and control over resources (management).

As indicated by Rogers (1990), any development program should lead to economic and environmental changes that result in new demands (conflicts) to be faced by the participants. The limited nature of household resources has been discussed earlier (World Bank 1995, Dwyer & Bruce 1988). Balakrishnan *et al* (1986) have highlighted the role that family management should play in maximising the return of resources for families in rural areas. This has been further substantiated by Baker & Nelson (1987, p 131) realisation that rural women have possessed capabilities and technical resource reservoirs, about which “industrialised nations and urban Third World countries know little”. An understanding of women’s resource allocation strategies would allow for improvements in women’s access to resources and training (Baker & Nelson 1987). In the light of this, household management could therefore be a key to understanding the dynamics that govern the allocation of resources and responsibilities within households. Through this understanding, the design of development projects could be improved to better accommodate the situational constraints of women.

2.7 Family management research

Studies in the following categories have characterised family management research (Heck *et al* 1992, Garrison & Winter 1986):

- ▼ The effects factors such as income, education, age or household head, and household size have had on managerial behaviour.
- ▼ Family resource management studies that have described the nature of activities directed at the accomplishment of instrumental family goals.
- ▼ Time-use studies to determine time spent in managerial behaviour.
- ▼ Management of specific resources, often of time or money.
- ▼ Development of conceptual frameworks to examine and explain the activities of families.
- ▼ Studies of family management subprocesses such as planning, sequencing and goal setting.

- ▼ Comparisons of family management with other management concepts or areas of study such as economics, family sociology or time-use research.

Heck *et al* (1992) have claimed that throughout, the overall nature of management has remained empirically elusive. Although effective management has been widely accepted as the major determinant in achievement of desired outcomes, the empirical linkage of achievement practices and outcomes has not been validated. Heck *et al* (1992) have proposed that the lack of definitive methods and instruments for measuring managerial behaviour has been the major hurdle to the establishment of this relationship. Whereas measuring inputs and outputs of the management system have offered clues to the types of activities that have occurred during management throughput, the measures have not represented the processes themselves, since managerial activities are mental rather than physical in nature (Garrison & Winter 1986). Measurement has therefore been limited to the assessment of time spent on tasks and patterns of household task management, or determination of management performance through measurement of outputs (Heck *et al* 1992).

The problems associated with the measurement of managerial behaviour have not been limited to family management. Heck *et al* (1992) have explained that several researchers in farm management literature have routinely used education or experience as a proxy for management. Mefford (1986, cited by Heck *et al* 1992) has simply treated management as a “relevant omitted variable” in estimating farm production functions.

Family management studies illustrative of the types of research classified above, which have related to the proposed hypotheses of this dissertation are discussed below. Attention will first be given to the research methodologies employed. Following this, the variables and their measurements from these studies will be discussed in relation to management input, throughput and output. Bold type has been used to introduce discussion of the above research categories, while italics have been used to highlight the major variables investigated by family management researchers.

2.7.1 Family management research methodology

The **effects of factors such as income, education, age or household head, and household size** have had on managerial behaviour has been examined by Garrison & Winter (1986). These researchers made use of analysis of covariance (using dummy variable regression analysis) to ascertain how reported managerial behaviour scores of families with only younger children varied compared to other family types. Their study was based on three assumptions: all families manage resources; the effectiveness of family management depends on managerial behaviour; and critical life traditions would alter family behaviour patterns. To this end, a fourteen-point questionnaire with Likert scale responses was used to describe activities thought to be part of effective managerial behaviour, through predicted satisfaction with managerial behaviour and quality of life. Cumulative scores were derived to compare the behaviour scores of families.

Family resource management studies could be illustrated by the study carried out by Baker & Nelson (1987), which concentrated on the allocation of resources among rural women. The study assumed that resource use, and thus goal achievement, depended upon control over the allocation process, and the extent or possibility of control over allocation. In turn, they expected that control over resources would have depended partially upon the allocation strategies employed. Time, money and other quantifiable economic resources were measured to assess resource allocation strategies. The five resource allocation strategies identified by Baker & Nelson (1987) were used as the base for two studies (Green & Spalding 1992, Spalding 1989) which compared women's attendance at women's club meetings to their attendance. Multiple linear regression and discriminant analysis (respectively) were used to isolate the significant variables in relation to attendance.

Both family management specialists and economists have used **time-use studies and perceived resource adequacy measures** as means to assess quantitative and qualitative aspects of resource allocation (Baker & Nelson 1987). Walker & Parkhurst (1982) conducted a study to differentiate between more effective and less effective time

managers. This was based on Walker & Woods' (1976) exploratory research to measure household production of family goods and services. Walker & Woods (1976) have outlined the problems associated with the variable and discontinuous nature of family management variables, the effects of these variables on management outcomes, and the determination of units of measurement to gauge this effect. In addition, these researchers have explained in detail the complexities of selecting statistical procedures for the non-parametric variables most often chosen to represent management concepts. Such variables have frequently not exhibited normal distributions, which has further complicated the selection of analyses for researchers. Walker & Woods (1976) eventually settled for correlations to detect efficient time usage.

Researchers have also assessed the management of specific resources. Nickols & Abdel-Ghaney (1983), compared the leisure time of husbands and wives, while Sanik (1981) has studied the division of household labour. Publications by Heck (Heck 1983, Heck & Douthitt 1982) have predominantly dealt with the **development of conceptual (empirical) frameworks** to examine and explain the activities of families. Different variables (in relation to family management output and satisfaction with this output) have been statistically modelled to gain insight into the development of a functional research model. However, the relationship of the independent variables to the dependent variables (in terms of linear, non-linear, multiplicative or exponential relationships) has not been empirically established (Heck *et al* 1992). An example of the methodology used by Heck was that used in the 1983 study where a multivariate research model was developed and tested on a national (USA) sample of families. Variables that represented some management elements of the conceptual frameworks were specified. The multivariate probit technique (determination of the contribution of independent binary variables to the combined influence of the variables) was used to determine the significance of the independent variables. Chi Square tests were then used to detect if the omitted variables contributed significant explanatory powers to the model. Only one output showed this relationship (cleanliness of the house).

Planning, a **management subprocess**, has been explored by Beard & Firebaugh (1978, cited by Heck 1982) however, the measurements of the components in other segments of the management system need to be developed and tested. Studies conducted by Acharya & Bennett (1981 cited by Piwoz & Viteri 1985), have concentrated on different aspects of decision making. Mumaw & Nickols (1972) have developed an 'Organisational Activities Index' to assess the organisational styles of homemakers. Factor analysis was used to decide the management activities that yielded greater benefits in meeting family needs and demands. Survey techniques were used to collect data for these studies.

An example of a study to **compare family management with other management concepts or areas of study** is the Heck *et al* (1992) study of management of work and family by home based workers. A ten-question telephonic survey was used to determine the underlying conceptualisation of, and behaviour represented through family management concepts. It was assumed that the more intense or frequent the engagement in specified management practices was, the more effective overall management style would have been. Responses were rated on a scale of 1- 5. Scores from each question were totalled. Factor analysis was carried out with the assumption that responses to questions would factor into the major segments of the Deacon & Firebaugh (1988) framework. T-tests were used to compare the means of the individual items and scale of means. Confirmatory factor analysis was then used to assess whether the factoring of scale items supported the theoretical framework. It was concluded that processes of managing home based production may be closely associated with processes of managing household work. Beach has supported this by earlier findings (1985, cited by Heck *et al* 1992). This author found that child, family and household tasks interrupted home based production, while women tended to adjust the demands of home based work to their families. The nature of adjustments depended on the emotional intensity of the work, fatigue associated with the activity, other pressures on time use, intellectual intensity of the activity, feeling about the activity, the expected outcome, and the involvement of others.

In conclusion, most of the above-cited studies have used survey techniques for the collection of data related to a specified set of variables deemed by the researcher/s to represent the management components under study. The following subsections outline the use of variables specific to the measurement of family management input, throughput and output. The subsections are not exhaustive in terms of the research conducted, but discussions have focussed on variables specific to the research design for this study. However, the variety of variables included by researchers has been illustrated.

2.7.2 Input variables

Deacon & Firebaugh (1988) have described two types of management input: demands and resources. Demands have been defined as either goals or events that require action (goals are value based objectives that give direction and orientation to action, whereas events are unexpected occurrences that require action). Resources have been defined as assets: anything owned or accessible that has exchange value (Rice & Tucker 1986). Resources have the following characteristics: they have utility value, must be accessible, are transferable, can be substituted, have alternative uses and can be managed (Rice & Tucker 1986). Many systems have been developed for categorising resources. Mainly, resources fall into one of two main areas: human resources (knowledge, skills and human energy), and material resources (natural and consumption goods, household capital, physical energy, money and investments). Resources are used to accomplish goals and satisfy needs and demands (Deacon & Firebaugh 1988).

Garrison & Winter (1986) have explained that *demands* affect the allocation of resources. Demands are family characteristics that dictate or shape the management activities of families (Heck 1983). Some of the demands included in family management studies have been summarised in Table 7 on the following page.

Table 7 Demands measured by family management researchers

Demands	As indicators of (where given)
Presence of children under six years old	A goal orientation complex Satisfaction with outputs Stage in the family life cycle Time-use patterns
Employment status of the wife	Ability to adjust to household demands Satisfaction with household output Time for household work Capacity for household production
Stage in the family life cycle	
Family size	
Level of household production	

(Singal & Balakrishnan 1990, Garrison & Winter 1986, Heck 1983, Walker & Parkhurst 1982, Wheeler & Arvey 1981, Gauger & Walker 1980, cited by Heck 1983)

The *presence of children less than six years old* has been used to indicate different aspects of family management. Firstly, this variable has been used to represent that stage of the family life cycle (Heck *et al* 1992). Larger families and the presence of younger children were expected to lower the satisfaction level experienced by families, due to additional stress on the family's resources. Research has shown that as families have passed through the various stages of the family life cycle, demands have varied (Heck *et al* 1992).

Secondly, not only has the presence of younger children been shown to affect the time use patterns of women (Gauger *et al* 1980, cited by Heck 1983), but Gramm (1975, cited by Heck 1983) has shown that the number (rather than age) of children has affected women's time use patterns. However, Heck's (1983) empirical model did not show the presence of young children to be significant. This researcher therefore concluded that families manage, regardless of young children, but that education or income could affect management patterns more directly. However, Garrison & Winter (1986) have pointed out that even though Heck (1983) has shown that the presence of children has no significant influence on output, the impact of young children in the family on throughput has not been established.

The *employment status of the wife* has also been used as a measurement for family demands. Research has found that employed wives have had limited time for household work (Wheeler & Arvey 1981). Gauger *et al* (1990, cited by Heck 1983) have observed that full-time homemakers have devoted more time to household production than employed homemakers. Similarly, families with homemakers who were employed had more demands placed on their managerial system. These families may be less able to adjust to internal household demands, and experience a lower level of satisfaction with the family's outputs. It was found that if the wife was employed, the household attained lower levels of satisfaction with outputs (Heck 1983). The work effort involved in the acquisition of earned income may have lowered the probability of family satisfaction with its management outputs, since employment may complicate the management activities for a family by reducing time and energy available for family management (Heck 1983).

As indicated in Table 7 (above), *family size*, *stage in the family life cycle* and the *level of household production* have also been used as measures of family demands, but these have been partially covered through the discussions above (in relation to the presence of young children and the employment status of the wife). Any change in household factors would create new demands to be met by the family's resources (Garrison & Winter 1986).

Resources have been categorised into two types: human and material (as discussed above). The resources measured in selected family management studies have been summarised in Table 8 (on the following page).

Table 8 Resources measured by family management researchers

Resources	As indicators of (where given)
Age of the wife (Garrison & Winter 1986).	Human capital.
Capital stock (Heck 1982).	Complexity of management.
Education of the wife (Heck 1983).	Type of household production performed. Skill in household tasks. Human capital.
Education of household head (Garrison & Winter 1986, Walker & Parkhurst 1982).	Human capital.
Health of husband, wife and children (Heck 1983).	Human resource pool.
Length of current marriage (Heck 1983).	Experience. Adjustment ability. Marital stability.
Level of marital satisfaction (Heck 1983).	Management capacity indicator.
Location of residency (Heck 1983).	Amounts of resources available (non-urban families may experience greater obstacles in managing their affairs).
Number of people able to help with housework (Walker & Parkhurst 1982).	Human capital.
Sex of household head (Garrison & Winter 1986, Walker & Parkhurst 1982).	Family type.
Time, money and other quantifiable resources (Baker & Nelson 1987).	Resource levels.
Time for household production (Heck 1983).	Level of resources.
Total household income: earned and unearned (Singal & Balakrishnan 1988, Garrison & Winter 1986, Heck 1983).	Time and energy for household activities (Singal & Balakrishnan 1988). Complexity of household management (Heck 1983).

Heck (1982) used *ownership of capital goods* as an indication of the resource stock. It was expected that increased ownership of capital goods would facilitate family management, but the results of this study showed that ownership of capital goods may have complicated, or even increased management demands and other work activities within the family.

The *wife's education level* was deemed an important resource by Heck (1983) who had expected that higher levels of education would relate positively to a family's satisfaction with outputs, as education may have raised levels of human resources (such as skills), and in turn, made the production of goods easier for families. Also, the wife's education has been linked with the type of household production she performed (Walker & Parkhurst 1982).

Heck's (1983) empirical model included a determinant of *health status of family members*. Poor health status of any one member of the family was expected to detract from the human resource pool and increase dissatisfaction with management outputs. *Length of marriage* was used in this model to determine experience, adjustment and marital stability of wives. Higher levels of *marital satisfaction* were expected to enhance the management activities and processes of the family, and in turn, increase the family's satisfaction with outputs.

In relation to *household income*, earned income may increase the material resource stock of the family and enhance the management activities of the family (Rice & Tucker 1986). Unearned income has not contributed to the household in direct monetary terms, but has increased the human capital of the person carrying out the activities (Heck 1983). Consequently, Heck (1983) separated the earned and unearned income of households to examine the differential effects of these two sources on family management outputs. However, no differential effect was found. Singal & Balakrishnan (1988) have suggested that, for women's studies, rather than focussing on the source of household income,

analysing the interplay between types of work performed by women would be more realistic, since different types have differential rewards (for example paid and unpaid work), and create different demands to be met by the worker and the family.

Rice & Tucker (1986) have explained that tradeoffs are characteristic of resource use. Therefore the assessment of the quantity of resources (material, and human) would be vital in studying women's home management practices. Yet the greatest amount of management skill would be required when the stock of resources has become limited. For example, human resources have tended to be scarce when consumption needs have been greatest (Rice & Tucker 1986).

2.7.3 Throughput variables

Throughput activities researched by family management researchers have included planning activities, such as standard setting (when measures of quality and/or quantity required are reconciled with inputs) and resource allocation, action sequencing (process of ordering among or within tasks), and implementing activities such as facilitation, checking and adjusting (Garrison & Winter 1986). Identification of the manager and implementor of each throughput step has been of critical importance. If the management process has not been individually controlled, but rather shared by two or more members, the actions of all participants must be recorded to appreciate the individual contribution of the members (Heck *et al* 1992).

Planning has been found to be an integral part of the management process (Rice & Tucker 1986). Heck's (1983) empirical model included binary variables to represent the cumulative effect of planning and scheduling activities in five areas of housework: cooking dinner, washing clothes, writing cheques, keeping track of bills, and grocery shopping. Respondents were asked whether they scheduled or planned the tasks, and who was to perform each of these tasks. Planning was included in this model as it was thought to be an integral and satisfaction-enhancing component of management.

Acharya & Bennett (1981, cited by Piwoz & Viteri 1985) have compared the roles of husbands and wives in suggesting, deciding, implementing and disagreeing on management activities. Heck's (1983) empirical model included six decision making areas: choices related to visiting friends, seeing relatives, television or radio programming, going out for the evening, how much to spend on major purchases, and the work status of the wife. The power structure between the husband and wife was examined in the expectation that egalitarian marriages would have allowed for more flexibility in family activities and goals, and satisfaction with outputs would have been higher. In addition, the *total time spent in household production* by both the husband and the wife were viewed as indicators of their relative participation in throughput activities (Heck 1983, Sanik 1981).

2.7.4 Output variables

The outputs from the family management process are numerous and varied in nature, but have been broadly categorised into met demands and goals, and used resources (Rice & Tucker 1986). The satisfaction derived from the managerial system has been used by Heck (1983) and Heck & Douthitt (1982) as a measure of satisfaction resulting from throughput activities, but as yet, no attempt has been made to relate managerial style to outcomes (Heck *et al* 1992). The output variables used by family management researchers are summarised in the table below.

Table 9 Management outputs included by researchers

Demand responses	The economic contribution of the wife
Resource changes	Work accomplished
Met family goals	Amount of rest/leisure
Family satisfaction	Feasibility of income generating activities

(Heck *et al* 1992, Singal 1990, Garrison & Winter 1986, Heck 1983, Heck & Douthitt 1982, Walker & Parkhurst 1982)

2.7.5 The plausibility of extending family management to project development

As described above, the variables used in family management research have been varied and sometimes no substantiation has been given for the selection of specific variables. Nevertheless, researchers have hoped to assess the management processes or management effectiveness through their selections (Heck *et al* 1992). Baker & Nelson (1987) have asserted that family management studies could contribute to the improvement of development projects and training. The results of the two studies (Green & Spalding 1992, Spalding 1989) based on Baker & Nelsons' (1987) theories of resource allocation practices for rural women showed that the factors outlined in Table 10 (below), were significantly linked to the attendance rates of women at women's club meetings. These results could suggest that perhaps family management may offer insight into women's potential for attendance at activities outside their homes, and their ability to cope with the added demands evoked by involvement in such activities.

Table 10 Results of previous resource allocation studies

Attendance at Zenzele Club Meetings significantly linked to (Green & Spalding 1992):	Attendance at Zenzele Club Meetings significantly linked to (Spalding 1989):
Distance women lived from the club.	Higher demands.
Participation in other community groups.	Greater household productivity.
Level of economic resources.	Less involvement in formal work.
If the woman tended animals.	Fewer available resources.
Amount of 'free time' available.	

2.8 Summary

It has been suggested that women have been excluded from income generating skills training due to the insensitivity of program planners. In designing programs for women, many planners have ignored the roles and responsibilities of women in developing countries, added unacceptable time burdens to women participating in such programs, and have excluded women through inappropriate training prerequisites. Literacy may be one of these insensitive prerequisites.

As explained, literacy has been considered a necessary skill for successful functioning within a society, and the benefits (particularly in terms of small enterprises) have been explored. Indeed, illiterate women have been at a disadvantage, yet women's lack of education has barred them from formal sector employment. Poverty, coupled with socio-cultural factors (which have marginalised women in terms of education and employment opportunities), have attracted women to informal sector involvement. Women's predominance in the sector and the nature and scope of their activities have illustrated that these activities have suited women (regarding their situations, household roles, family responsibilities, and their education and skill levels). Nevertheless, their predominance has illustrated the plight of many women in developing countries; participation in the sector has been a 'desperation strategy' to increase household income.

Poverty has been linked at almost every juncture, throughout the discussion, to factors such as illiteracy or low educational level, lack of skills and their diversity, lack of resources (especially money and credit), limited female mobility, gender ascriptions and socio-cultural norms. Women's informal sector activities have been concentrated within a narrow range of not very lucrative skills. Informal sector activities have not provided an escape from poverty. Rather, women's progress within the sector has been limited by factors related to poverty. Many limiting factors have been the same factors described above as the attractions to the informal sector (especially women's low levels of literacy). Perhaps the ease of entry and the women's seemingly agreeable circumstances have misled poor women into believing that this sector could deliver them from poverty.

Undeniably, women in developing countries (and their households) have needed the income generated from informal sector activities, and the economies of most countries have benefitted from the resultant mobilisation of resources. However, women's lack of skills, limited education and restricted mobility have limited their flexibility in product complexity, competition and diversity. The capacity of women to accommodate change has been displayed through their adoption of income generating survival strategies. These activities have had many consequences for women and their households.

As discussed, women have been primarily responsible for the maintenance of their households, and women have borne the greatest burden of household tasks. Although household size has not substantially affected the maintenance of households, the number of small children could impact on the household chore burden of women. They have been responsible for children and every aspect that relates to children: bearing, nurturing, socialising, and child minding. The opportunity for delegating these tasks has depended on the household composition, especially whether there have been other members to delegate responsibility to, and to what extent the household has ascribed to cultural divisions of household labour. Even though some evidence has suggested that households have adapted to change through the transfer of tasks, change has not necessarily been rapid.

Consequently, women's household roles and responsibilities have limited their time, whatever the household composition. In addition, women's income generating activities have conflicted with time for household tasks by increasing women's labour time. It seems then, that although time is a finite resource, women's time management is flexible enough to accommodate added burdens. The involvement of men in tasks traditionally assigned to women, could suggest a capacity for accommodation of change within households, if the women were to engage in training programs.

A second conflict resulting from women's income generating activities has been related to access to household resources and control over them. In most households incomes have been pooled. The allocation system adopted by households has determined access to, and control over resources. When household resources have been above the critical level, women seem to have had greater access to resources. In poor households, women's access to resources has been low, even if women contributed to the household income. For the most part, women's contributions to the household have been 'invisible' or perceived to be of little consequence as they have often been irregular, small amounts gained from various activities. Women's incomes have often been spent immediately on food and household necessities, which has added to their invisibility. Female bargaining power and access to resources within households have increased following women's

participation in activities away from home, provided that the activities have not been seen as extensions of women's domestic activities.

However, access to resources alone has not directly enabled women to manage change. Management involves decision making, which in turn infers access to, and control over resources from which to choose alternatives. Women's decision making power within the household has been directly related to personal income levels (rather than the level of household income), income sources and culture (which has determined who has control over resources within the household). Control in turn has inferred access to resources (although not necessarily all household resources). Access to resources has been determined by the bargaining power of household members. This has been greatest for women who have contributed visibly to household incomes. Access to resources has suggested the ability to transfer and reallocate resources and responsibilities within the household.

Finally, the diversity of survival strategies employed by women in developing countries may have indicated their potential to respond to changing demands and environments, despite household situations. It is therefore proposed that women would be more likely to engage in training programs, and households more like to accommodate the resultant changes to household environments if :

- ▼ household composition was such that alternative labour resources existed (and were controlled by women), and
- ▼ women had a recognised contribution to household incomes (resulting in greater access to resources, stronger bargaining power and improved control over resources).

Family management research has focussed on how family demands have been met and the allocation of resources have been allocated through the family management processes of throughput, to produce outputs as met goals, changed resources, and satisfied demands. Throughout these studies, the factors discussed above have played a vital role. Household

production, income, division of labour, participation in decision making, access to resources, control over resources, education, capital stock, sex of the household head and time spent in different household related activities have been assessed and empirically modelled to examine their influence on the family management system. It seems that family management might offer development planners an understanding of the interplay between the factors that affect women's participation in programs (particularly training programs).

Literacy has been used as a skills and entrepreneurship training prerequisite, despite the complexities and lack of agreement concerning the measurement of literacy levels. Family management studies could probably relate training outputs to family (or household) inputs and management throughput, and may provide more appropriate, alternative criteria for the selection of women for skills training (in relation to their potential to adapt to a new situation and manage the new demands that this would create for women and their families). Granting women access to training based on their potential to adapt to a new situation and demands may widen the scope for illiterate women and improve skill levels, product complexities, product diversity and chances of enterprise success for women either in the informal sector or entering this sector.

CHAPTER 3 METHODOLOGY

3.1 Survey design

Survey research has been described as a powerful, scientific tool for gathering accurate and useful information (Salant & Dillman 1994). Surveys have been used by researchers to develop statistical descriptions of people (Fowler 1993). The information gained from a few respondents is then used to describe a wider population (Salant & Dillman 1994). Data is collected through asking questions via mail questionnaires, telephone surveys or face-to-face interviews (Salant & Dillman 1994).

Fowler (1993) has explained that 'special purpose' surveys (designed to collect information to satisfy a specific need) have been appropriately used in instances where:

- ▼ the information required could not be obtained from other sources;
- ▼ standardised measurement, consistent across all respondents, has been required for comparative studies involving distributions or patterns of association within the sample;
- ▼ this may have been the only way to ensure that all the data needed for a given analysis were available and could be related.

The use of home management practices and household attributes for course selection was a novel approach; no data bases were available for use. This necessitated the development of a 'special purpose' survey. In addition, the study set out to establish patterns of association between attendance, successful training, education level, home management and household attributes. The only way to collect this data was to develop an instrument specific to the research problem.

A modified version of face-to-face interviews was chosen as the survey technique. A questionnaire was developed to gain information regarding the attendance, training achievement, education levels, home management practices and household attributes of

women participating in skills training courses. The survey method chosen (described below) was not a true face-to-face survey as used for qualitative data collection (Creswell 1994). Both qualitative and quantitative data were collected.

Salant & Dillman (1994) have reported that face-to-face surveys yield the best return rates, allow for longer questionnaires, and collect the most accurate data. In addition, this method was chosen in anticipation of problems with answering the questionnaire due to factors related to: educational levels and experience of the respondents, respondents' unfamiliarity with such an exercise, and reading level of the questionnaire in relation to the literacy levels of the sample. Since education was included as a dependent variable in the study, it was decided to use a standard questionnaire, simultaneously administered to a class of course participants.

Face-to-face interviews have the limitation of being dependant on interviewers (Salant & Dillman 1994). These authors have stressed the need for interviewers to be informed of the purpose of the study, questionnaire format, and sound interviewing techniques. A senior family management student (whose mother tongue was Zulu) was trained in these aspects by the researcher. In addition, the researcher was always present during surveys to deal with problems related to how respondents should answer questions. The consistent presence of the researcher was also important to ensure standardisation of questionnaire responses (Salant & Dillman 1994).

Data collection was simplified by translating the questionnaire into Zulu, so that respondents could choose to answer in English or Zulu. This, and use of a standardised questionnaire meant that women who could cope with the reading level and record their answers could answer for themselves, while the researcher and assistant dealt with queries and helped those who encountered problems with reading the questions or recording their answers. In addition, this method meant that the maximum time demanded from the class and their teacher for collection of the data was half an hour; a factor that would hopefully have increased the chances of an institution agreeing to participation.

The method chosen was also less threatening to the women than face-to-face interviews, and took less time. As only one assistant was required, greater data reliability could be ensured.

3.2 Population and sample selection

NGO's who conducted women's skills training courses within a one-hour travelling distance from Pietermaritzburg were identified from two publications (Regional Consultative Forum (undated), Barnard (1994)) and newspaper articles. The directors of the targeted NGO's were approached telephonically to check that their organisation did conduct training courses for Black women in skills that could lead to income generating opportunities. Organisations were invited to participate in the study if they: offered such courses, had no entry requirements other than basic literacy, recorded class attendance and grades (or were willing to keep such records). Therefore, purposive sampling was used; ie sample selection was based on convenience and availability of organisations (Kerlinger 1986). As indicated by Creswell (1994), findings of studies that have used this sampling technique may not be generalised to reflect the characteristics or behaviour of an entire population, since the sample was not a stratified random sample. Appendix A contains a list of the participating organisations and key people involved in the study.

Salant & Dillman (1994) has explained that the survey technique may lead to development of a sample error, because data has been derived from interviewing a sample of people, rather than the whole population. This author has suggested that the sample error may be overcome by:

- ▼ a large enough sample size,
- ▼ ensuring that everyone within the population is assured an equal chance of being interviewed,
- ▼ designing questions that lead to willing and accurate responses, and
- ▼ selecting a sample with similar characteristics to those of the population.

For these reasons, the NGO's that fulfilled the above criteria were invited to attend. As many courses as time and resources would permit were included, and all women in the classes were asked to participate. Each organisation was given the opportunity for participation, and the participants in the contacted organisations had equal chances of being included. However, participation was not mandatory for the women in each survey, therefore the willingness to participate was ensured.

Support from the NGO's was seen to be important in attaining the cooperation of the women in the courses. Data was collected between January and March, July and December 1995. Surveys were completed at six organisations with 11 classes. This included 161 women in total.

3.3 Survey materials and approaches

As discussed above, a questionnaire was used as the data collection instrument (refer to copies of the English and Zulu translations of the questionnaire in Appendixes B and C). The questionnaire included questions with one word answers, and categorial scales (with yes/no, closed-ended response scales; and some partially closed-ended questions with the option for respondents to add other responses). The questionnaire was designed to rate the educational level of the women, describe selected household attributes and gain insight into their management practices. Heck *et al* (1992) have outlined the problems associated with the measurement of the components of the managerial system. Although researchers within the discipline of family or home management have agreed upon the components that comprise the management system, no system has yet been verified for the measurement of the practices that characterise these components (Heck *et al* 1992). The questions were designed to appraise women's participation in activities that could characterise home management practices, and identify household factors that could inhibit or enhance the practice of home management.

A questionnaire had been developed and tested for an earlier study conducted by the researcher, following a study of variables measured by other researchers (Spalding 1989).

This study aimed at the collection of data to establish the relationship of women's attendance at a women's club to home management (specifically resource allocation) practices. A further study (Green & Spalding 1992) used a modified and improved version of the first questionnaire in the same situation. These studies used a method of accumulative scores developed by the researchers according to Rice & Tuckers' (1986) management system categories. A subsequent linear regression analysis of the raw data was carried out. Selection of questions for the current survey was based on these results and the findings of other family management researchers (as was discussed in the review of related literature).

The teachers at the NGO's that participated in the study were asked to give prior notice of the surveys to their students. They were requested to assure the students that the survey was for research purposes, that individual responses would remain confidential and that there was no reward offered for the women's responses. This was necessary to limit the giving of perceived 'correct responses'. Refer to Appendix D for a copy of the questionnaire completed by the course organisers.

At the start of each survey, the women were invited to participate. Instructions on the cover sheet of the questionnaire encouraged honesty, promised confidentiality and discouraged discussion of the answers with anyone but the researcher and survey assistant. This was reinforced through the standardised introduction delivered (in Zulu) by the survey assistant at the start of each survey. The teachers were not present while the questionnaires were completed. Respondents were thanked for their participation at the conclusion of each visit. Confidentiality was introduced by using coded questionnaires, where the women's names could be detached from the rest of the questionnaire.

It was originally intended that surveys should have been conducted on the women's first day at the course to ensure that their management practices could be recorded before the women adapted their practices to cope with the demands associated with being away from their homes for the duration of the course and to ensure that women were surveyed before they dropped out of the courses. However, completing the questionnaire on the first day

of the course was not feasible as the women were too stressed by the demands of their new environment and activities to cope with the additional stress related to the surveys. Instead, the day (in relation to the duration of the course) was recorded along with other organisational information as a control variable. The date of completion of the course was recorded during these interviews and the NGO's were contacted soon after the completion of each course to obtain the percentage attendance and grade assigned to each woman. Refer to Appendix E for a copy of the schedule used. The organisations were thanked upon return of these schedules.

Translation of the questionnaire into Zulu was carried out by the survey assistant. The accuracy of the questionnaire was tested through the reinterpretation of the questionnaire into English to validate the translation of the terminology. As a result, corrections were made to both the English and Zulu questionnaires. The questionnaire was then pre-trialed on three people randomly selected from the survey assistant's home neighbourhood near Howick. Neighbours were approached and requested to assist. Three women willingly offered their help. One woman was confident at answering the English questionnaire, one could answer the Zulu translation and one illiterate woman was guided through the questions of the Zulu translation by the survey assistant who also recorded the answers. These exercises confirmed that the questionnaire could be completed in less than half an hour. Following discussions with the assistant, minor alterations were carried out to the questionnaires.

A trial was conducted on a class of 20 women at one participating institution. Assistance was required to interpret what was asked of the women in the last question of the questionnaire (namely question 10.2: Who makes household decisions?). The question was explained to the women by the survey assistant. This would not have altered the responses of the women to the question. The question format was simplified (refer to adopted format in Appendixes B and C, question 10.2). No other changes were made to the questionnaire. Experience from the earlier studies (Green & Spalding 1992, Spalding 1989) suggested that the small sample size (30 women in these earlier studies) was too small for accurate statistical analyses. Since the outcome (attendance and success) of the

training would only be known at the end of the course (three months later), these women were included in the sample and further surveys were conducted.

3.4 Variables included in the study

Following the tradition established by other researchers (Heck *et al* 1992, Singal & Balakrishnan 1990, Garrison & Winter 1986 and Heck 1983), participation in activities thought to represent home management practices were measured against output variables (here attendance and successful training). This was based on the assumption that effective managers could have had higher attendance rates and greater success in skills training courses. Household factors that could have affected women's management practices (identified from the literature studied) were included. The differences between courses and institutions were controlled for by the inclusion of course related variables. Education, although a resource within the management system (Rice & Tucker 1986, Heck 1983), was treated as a dependent variable in the study to isolate it from the management variables. Figure 4 (below) illustrates the relationship between the independent and dependent variables. How variables were derived from the questionnaire has been detailed in Appendix F.

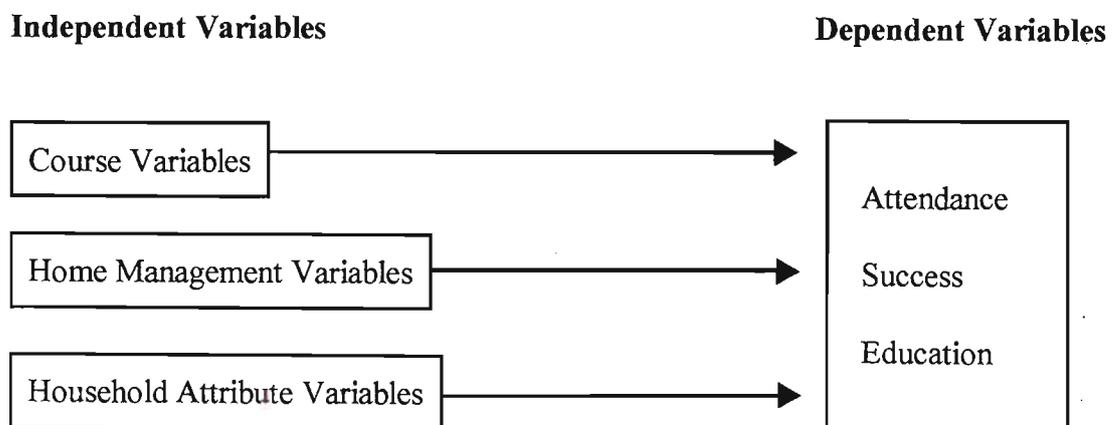


Figure 4 Diagrammatic representation of the relationship between variables

3.4.1 Attendance variable

Women's attendance at courses was treated as a dependent variable. Attendance figures were provided by the institutions as the number of days attended by each woman. The percentage attendance was calculated. A binomial variable was used for analysis purposes (women with perfect attendance against women without perfect attendance).

3.4.2 Training success variable

Training success (a second dependent binomial variable) was expressed as the women's successful completion of the course (in terms of the criteria gauged by the institutions), or failure to meet the criteria. The original agreement with the institutions was that grades would be awarded as symbols (A, B, C, etc.). Final grades varied widely in the range of symbols. Grades for some institutions ranged from A - C, while others ranged from A - F. One institution had mislaid the symbols assigned and could only report on whether the women had passed their course or not. This necessitated the conversion of this variable to a binomial variable (successful completion of the course or unsuccessful completion).

3.4.3 Education level

A scale was used to record the women's level of formal education to limit the range of answers for statistical purposes. The scale included the following categories: no education, junior primary, senior primary, standards six to eight, standards nine to matric and further studies. These categories were based on the debate regarding the relationship of education levels to literacy reported in the literature review (refer to sections 2.4.1 and 2.4.3). Education level was treated as a dependent variable for analyses related to hypotheses one to four in order to isolate its interaction with the independent variables and to assess its influence on these variables.

3.4.4 Course variables

These variables were used to control for inter-institution and course differences (refer to Figure 5, below). Binomial variables were used to indicate if overnight accommodation was provided for participants, and if the course was income generation orientated (ie if an entrepreneurship training component was included in the skills based course) or not. Discrete variables included were: course number, institution number, course duration (number of days), and day on which the survey was conducted (in relation to the duration of the course as discussed above).

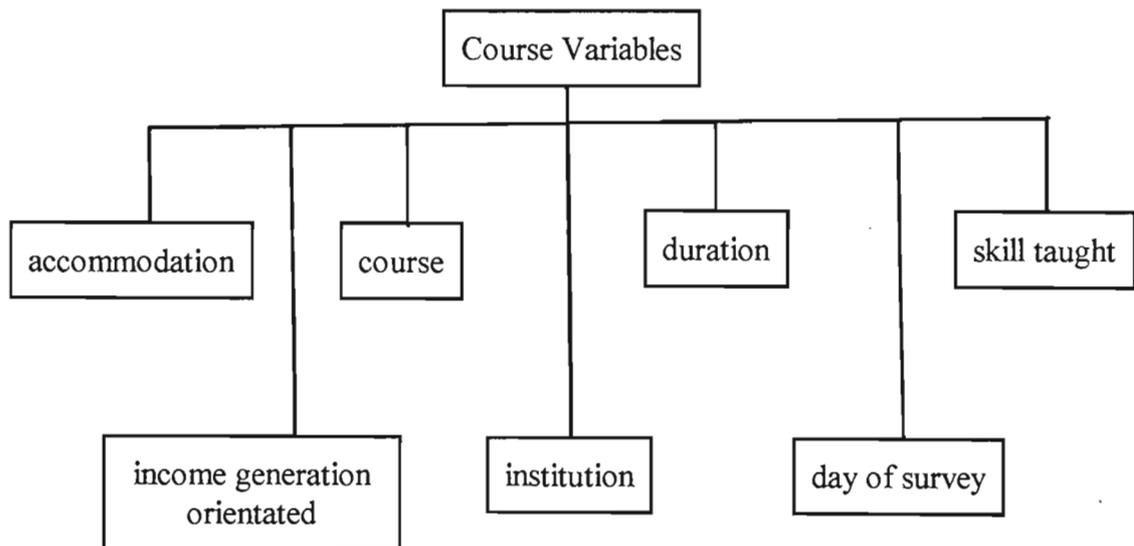


Figure 5 Explanatory framework for course variables

3.4.5 Home management parameters

The problems associated with the measurement of home management have been previously outlined (refer to section 2.7). Questions to gauge the participation in activities that may have represented management practices and factors that could have hindered or enhanced management, were included in the questionnaire. Following the pattern established by Deacon & Firebaugh (1988), the variables were divided into areas representing input and throughput within the management system. Bold type has been used to highlight the introduction of input and throughput variable categories, and

italicised type to introduce variables into the discussions. The figure below illustrates the relationship between the management areas covered by the management indicator variables included in the study.

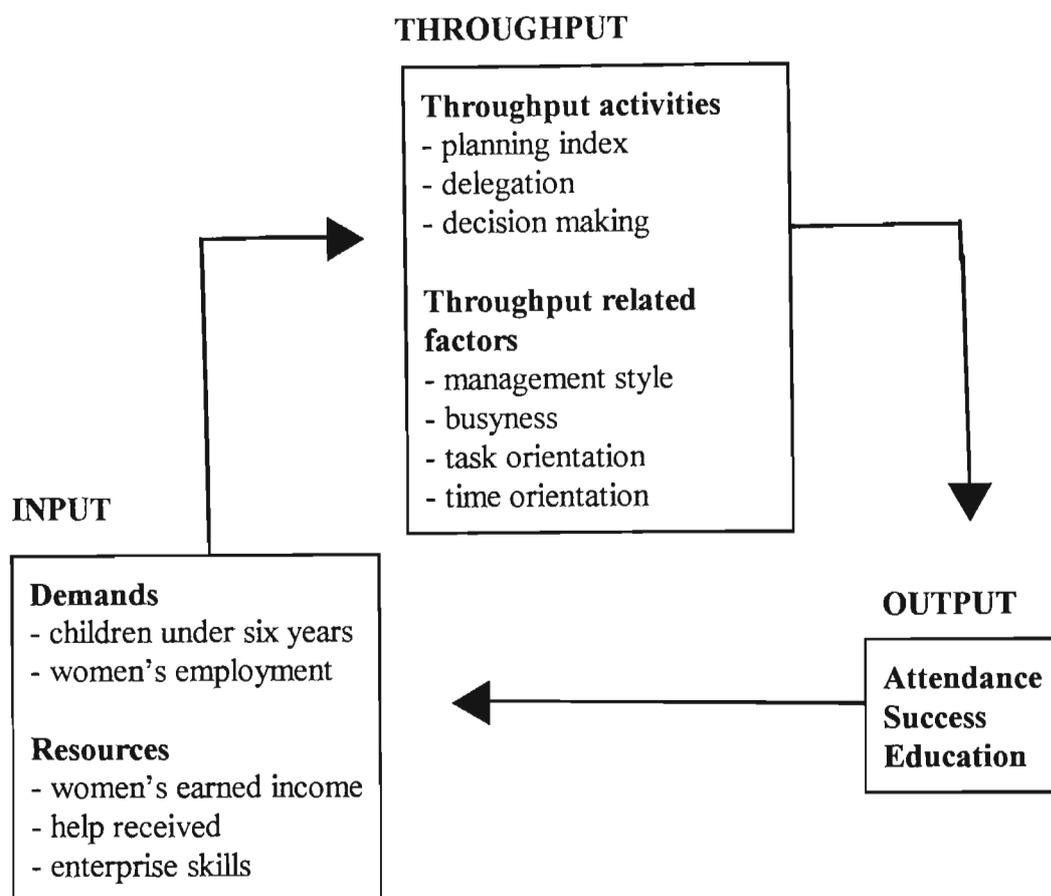


Figure 6 Theoretical framework for home management variables (after Deacon & Firebaugh 1988)

The **demands** faced by the women were indicated by variables reflecting *the number of children less than six years of age* (Jaquette 1993, Heck *et al* 1992) and *women's employment* (Heck 1983). **Resources** available to the women were measured in terms of women's earned income (Heck & Douthitt 1982), help received from other household members (Signal *et al* 1990), and enterprise skills (Rice & Tucker 1986) measured as the marketing of home grown fresh produce and animal products (eggs, milk and meat). *Women's earned income* was recorded as a variable derived from income from formal,

informal and other sources (pensions, grants). A trinomial variable was used to indicate *participation in household chores by children and adults*. This variable indicated if there were no children or adults (ie. human labour resources were not available), if these were present but did not help (latent resources), or help was received (resource existed and was accessible). The inclusion of binomial variables to indicate the woman's *participation in enterprise activities* was felt to be an important indicator of the potential to use skills acquired through the course to generate income (Harper 1984a), and so to succeed in the ultimate purpose of the training course.

Management throughput was gauged through women's participation in a number of **throughput activities and related factors**. Throughput activities were reflected in variables for planning (Heck 1983), delegation (Rice & Tucker 1986), and participation in decision making (Bullock 1994, Heck 1983). Variables for factors related to throughput included: management style (Baker & Nelson 1986), busyness (Baker & Nelson 1986, Heck & Douthitt 1983, Walker & Parkhurst 1982), task orientation (Baker & Nelson 1986), and time orientation (Walker & Parkhurst 1982). No attempt was made to qualify whether the variables included to represent women's participation in management were in fact able to suggest the effectiveness of the women's management. Determination of management effectiveness was not an aim of the study. Variables used to indicate the throughput and throughput related factors (refer to Figure 6, above) are clarified below.

A *planning* index was derived from whether woman knew what would be prepared for supper. The practice of *delegation* was indicated by appointment of someone else to prepare supper for her. *Participation in decision making* was determined by women's responses to questions related to various decisions (economic, non-economic and power related) a household could face. The binomial variables derived were used to indicate if woman participated in these decisions or not. Whether women were household heads or not was deemed important to signify participation in decision making (Young 1992). Therefore, a binomial variable was included to indicate household headship.

The women's *management styles* were determined from responses to a closed-ended question of how women selected the activities to do in the home each day. Women's participation in various activities (namely child care, fresh produce production, care of animals, time spent in wage employment, community involvement eg committees and organisations) were used as indicators of their *business*. Baker & Nelson (1986) have related the range of activities carried out by women to their effectiveness in management. The Green & Spalding (1992) study isolated participation in community activities as an indicator of the probability of women's attendance at group meetings. As explained above, measurement of effective management was not intended as part of the study. However, a wide range of activities could suggest that management or coping strategies may have already been employed and therefore such women may have had a greater potential to adapt to an added burden of training. *Task orientation* was reflected by whether women had completed all they had wanted to before leaving for the course. The response to a closed-ended question of when an uncompleted task would be completed, was used to suggest *time orientation*.

3.4.6 Household attribute variables

Household factors that could hinder or enhance women's management were incorporated as household attributes (refer to the framework below). **Household demographics** were represented by the following variables: household size (excluding migrant workers), number of household earners (including migrant workers), the mode of transport used to get to the course and the time taken for this (refer to Figure 7, below).

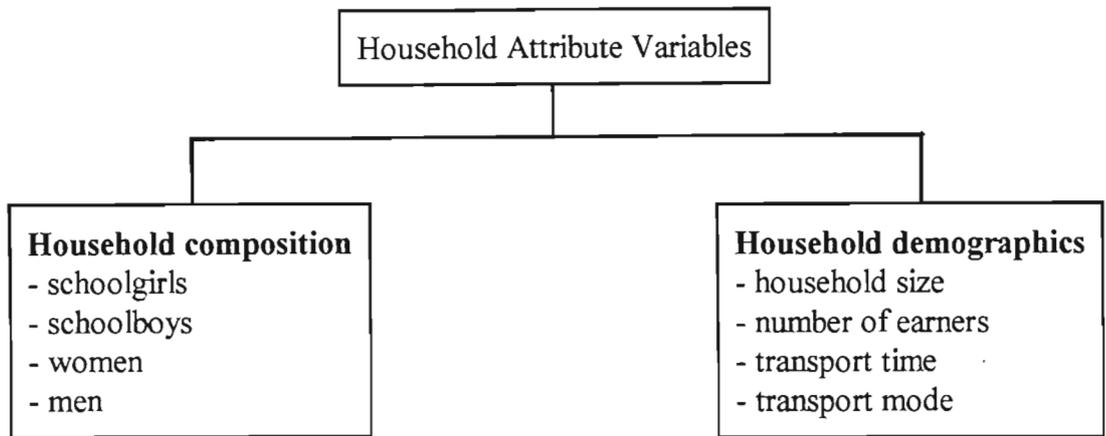


Figure 7 Explanatory framework for household attribute variables

Household composition was recorded as the following variables: number of male scholars, female scholars, men and women. Household composition has been highlighted as an important consideration in development planning (Rogers 1990). Factors such as the number of other adults (particularly other women) present in the household could have suggested the availability of human resources that could be substituted for the women's labour while attending training courses (Rice & Tucker 1986). So too, the number of children (especially girls) could also have suggested human resource potential. Whether these resources were accessible was recorded in the variables used to show participation of children and adults in household activities (see home management variables above). The division of labour was not further investigated. Cultural and household divisions of labour have been highlighted (O'Connell 1994 and Reynolds 1983, cited by Rogers 1990) as important in relation to availability of, and access to resources by women. However, this aspect was not intended as part of the study. Nevertheless, women's access to, and control over resources were included (and indirectly measured) by home management variables, namely: women's range of income sources, participation in wage employment, position in relation to household head, and participation in decision making.

Household size and *the number of household earners* were included as indicators of the economic well-being of the household, although the actual income of the household was

not ascertained, nor was the adequacy of the income assessed. Previous experience (Green & Spalding 1992, Spalding 1989) in trying to access these factors had been unsuccessful. Many women interviewed were not able to quantify household income, and income was consistently perceived as inadequate (whatever the level of income). Such assessments were therefore not attempted.

Variables for the *mode of transport* used to get to the course and the *time taken* for this were used as indicators of access to the training situation (Buvinic & Lycette 1988). In addition, greater travelling time would mean that women were away from their homes for longer than women who lived closer to the institution.

3.5 Data analysis

The data collected from the surveys was appropriately coded and entered into a spreadsheet for analysis. Derived variables were calculated where necessary. The accuracy of the data capturing was checked by means of responses included in the questionnaire as checks. These have been detailed as part of Appendix F. Once checked, these entries were deleted from the spreadsheet. Following this, a frequency analysis was conducted using *QuatroPro* (version 6), while cross tabulations and Chi Square tests were carried out using the *SAS* system. The Chi Square test has been reported as appropriate for analysing data expressed in frequencies rather than measurements (Leedy 1993). Dependent variables were non-parametric, while the independent variables were continuous, discrete and explanatory in nature. The findings were used to interpret the results of the analyses carried out to test the hypotheses.

Data were analysed using multiple regression processes. Kerlinger (1986) has explained that these statistical methods are appropriate in assessing the influence of several variables on a dependent (or response) variable. In addition, regression analyses have the advantage of being able to incorporate discrete or nominal explanatory variables, as well as continuous variables to determine correlations between variables (Pagano & Gauvreau 1993). As described in section 3.4 (above), a mixture of variable types was included in

the study. The influence of course related, home management and household attribute variables on each of the dependent variables was tested using the statistical package *Genstat 5* (1995). More specifically, stepwise logistic regression was used to identify the order of influence of independent variables against the two binomial dependent variables (attendance and success) independently. Stepwise multiple regression was used to carry out a similar process for studying the influence of independent variables on the third dependent variable (education, a nominal variable).

Logistic regression has been used to identify a set of explanatory variables that influence a dichotomous (rather than continuous or nominal) response. The dichotomous variable usually represents 'success' or 'failure' (Pagano & Gavreau 1993). This technique was suitable for assessing the relationships studied for hypotheses one, two and three. Multiple regression (an extension of linear regression) has been used in statistics to investigate the relationship among a number of different variables against a continuous or nominal response variable (Pagano & Gavreau 1993). Therefore this technique was used to test relationships for hypothesis four (with education as the response).

Mulder (1987) has explained that stepwise regression enables decisions to be made regarding the inclusion or exclusion of variables from an analysis by assessment of the contribution of a variable in a correlation test. The procedure is begun with the variable that correlates highest with the response variable (here the dependent variables). This variable is then combined with each of the other independent variables in turn to determine which combination of variables correlates the highest with the response variable. These sequential processes are repeated until no noticeable increase in correlation is brought about by a further addition, or until the most highly correlated variables have been identified (Mulder 1987). The order of influence of the independent variables for each hypothesis (one to four) was identified by this process.

The relationships for hypothesis five were also tested using logistic regression (attendance and success against education levels). Results of analyses for the previous four hypotheses were used to interpret the results of analyses carried out for hypothesis five.

CHAPTER 4 SAMPLE CHARACTERISTICS

Surveys were completed by 161 women during 11 courses. Five training institutions, belonging to four NGO's participated. All courses offered full-day training. Eight courses taught sewing, one course taught cooking, one soft furnishings and one course offered training in electrical wiring and maintenance of domestic appliances. The Directors and Organisers of these institutions were enthusiastic regarding participation in the project. Of those contacted, three other organisations fulfilled the criteria and were asked to participate. No conclusive arrangements could be made with one course organiser and as a result no surveys were completed at this institution. Upon arrival to carry out the surveys at two institutions, it was discovered that their entry requirements were not basic literacy but a completed matriculation, and so could not be included in the study. None of the contacted organisations declined the opportunity to participate.

The institutions that participated were in central Pietermaritzburg (2 institutions), central Durban (1), Durban's industrial area (1), and Marianhill (1). Sample contribution per institution is illustrated below (Figure 8). The proportion contribution of each course is reflected by the shaded areas for each institution. Institutions two and four (below) belonged to the same organisation but were geographically separated.

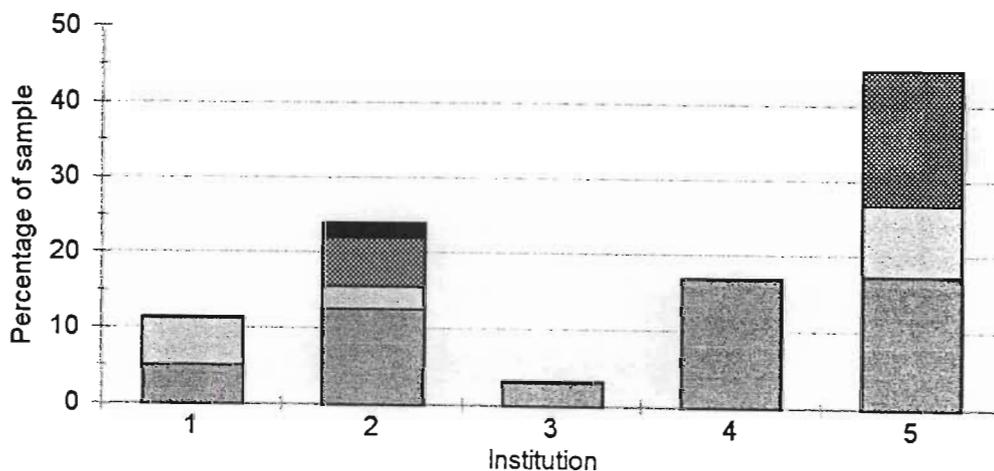


Figure 8 Percentage sample contribution per institution

At two institutions, women paid R 250 to register for the courses. Training at the two institutions belonging to the same organisation, was subsidised by the Department of Labour. These women did not have to pay for training but their selection was based on financial need. The course organisers were not familiar with the selection procedures. The electrics course was fully sponsored by a union for informal business women. Selection for training was carried out by the union administrators and again, the details of this process were not accessible. In all courses, the women were supplied with the necessary equipment (sewing machines, scissors etc.) and materials for training by the institutions. Students registered at the Marianhill Institution were offered on-site boarding at R25 per day. Thirty-nine percent of participants at this institution used this facility (only 17% of the total sample). Consequently, the time travelled by the women to get to the course was higher for these courses than for women attending courses at the other institutions. Most women relied on public transport (mostly minibus taxis) to get to the courses.

Class sizes ranged from 3 - 28 women. Average class size was 13. In all cases, instruction was directed by the learning pace of the women. Teachers instructed individuals as they progressed with their tasks. Course duration varied from 10 - 80 days. Eighty-six percent of the women in the sample had perfect attendance at their courses. Each participating institution awarded certificates upon successful completion of the courses. Twelve percent of the women in the sample did not pass or complete their training. There was a wide spread of ages within the classes, from twenty-year-olds to women in their sixties, although the women's actual ages were not recorded, since this variable was not found to be significant in previous studies conducted by the researcher.

Only one institution (offering two of the surveyed courses) included instruction for entrepreneurship. One institution formed part of a larger organisation that offered separate entrepreneurship training at additional cost. This organisation also operated a loan scheme for purchasing equipment (such as sewing machines) for setting up small businesses. People who had completed training with the organisation were entitled to apply for these loans.

Each participating institution had no other entry requirement beyond basic literacy, however, no formal testing was carried out for selection purposes. The need for reading or writing during the sewing classes was not observed during the collection of data, but instruction was given in use of tape measures, which were used in these courses. The electrics class was given formal instruction each day and the women took notes during this. Cookery class participants were provided with written recipes. Nevertheless, women worked in pairs and the class prepared the same recipe simultaneously, therefore literacy hurdles could have been overcome by group work. Course instruction was mostly given in Zulu.

The nervousness displayed by the women at having to complete the questionnaires was obvious. This may have undermined their confidence at completing the questionnaire. Many women required assistance with reading, interpreting questions and recording their answers. Generally, those who opted to answer the English version could cope on their own. Although the average educational level of the women surveyed was senior primary (standards two to five), a wide range of education levels was recorded by the women's replies. Only three of the women in the sample were not Zulu-speakers. These women spoke Xhosa.

Despite willing cooperation from course organisers, some teachers were suspicious of the researcher's intentions. This feeling was also portrayed by women in some courses, which may have been a direct result of their teacher's input before the surveys. Fears seem to have waned as the surveys progressed, since no questions in the questionnaire related to the training situation. Often the women's facial expressions indicated that they were very puzzled at the 'peculiar' content of some questions. This could have suggested unfamiliarity with the procedure or portrayed misconceptions concerning the purpose of the survey. Often the researcher and assistant were asked if they intended to help the women financially through money, employment or loans. This may have been an indication of the plight of the women who were engaged in these courses. Fifty-four percent of the women had no income of their own, 12% reported that there were no household earners, and 31% reported only one earner for the household. Assessing

women's income in relation to a 'breadline' or such measure was not possible. The problems associated with this assessment have been outlined earlier. Most households had migrant members (84% had males who worked away from home, while 70% had absent female members), comparable with Ardington's findings (1994) in a survey of five thousand households in KwaZulu-Natal.

Adults helped with the housework in two-thirds of the households (66%), while three-quarters (75%) of the sample reported that children assisted with housework in their households. Average household size (eight members) was higher than that reported (six) for the average Black household in KwaZulu-Natal (Ardington 1994). The average household composition was: two children under six, two female scholars, two male scholars, one man and one woman. Only five percent of the women surveyed were household heads. No women came from joint headed households where they could have shared the headship. Almost half (49%) of the sample were daughters of the household heads.

On average, the women in the sample were the decision makers in 25% of seven common household decisions. The illustration on the following page (Figure 9), portrays the interesting pattern of who was reported to be the decision maker for common household decisions. Respondents' mothers predominantly made household decisions. This may have suggested that households represented by the women in the sample were not traditional patriarchal households, a finding which contradicted what was expected in the light of the discussion in Chapter 2.

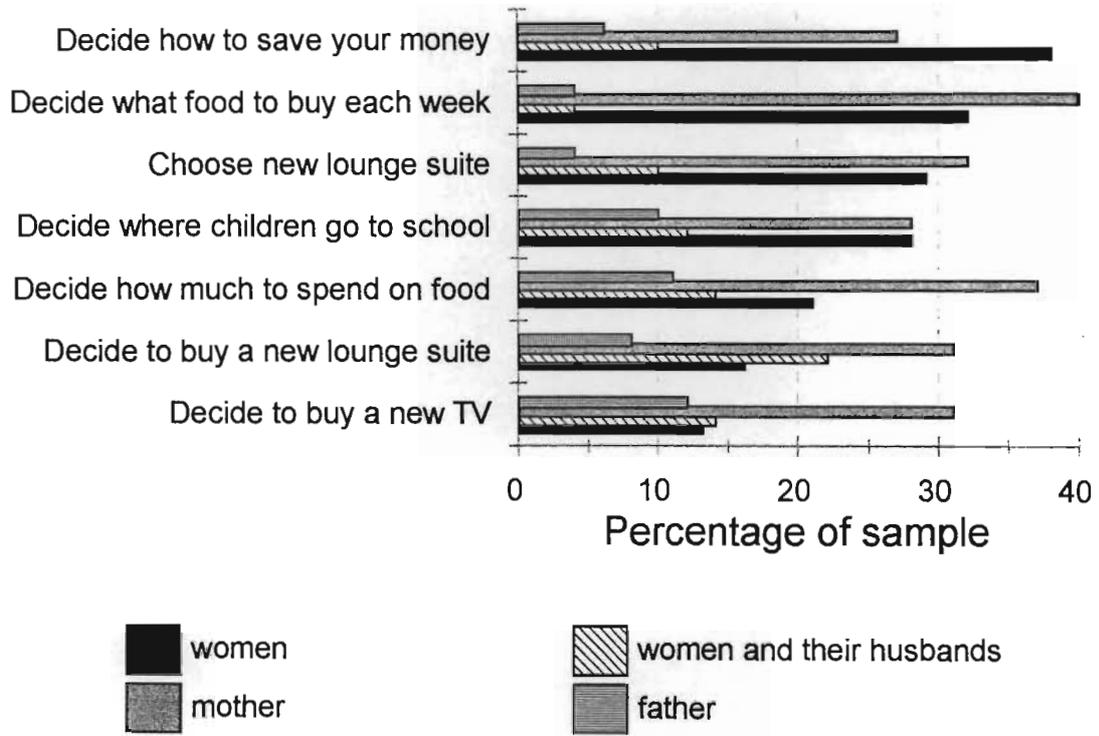


Figure 9 Decision maker for common household decisions

CHAPTER 5 RESULTS AND DISCUSSION

5.1 Statistical analysis of variables

Stepwise logistic regression analyses were used to determine the influence of the independent variables on the two bivariate dependent variables (attendance and success) to identify significant relationships. Multiple regression was used to carry out the same procedure with the dependent variable education, as this variable was not bivariate in nature. Finally, education was treated as an independent variable in analyses to determine relationships between this variable and the other two dependent variables.

5.2 Description of dependent variables

Many more women attended 100% of the course days and successfully completed the courses than those who did not. The surveys resulted in 161 women being interviewed: 86% had perfect attendance, while 88% successfully completed the courses for which they were registered. Only 2% of the sample had completed less than three years of schooling, and 1% had post-matric qualifications (refer to Table 11, opposite). For the purpose of analysis, education levels were regrouped to render three levels: less than eight years of completed schooling, 8 - 10 years of completed schooling, and more than 10 years of completed schooling (including post-matric qualifications). The majority of women in the sample had completed 8 - 10 years of schooling.

Table 11 Sample education levels

Schooling completed	Proportion of sample
0 - 3 years	2%
4 - 7 years	19%
8 - 10 years	42%
11 - 12 years	36%
Additional	1%

5.3 Course related variables

Hypothesis one stated that variables related to the courses themselves did not affect women's attendance and success in skills training courses included in the sample. Multiple logistic regression was used to determine the influence of the independent course related variables to the dependent variables. Course number was significantly related to both attendance and success. Course duration, institution number and type of course were significantly related to attendance, while the day on which the survey was conducted was significantly related to successful completion of training. The change in regression deviance and the degrees of freedom derived from the regression analyses against attendance and success are summarised in Appendix G.

The proportional contribution of each course and institution to the sample has been illustrated in Figure 8 (Chapter 4). Percentage attendance and success for each course are illustrated in the figure below.

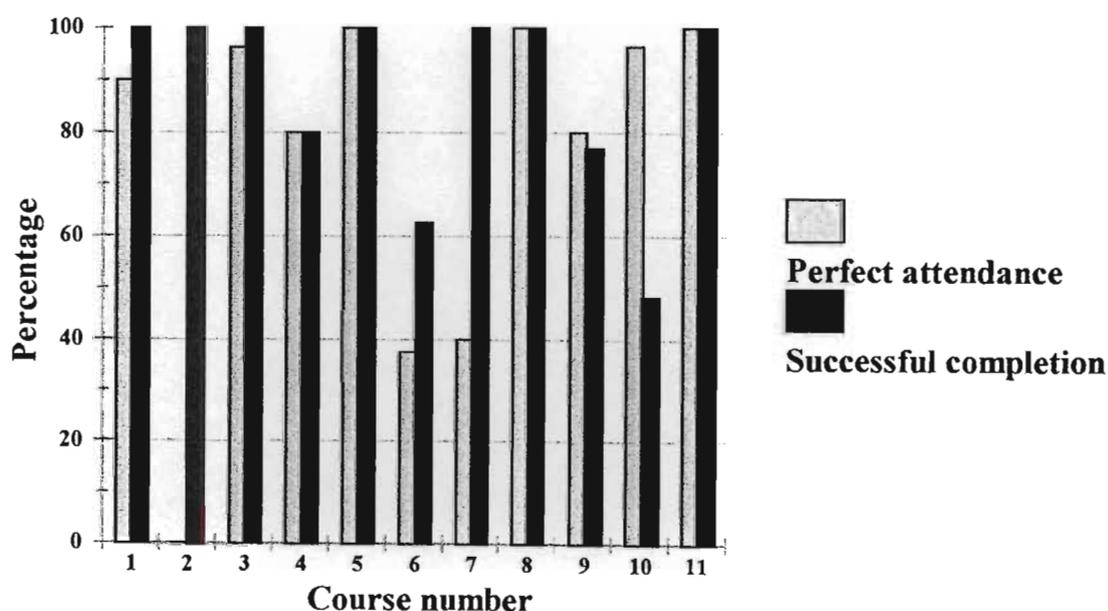


Figure 10 Perfect attendance and success per course

One course had no women with perfect attendance, while three had 100% or perfect attendance. Seven courses had perfect success rates. In two courses success rates were lower than perfect attendance rates. Lower attendance rates and unsuccessful course attainment were linked. *Course number* was strongly and significantly linked to the dependent variables. This variable determined each of the other course related variables. Whether accommodation was offered to participants, if the course was income generation orientated or not, which institution offered the course, the type of course, the day interviews were conducted, and course duration could all be linked to the course number. Therefore inclusion of these variables in addition to the course number generated a collinear error (the inclusion of the first variable could have masked the influence of an added variable). This error was seen in a change from a positive effect of duration on attendance, to a negative effect when course number and course duration were included in the logistic regression. Course duration was negatively related to attendance, the longer the course, the greater the absenteeism. This could be expected as course duration ranged from 10 to 80 days. The probability of women missing a day would increase as course duration increased. Mean course duration was 29 days.

Skills taught per course were: seven basic sewing courses, two advanced (and longer) sewing courses, one course each for electrics and soft furnishings (curtains, pillows, bed linen). From the above discussion, it can be assumed that the *skill type* was not as much a determinant as the *course duration* (identified by stepwise regression as having greater influence than skill type taught).

Institution number was also significantly related to attendance. The 11 courses were surveyed at five institutions. Women from one institution contributed 44% of the sample (three courses). This institution had shorter courses (10 - 15 days), and only one person did not have perfect attendance. This would have influenced the relationship of institution number to attendance. A second institution (one course) had no women with perfect attendance, but course duration was 80 days. As discussed above, the course number explained most of the trends seen between attendance and success and the other course variables.

As explained in the methodology, conducting the surveys on the first day of the courses was not possible, in fact the surveys were conducted on any day on which an appointment could be fixed with the institutions. No trend was evident in the relationship of successful completion and the *day on which the survey was conducted*. The significance of this variable may have been influenced by the finding that 52% of women interviewed on day four of the courses were unsuccessful at meeting course requirements. Course records did not indicate that any women were not interviewed because they were absent on the day of the survey, or dropped out before the survey took place. This may have been due to warnings from the course organisers that the surveys would be conducted on that day. Mostly, class composition was static. Day on which the interview was conducted did not affect attendance.

Provision of on-site accommodation by the institutions, and whether the course was *income generation orientated* or not, were not isolated as significantly related to either attendance or success. This could, again have been linked to course number. Only the institution at which three courses were surveyed offered on-site accommodation to participants at an additional cost to training. One institution offered training in income generation related matters. Attendance and success were not significantly related to whether this training was offered or not.

Models were not developed for the influence of the independent course related variables on attendance and success, but the analyses were used solely to determine the relationships and variable's order of influence on the dependent variables attendance and success. The results of multiple regression analysis revealed that women's education levels were not related to course related variables. This suggests that education levels across courses were homogenous.

5.3.1 Synopsis

Course number had primary and significant influence over women's attendance and successful completion of training. Course duration exhibited the second most significant influence on attendance rates (negatively related to course length). Significant interrelationships between the course related variables existed.

Provision of on-site accommodation for course participants did not relate to attendance and training success. Since reasons for women's absences were not ascertained, it was not possible to know if women were away due to illness, or if their reasons related to the variables measured in the study (both dependent and independent variables). It was anticipated that courses that were income orientated might experience greater attendance and success rates, since this may motivate women's attendance and successful completion of training. However, this was not seen. Differences in attendance and success rates between courses where women payed to register for training or were sponsored were not evident.

More course related variables influenced attendance than success rates. This may be explained by the different aspects measured by the two variables. Attendance rates reflected an absolute proportion of attendance over course duration. Successful training completion was indicated by a binomial variable (success against not successful) derived from grades provided by institutions upon completion of the courses. As explained, these grades varied across institutions. For example, some were expressed as symbols between A and C, while other ranged from A to F (as indicated earlier). One institution mislaid the symbols assigned to their course participants and could only say whether women had passed or not. In addition, there was no standardisation of grades across courses, and grades were subjective evaluations by the teachers. The reliability of the variable could not be guaranteed.

However, both attendance and success rates were significantly related to course number. This variable was related to institution number, course duration, type of course and day

on which the surveys were conducted. Aspects obviously linked to courses such as teachers, teaching and training styles, and learning situations affected training. Assessment of these was not intended as part of the study. Nevertheless, the average attendance and success rates of a course would have to be controlled for should prediction models be developed to predict women's attendance and success at training. Education did not influence attendance and success rates. *Hypothesis one* (variables related to the courses themselves did not affect attendance and success in skill straining courses) was *rejected* since course number and course related variables were significantly related to attendance and success rates.

5.4 Home management variables

Hypothesis two set out to explore if significant relationships existed between women's home management parameters and their attendance and achievement in the courses included in the study. Whether women grew food for their families or not was the only variable directly related to attendance. No variables were directly related to successful completion of training (referred to as 'success'). However addition of the following input and throughput variables listed in Table 12 (opposite) influenced both regression analyses

Table 12 Home management variables related to both attendance and success

Women have an income
Selling animal products
Children help with housework
Management style
Care for children

(for attendance and success), and therefore influenced the dependent variables. The order of presentation is not linked with the variable's significance, but modelled on Deacon & Firebaughs' (1988) management system. A summary of the stepwise logistic regressions analyses used to isolate variables is presented in Appendix H.

Variables related to either attendance or successful training are presented in Table 13 (below). Again, order of presentation complies with that of the discussion to follow, and that set out in the presentation of the variables in the methodology.

Table 13 Home management variables related to either attendance or success

Variables related to attendance:	Variables related to success:
Growing food	How often women work
Women decide to buy a TV	Time orientation
Women deciding which lounge suite	Task orientation
Women deciding money for food	

5.4.1 Demand variables

Neither **demand** variable (number of children less than six years and women's wage employment) seemed to influence attendance nor success. Contrary to previous findings (Jaquette 1993, Heck *et al* 1992) that the relationship of small children affected management output, the *number of children less than six years of age* did not seem significantly related to women's attendance or success at training courses. This may have been that the survey did not differentiate between the presence of small children in the household and those that belonged to the women who formed the sample. It must also be noted that the average sample household composition (two children, two men and two women) suggests that most households were composed of extended family structures. Child care may have been shared or the children may not have been the respondent's children. However, the participation of women in child care was significantly related to attendance or success (this variable is further discussed below). This may have been a more reliable variable in determining women's responsibilities for child care (highlighted as an important factor restricting women's participation in development and training programs, refer to section 2.5.1). The range was 1 - 6 small children per household. Therefore, all households represented had at least one small child. Mean number of small children per household was two.

It was expected that household demands would influence attendance and success. The effect that the number of small children in the household has, has been discussed previously (refer to sections 2.5.3 and 2.7.2). Specifically, the labour contribution of small children only becomes significant at age six. The demands associated with the care

of small children affect women's time use, and restrict sleep and leisure time. These factors may have affected women's attendance and performance at training courses. However, this was not evident from the results of the analyses.

Women's employment was included in the study as a second **demand** variable. Of the sample women, 21% worked for wages. This bivariate variable was however linked to how often the women worked (discussed below). Employment of the wife has been seen to increase women's demands, limit time for household production and so influence management (Heck 1982). Twenty-seven percent of women in the sample were wives of the household head. Still, demands were not found to be significantly influential in determining attendance and training success.

5.4.2 Resource variables

Women's earned income (income sources), participation in enterprise activities (women sell animal products) and help received (children help with housework) were related to attendance and success. These variables were included in the study to evaluate women's **resources**: money, income generating potential alternative, and accessible household labour. The exact *number of income sources* was not obtained through the questionnaire due to women's reluctance to declare all sources of income in previous surveys conducted by the researcher. Many women left the question blank that asked for a list of income sources, reinforcing their reluctance to declare income (perhaps due to sponsorship of some courses or selection based on financial need). A bivariate variable was therefore derived from women's responses to questions related to wage employment, selling animal products and food, and other sources of income (eg hawking, pensions). This variable indicated whether women had personal incomes or not. Forty-six percent of

Table 14 Contribution by income source for women with incomes

Income source	Proportion contribution
Wage work	45%
Other income	59%
Sell fresh produce	26%
Sell Animal products	14%

women in the sample had an income. Table 14 (above) illustrates the percentage contribution of the income sources from which the bivariate variable was derived to represent women's incomes.

Women with personal incomes were 10% less likely to work for wages, and 18% more likely to have incomes from other sources (informal sector activities or pensions etc.). As discussed above, less than a quarter of the sample worked for wages. This may infer that women in the sample derived money more often from pensions, informal activities and grants than from wage employment. In addition, women with personal incomes would be less likely to sell fresh produce (48% less) and animal products (72% less) than women with no personal income. It was anticipated that wage employment would limit time for tending a garden and animals, and increase the resources with which to purchase these products for the household. Both these variables (growing food for the family, and selling animal products were significantly related to the measured output, and are therefore discussed later). Yet women with income sources were 12% more likely to grow fresh produce and 8% more likely to keep animals than those with no income sources (although not statistically significant). The comparison of the participation for the two groups is illustrated in Table 15 (opposite). Resource levels affect time and energy available for household production (Heck 1983). This is illustrated by the findings of the next variable to be discussed.

Table 15 Participation in household production

Activity	Women with income	Women without income
Grow food	66%	31%
Keep animals	54%	23%

Higher attendance and success rates were related to selling animal products. Six percent of the sample *sold animal products*. These women all had personal incomes. Of those women who did not sell animal products, 58% had no income source. The relationship of selling animal products to income sources was significant ($\chi^2 = 12.535^{**}$, $df = 1$, where ** signifies significant at the 0.01 statistical level). This could relate to women's access to, and control over resources. If women have their own income, they would have

access to the capital necessary to invest in animal stock, and the requirements for raising the animals for resale. This could raise the income generating capacity of women, and increase their access to resources.

However, as discussed above, women with an income and those who sold animal products, were less likely to work for wages. These women seemed to gain income from sources other than wage employment; perhaps from informal sector activities. This cannot be verified from the survey data, but three women (1.8% of the sample) did not keep animals but sold animal products. It was assumed that these women were traders (formal or informal). Harper (1984b) has identified previous experience at selling products informally as an important factor in selection of candidates for entrepreneurship training. Maybe selling animal products inferred entrepreneurial potential, in which case these women would be expected to succeed at training.

Nineteen percent of the women who kept animals, *sold animal products*. These two variables were significantly related ($\chi^2 = 10.209^{**}$, $df = 1$). Mode of transport was significantly related to whether women kept animals ($\chi^2 = 22.395^{**}$, $df = 2$), but transport time to get to the course was not related to keeping animals. Those who relied on taxis to get them to the course, were 25% less likely to keep animals, while all of those who came to the course by car, kept animals. Access to a car could infer greater resource levels, and therefore, following the argument above, a greater level of resources could provide the capital necessary to purchase animal stock. However, there was no clear relationship between mode of transport to the course and selling animal products, but there was more likelihood that women who lived closer to the course would sell animal products.

As discussed, the location of the women's homes was not established through the survey questions. It was assumed that those who lived further away came from more peri urban and rural areas and used bus or taxi transport or a combination of buss and taxi transport (these three responses were grouped for data analysis). Inspection of the responses has suggested that factors related to keeping animals may offer more insight into the

relationship between attendance and success than to selling animal products. However, keeping animals and selling animal products were significantly linked.

Children's participation in household chores was recorded as a trinomial variable to indicate the absence of children (above six years of age), children present but did not help, and households where children did help with housework. This variable was included to show whether children contributed to the household's labour pool, thereby increasing the availability of household resources (Rogers 1990). Children's participation in household chores significantly influenced women's attendance and training success. Fifteen percent of sample households represented, had no children to help with household tasks. Contrary to expectation, the highest percentage of women without perfect attendance and those who were unsuccessful at course completion were those from households that had children who helped with housework (refer to Table 16, opposite). Women from households where there were children, but did not help with housework, were slightly more likely to miss lessons than be unsuccessful in the courses. The percentage of women who missed lessons or were unsuccessful was similar for households with no children.

Table 16 Imperfect attendance and non-success against children's participation in housework

Children's participation in housework	Attend <100%	No success
No children	27%	29%
Children but no help	4%	10%
Children help	69%	62%

Women without perfect attendance, and unsuccessful women were more likely to come from households where children helped with housework. Therefore, it cannot be assumed that the availability of human resources (here children's help) was positively linked with training course attendance and success. However, for women with perfect attendance and

Table 17 Perfect attendance and success against children's participation in housework

Children's participation in housework	Attend 100%	Success
No children	13%	12%
Children but no help	11%	10%
Children help	76%	77%

successful course completion, the percentages of women with no children in the household and where children did not help were more similar. Children’s participation in household chores enhanced attendance and success rates (refer to Table 17, above). A dichotomy was evident. More women with higher attendance and success rates came from households where children helped with housework, but the same went for women without perfect attendance and unsuccessful training. The absence of children from the household seems to have a greater influence over attendance and success.

The number of small children, number of women, household size and whether adults helped in the household were not related to whether children helped with housework, but the number of children in the household (small children plus school boys and girls) was significantly related to whether children helped with household chores ($\chi^2 = 68.728^{**}$, $df = 20$).

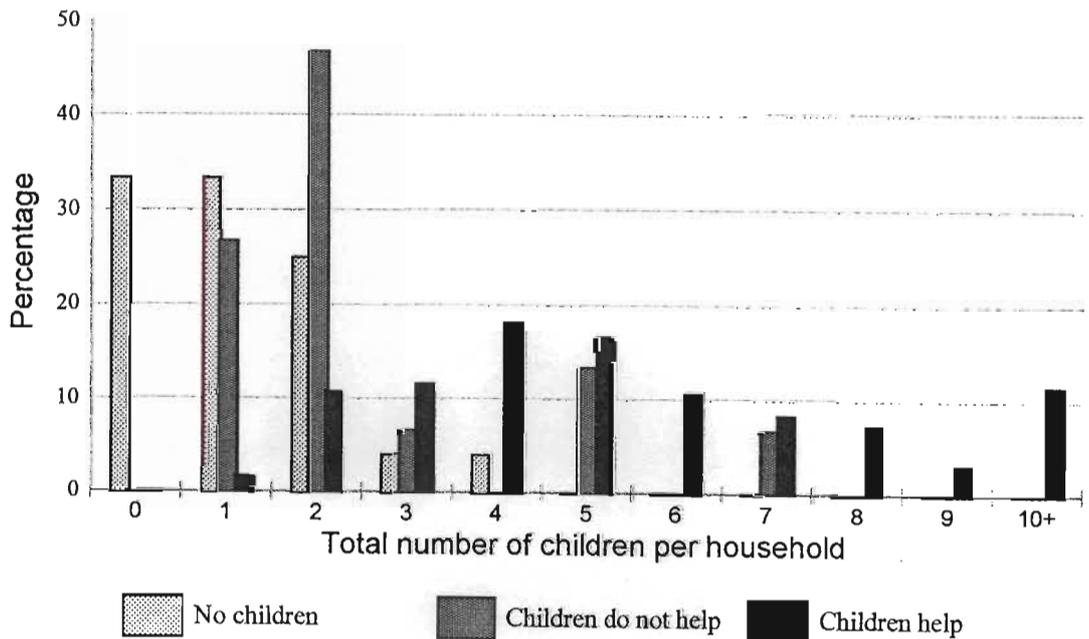


Figure 11 Children’s participation in household chores by number of children

No clear trend was evident from the graph in Figure 11, above (Children’s participation in household chores by number of children), except that children tended to help more consistently with housework when the total number of children was larger. The total number of children per household for the sample ranged from none to 14. Mean number

of children per household was five. In households with two children, children were least likely to help with housework. With three children, the relationship altered (more children helped). However, in households with four children, the highest proportion of children helped with chores.

Since the total number of children in the household did not only include male scholars, female scholars, but also small children, it can be assumed that these trends suggest that when the number of children in the household was low, these were mostly small children. Above a total of four children per household, it seemed that the number included older children (ie. there were children to contributed positively to the labour pool, based on Jaquette's (1993) findings). For households with more than seven children, children helped with housework.

To summarise: Significant relationships were discovered between women's attendance and successful completion of training and resource related home management variables. Women's access to household resources has been linked to whether they have their own income (refer to section 2.5.4). Women's employment leads to greater personal resources. As incomes increase, control over resources, household bargaining power and participation in decision making is augmented (Jaquette 1993, Blumberg 1988). Although measuring women's incomes in real terms was not feasible, totalling the number of sources declared by the women was unreliable, as explained previously. However, many women who had incomes, derived this from up to four different sources. This has been a common pattern established by women in the informal sector (refer to section 2.3.2), where participation in many activities to subsist has been associated with low resource levels (in particular women's low financial resources). Possibly, women most in need of training were the women who had no income, but these women were not as faithful at attending and as successful as women with incomes.

Women's participation in wage labour has been linked to participation in household production. Women who work have less time to engage in these activities (Walker & Woods 1976). Although participation in wage employment was not significantly related

to attendance and training success, women's participation in informal sector activities was not separately measured. Informal sector activities could be equated to wage employment in terms of production, and participation in informal sector activities would have the same influence on women's time for household production as wage employment. However, income from informal sector activities was included in the category "other sources" (refer to Table 14, above). Therefore income from these activities could not be calculated. Nevertheless, participation in wage employment was not significant in the analyses, but may have been if informal sector participation was included.

Contrary to expectation, women with personal incomes were more likely to *grow fresh produce* (a variable significantly related to attendance) and keep animals, than women without incomes (refer to Table 15, above). However, women with personal incomes were less likely to sell fresh produce and animal products. In addition, selling animal products was significantly related to both attendance and success. Results showed that selling animal products was related to resource levels (women whose mode of transport to the course was motor cars, were identified as those who sold animal products). The number of small children (a demand variable) did not influence attendance and success, but the labour contribution of children to the household showed influence on both dependent variables.

5.4.3 Management throughput and throughput related variables

Women's participation in three of the seven household decisions (management throughput variables) showed significant influence on women's attendance. Throughput variables included in the study for planning and delegation were not related to the dependent variables. No throughput variables were related to successful completion of training. Management style (how daily activities were chosen), busyness indicators (child care, growing food, time spent in wage employment), task and time orientation, all throughput related variables were identified by regression as contributing to both or one independent variable.

Women's participation in three of the seven household decisions included in the study significantly influenced attendance. These were decisions regarding how much money the household should spend on food each week or month, which lounge suite to choose if the household were to purchase a new one, and if the household were to buy a television set (refer to Table 18, below).

Table 18 Participation in significant household decisions

Decisions	Attend	Women decide	Women not involved	Women jointly involved
How much to spend on food per week/month	100% <100%	69% 31%	91% 9%	84% 16%
Choose new lounge suite	100% <100%	79% 21%	93% 7%	80% 20%
Choose to buy a television set	100% <100%	83% 17%	100% 0%	76% 24%

Contrary to expectation, women who did not participate in these decisions showed higher rates of perfect attendance than those who made the decisions themselves or were jointly involved in decisions. Consistently, women who were decision makers for these decisions achieved higher perfect attendance scores than those who were jointly involved in decision making. Of the households represented in the sample, 69% of women surveyed decided how much to spend on food each week, 57% would have chosen which lounge suite to buy, and 68% would have decided whether to buy a new television set. These three decisions were significantly related to each other and to the other four decision making variables. Relationships are illustrated in the table below.

Table 19 Relationship of significant decisions to each decision variable

Decision	How much for food (χ^2)	Choose lounge suite (χ^2)	Choose to buy new TV (χ^2)
Decide what food to buy each week	121.5**	84.7**	68.4**
How much food to spend per week or month	-	83.3**	103.7**
Choose to buy a new lounge suite	112.8**	96.2**	206.4**
Choose a lounge suite	81.9**	-	83.3**
Choose how to save your money	52.2**	82.2**	65.9**
Choose where children should attend school	99.5**	50.5**	99.8**
Choose to buy a new television	101.8**	90.1**	-

df = 4

** = significant at 0.01 level

The values in Table 19 (above) suggest that if women decided how much to spend on food, they also decided what food to buy, and if they chose the lounge suite, they also made the decision to buy a new one in the first instance. Deciding to buy a new television set seems more strongly linked to deciding to purchase a new lounge suite (also a major household decision in terms of financial resources), and secondly to whether women make other finance related decisions (eg. how much to spend on food). Involvement in money related decisions therefore affected attendance and success. The small amount of money handled by women in developing countries has been seen to hamper women's financial management skills in the informal sector (refer to section 2.3.3). The findings described here may suggest that the women surveyed were more involved in financial decisions than was expected. Figure 8 (Chapter 4) illustrated that the household decisions included in the study were predominantly made by the respondent's mothers. In addition, 49% of the sample indicated that they were the daughters of the household heads. Participation in finance related decisions could suggest more probability of success should women enter the informal sector, using the skills acquired through the training courses.

Women's participation in these three decisions was significantly influenced by whether women had an income or not (refer to Table 20, opposite). Women with no income were on average 26% less likely to make the decisions for these significant decisions, while women who jointly made the decisions were

Table 20 Cross tabulation values of personal income to participation in decisions

Decision	χ^2
How much to spend on food	7.1*
Choose a new lounge suite	10.9**
Choose to buy a new television set	6.0*

df = 2

* = significant at 0.05 level

** = significant at 0.01 level

twice as likely to have an income. Therefore, having an income may have suggested a higher possibility of egalitarian relationships (or shared decision making), but an income did not ensure participation in decision making, contrary to Blumberg's (1988) findings as discussed in section 2.5.5.

Participation in decision making related negatively to attendance. Women who did not make these decisions showed higher rates of attendance. The interrelatedness of the seven decisions in the study may suggest that women who did not participate in household decision making were more free to attend courses than those who carried the responsibilities associated; particularly with finance related decisions. Yet according to the literature discussed in section 2.5.5, women's personal income have been positively related to participation in decision making within households. Since attendance was significantly related to participation in decision making, perhaps participation in decision making inferred greater autonomy, greater access to resources, fewer household responsibilities and improved attendance rates. Successful completion of training courses was not related to these variables, suggesting that attendance had more to do with resources and autonomy than success.

Management style was represented by how women decided on their daily activities. Women chose from six alternative strategies given in the survey questionnaire. This

variable was significantly related to both attendance and successful training. These responses and their relationship to attendance and training success are illustrated in the figure below.

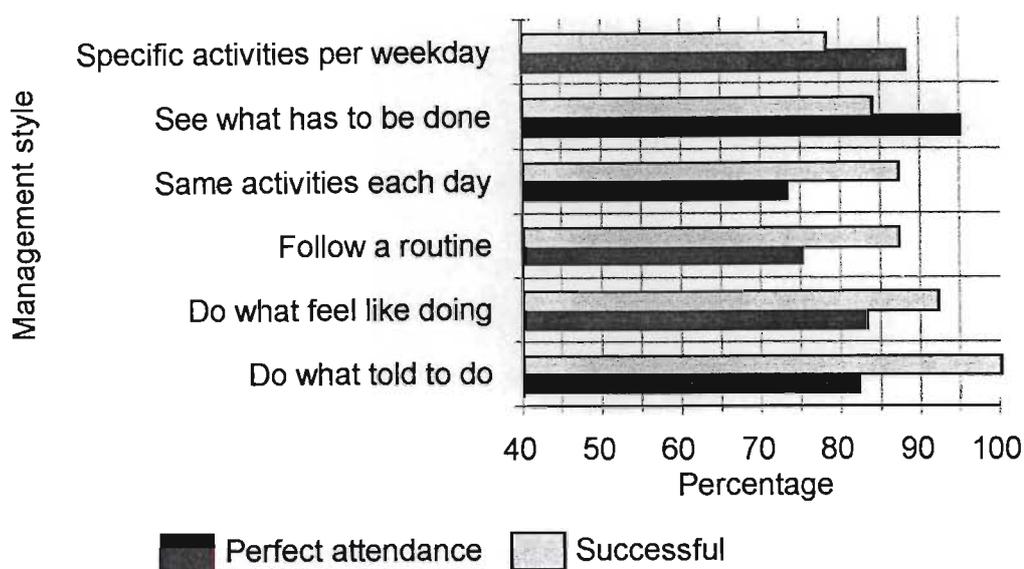


Figure 12 Perfect attendance and successful completion against management style

Women who carried out daily tasks as they were instructed to do, showed 100% success at training. Those who carried out specific activities each day of the week (ie washing on Mondays, ironing on Tuesdays) displayed the lowest rate of success. Perhaps women who were told what to do did not have specific responsibilities and may have been released from these activities while attending courses. Women who carried out the same activities on specific weekdays may have been less flexible when placed in a new situation (as in the training situation), and therefore were less successful. Management involves dealing effectively with change. Perhaps these women were less effective managers, but this assessment was not intended as part of the study, nor was there enough evidence to substantiate such a judgement.

The highest attendance was seen for women whose management style was to carry out activities as the need arose (see what has to be done), and the lowest attendance was seen among women who did the same activities each day. Possibly women who carried out

tasks as the need arose were less responsible for housework than for the group discussed above. Maybe housework was not their top priority, and they were able to adjust priorities to suit the new demands. Women who carried out the same activities each day showed the lowest attendance rates. Possibly following a set activity pattern showed the greatest inflexibility to changing demands. Time demands could have prevented completion of the tasks and affected attendance as demands mounted. Since task orientation was related to management style, this may be true.

From Figure 13 (below), it appears that management style was not related to attendance and success in similar ways. Since the alternatives included for different styles were not related to each other in any linear way, saying in which way the relationship was influenced is not possible, except that management style influenced attendance and success.

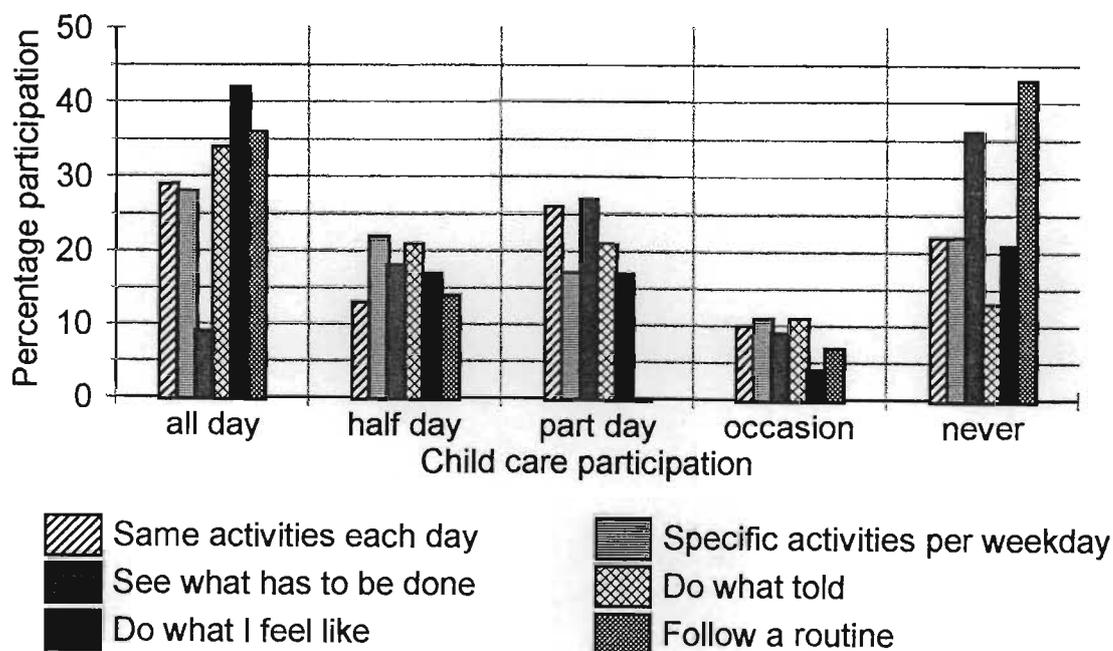


Figure 13 Child care participation against management style

Participation in child care activities and task orientation were significantly related to women's management styles. Although significant at the 0.01 level ($\chi^2 = 50.241^{**}$, $df = 25$), no distinct trend was established by the women's participation in child care compared with their management style (refer to Figure 13, above). However, women who never looked after children were more likely to follow a daily household task routine. Of those who were involved in child minding daily, 42% did the activities they felt like doing, 36% followed a routine, and 34% did the tasks they were told to do (refer to Figure 13, above). Women who did not tend children could possibly have been employed or were away from home; or the children in the household were not theirs and therefore did not affect management. Otherwise, being away from home could have required establishment of routines to cope with additional demands. This may account for the high percentage of women in this group who carried out activities after assessing what had to be done. The survey questions did not establish if the women surveyed were responsible for housework within the households, nor if the household children were their responsibility. Nevertheless, participation in child care was significantly related to both attendance and success, while task orientation was significantly related to management style (discussed below).

Busyness indicators found to be significantly related to the dependent variables were: participation in child care, growing food for the family, and how often women worked for wages. Participation in child care activities influenced both attendance and success. Table 21 (opposite) indicates the percentage involvement of women in child care activities for women with

Table 21 Perfect attendance and success against child care participation

Involvement in child care	Attend 100%	Successful
Never	86%	85%
Occasionally	86%	92%
Part-time	77%	94%
Half-day	79%	97%
Full-day	90%	76%

perfect attendance and those successful at training. No clear trend explained the influence of child care participation on attendance and success rates. Women who participated in

child care full-day had higher perfect attendance rates, while these women were least likely to be successful at training.

Women involved half-day in child care showed the highest proportion of successfully completed courses (97%, while only 3% of women involved half-day in child care were unsuccessful at training). It was expected that women without child care responsibilities would have been more able to regularly attend courses, but this was not so. Maybe women who participated in child minding full-time, struggled with coping with the new and added demands related to the training situation (compounded by separation from the children for whom they cared). Again, it must be noted that it was not established if the children were the women's. It could be that delegation of child care responsibilities or not having child care responsibilities enhanced women's chances of successfully meeting the criteria of training. Perhaps these women were free from worry related to altered child care arrangements (while they were away at the training course), and were not faced with the demands of resuming responsibility for children upon returning home. Although the survey did not ascertain whether child care related problems affected attendance, Ballara (1991) has suggested that this could be a contributing factor to women's imperfect attendance rates at training courses (see section 2.5).

The greater the number of small children in the household, the lower the involvement of women in full-time child care (although not significantly). Obviously other children or other household members assumed responsibility as the number of children increased. Perhaps child care was pooled in larger households. As discussed above, child care responsibilities were significantly related to management styles, specifically that those women responsible for child care full-day represented the highest percentage of women who were "told what to do each day". It could also be that younger women assumed responsibility for child care within households.

Contrary to expectation, the number of women in the household, the number of children and how often women worked for wages were not significantly related to child care participation. However, whether women had an income was significantly related to child

care participation ($\chi^2 = 17.795^{**}$, $df = 4$). No clear trend was evident in the relationship, and the direction of the relationship could not be determined from the frequencies. Child care participation, on its own, did not have significant influences on the logistic regressions for either attendance or success, but its inclusion in the regression analyses, along with other variables was significant (refer to the tables in Appendix H). Moreover, none of the participating institutions provided child care facilities for women engaged in training.

As discussed earlier, *growing food* for the household was positively and significantly related to attendance. This may suggest that women who grew food had more time for household production and, therefore, more time to attend courses (Walker & Parkhurst 1986). However, as discussed above (refer to section 5.4.2), selling animal products (related to both attendance and success), and growing food for the family, was positively (and significantly) related to whether women had a personal income. Results suggested a anomalous relationship between income, time for household production, participation in such production and resource levels. Again, the answer may be found in the classification of income sources as discussed above.

In addition, growing food was significantly influenced by whether women sold fresh produce ($\chi^2 = 10.839^{**}$, $df = 1$). Twelve percent of the sample sold surplus fresh produce they grew, compared with 19% of perfect attenders. No relationship was evident between growing fresh produce and distance women travelled to the courses and mode of transport. Unlike selling animal products, it seems no relationship was evident between resource levels and growing fresh produce.

How often women worked for wages influenced women's success at training. This variable was condensed from five into three categories for the regression analysis to remedy small cell sizes. Three categories remained: those who did not participate in wage employment, those who did so occasionally or less than a full day, and women in full-time employment. Seventy-nine percent of the sample did not participate in wage labour. Women who did not earn wages were more likely to be successful at training than other

women (refer to Table 22, opposite). Although women's wage employment (a demand variable) was not related to the dependent variables, women who participated in full-time wage employment were more likely to be successful at training than women who occasionally worked for wages. Perhaps women who were used to being away from home and having to organise their activities around their employment were better equipped to cope with the training situation and its resultant changes in demands. This would enable women to adjust to the training situation and gain from it. The anomaly of the relationship was unexplained.

It was anticipated that women who were employed would be more successful at training; since employment may widen exposure to new ideas and therefore, may enhance people's capacity to adapt to new situations. It could be that women who did not earn wages were most in need of gaining income-generating skills and therefore successfully attained the expected level of expertise in the skill taught. As discussed, the influence of how often women participated in wage employment on training success was not clear. Whether women had an income seemed more significant.

Task orientation was included as a throughput-related variable. This was recorded by women's responses to whether they had completed all the tasks they had set out to do before leaving home that morning. This variable was not identified by the logistic regression for success as early as *time orientation* (when women

Table 22 Successfully completed training against participation in wage employment

Participation in wage employment	Success	No success
Never	89%	11%
< Full-day	64%	36%
Full time	84%	16%

Table 23 Successful completed training against time orientation

Response to when finish task	Success	No success
All tasks completed	84%	16%
Next day	100%	0%
Next week	50%	50%
Sometime	94%	6%
Never	81%	19%
When possible	84%	16%

intended completing the unfinished task). Neither variable was related to other significant variables isolated by logistic regression for attendance and success. Almost half the sample did not complete the tasks they wanted to before leaving home (49%). No significant difference was evident between percentage completion of tasks for successful and unsuccessful women (84% against 89% successfully). Table 23 (above) illustrates the percentage of successful women for each time orientation response. Where women responded by stating they would complete the task the next day, these women were 100% successful in training. When women responded by saying they would complete the task next week, they were as likely to succeed at training as not to. This response could have been as vague as the responses “sometime”, or “when possible”. The reason this response was negatively linked with success was not clear.

Intending to complete a task within 24 hours was related to success. This may show that these women were more task and time oriented (factors linked to better management achievement). Women’s active responsibility for housework and/or specific activities may be inferred. Women who were time orientated could have also been more task orientated (or goal orientated). It would be anticipated that task and time orientated women were more efficient managers. Task orientation was significantly related to women’s management styles ($\chi^2 = 16.125^{**}$, $df = 5$). Women who carried out the activities they “felt like doing” each day were less task orientated than other women. Women who carried out specific activities each weekday were also less task orientated, but less so than those who did as they chose. However, these trends could not be explained through examination of the frequency analyses.

5.4.4 Synopsis

All three resource variables were significantly related to both dependent variables. Firstly, women’s income increased attendance and success rates. Secondly, selling animal products was positively related to the dependent variables and seemed to infer greater resources, as this was related to women’s mode of transport (specifically if women came by car). However, women who sold animal products were less likely to be engaged in

wage employment. Thirdly, children's participation in household chores was significantly linked to women's attendance and success but seemed to influence those without perfect attendance and unsuccessful women in the same ways as perfect attendance and success rates. Increased involvement in child care activities increased attendance rates but lowered success rates. However, where women were less involved in child care or not involved, success rates increased. Inspection of variables related to women's child care participation showed relationships that could have more explanatory power. For example, as the number of children per household increased, women's involvement in child care decreased, suggesting that others in the household may have helped with child care responsibilities. Attendance and success rates were significantly influenced by women's management styles. Successful training was more likely if women's household responsibilities were fewer. Management styles were associated with task orientation and proportional to participation in child care activities.

Attendance was significantly related to whether women grew fresh produce. This activity was linked to higher attendance rates. Women's participation in household decision making (particularly finance related decisions) was positively related to attendance at training courses. Women with incomes were more successful than those without personal incomes. Women who successfully completed the training courses were more task and time orientated. Task orientation was associated with women's management styles.

Not all management variables significantly influenced the dependent variables. No demand variables influenced the dependent variables. However, significant relationships between independent home management variables and the dependent variables (attendance and success) were identified by the regression analyses. Therefore, *hypothesis two was accepted*. Variables included in the study did significantly influence women's attendance and success at the training courses.

5.5 Household attribute variables

Hypothesis three proposed that selected household attributes are significantly related to women's attendance and achievement in the skills training courses studied. Household attributes included variables to account for household composition and demographics. No **household composition** variables exerted significant influence on either attendance or success. Three **household demographic** variables were significantly related to the dependent variables. Time taken to reach the course was significantly related to attendance at the 0.01 level, while household size and mode of transport were significantly related to attendance and success respectively at the 0.05 level. Total number of earners per household was not significantly linked to the dependent variables. If the number of earners per household was taken to indicate household resource levels (not found significant), then women's personal resources (as discussed above) were more significant in determining available resources.

The three significant household attribute variables were not significantly interrelated. Distribution of perfect attenders for *household size* is illustrated in the figure below. The proportion of perfect attenders increased as household size increased from 1 - 5 children. Above seven children, the proportion of perfect attenders declined except for households with 12 members. As illustrated in Figure 14 (below), women's attendance seemed to increase for households with 15 and more members, but this was due to the grouping together of households with 15 or more members. This trend was not seen in the raw percentages per household. Results suggested that as household size increased, perfect attendance could have been more probable, but when household size rose above seven members, perfect attendance may have been less likely. However, neither household size, nor the number of women per household was significantly related to the management variables discussed above.

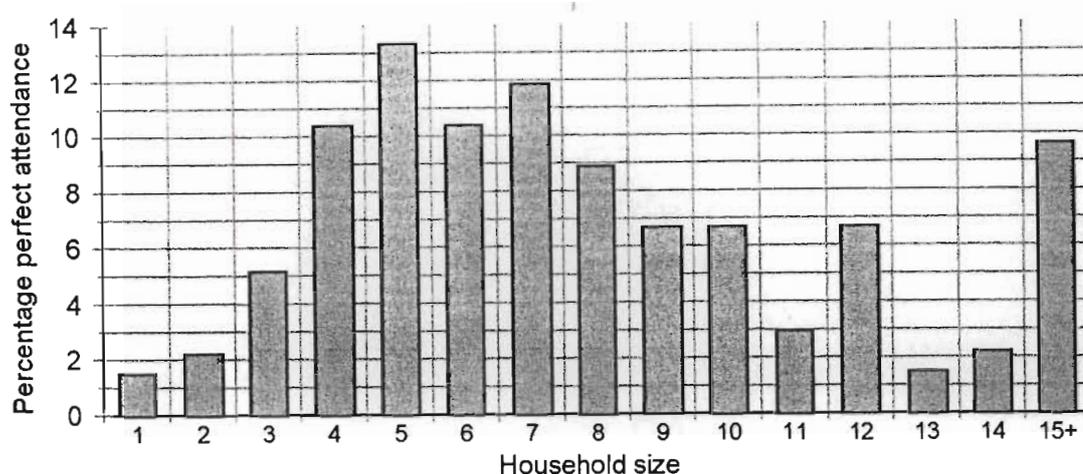


Figure 14 Distribution of perfect attenders per household size

Average household size was eight members but ranged from 1 - 22. Household size did not seem significantly related to the number of children. Household size was not significant on its own and did not significantly influence the results of the logistic regression, but when added to the model after time taken to get to the course (which was significantly related to attendance), the regression results were improved (refer to Appendix I for the stepwise logistic regression summary).

As stated above, there was no relationship between household size and time taken to get to the course. This may have inferred that household size was not related to location of the household. It was expected that household size for households further from the training institution could have been larger (Bullock 1994). Although, as discussed before, time taken to get to the course may have indicated the location of households in relation to the urban locations of the training institutions, this could not be confirmed through the survey questions.

Table 24 (below) illustrates that women who travelled a shorter *time to get to the course*, showed higher perfect attendance rates than those who travelled for longer. Fifty-five percent of the sample travelled less than an hour to get to the course. The mean time travelled for perfect attenders was lower than that for women without perfect attendance.

Women who boarded travelled up to 10 hours to get to the course, while women who travelled to the course daily travelled for up to two hours each way. Those who bordered at the institution were likely to have higher attendance rates since they were removed from the demands associated with their normal household responsibilities. The 96% attendance recorded for women who travelled five or more hours to get to the training courses, illustrates this point. This may have affected the outcome, as travelling time for these women was longer than for other women.

Table 24 Attendance against travelling time

Time taken	Attend 100%	Attend < 100%
≤ 1 hour	85%	15%
≤ 2 hours	76%	24%
≤ 3 hours	90%	10%
≤ 4 hours	94%	6%
≥ 5 hours	96%	4%

Successful training rates were influenced by the *mode of transport* used by women. As discussed this was not related to travelling time, possibly due to factors related to waiting for a bus or taxi or different travelling speeds relative to different transport modes. Fifty-nine percent of the sample used taxis as their transport mode while 30% used busses, trains or some combination of bus, train and taxis transport. The remainder walked (4%) or came by car (7%). Likelihood of successful completion of training seemed greatest among women who used taxis to get to the course (refer to Table 25, opposite). Women who travelled to the course by car were least likely to be successful. This transport mode has already been linked to greater resource levels. It was not known if the women drove the cars (or owned the cars) they used, or whether someone drove them to the training institution. Perhaps women who came by car were

Table 25 Likelihood of success against transport mode

Transport mode	Success	No success
Taxis	91%	9%
Car	55%	45%
Bus/combination	88%	12%

not as in need of acquiring income generating skills as women who had fewer resources, and therefore, women who came by car did not excel at training.

5.5.1 Synopsis

Household size was seen to influence women's attendance at skills training courses. As household size increased to five, attendance rates increased, and was highest when between four and seven children were present in the household. Although household size was not found significantly related to home management variables (discussed in section 4.5), and household composition did not influence the dependent variables, factors within households seemed to play a determining role in women's attendance at training courses. It was anticipated that factors such as household composition, and particularly the number of women who could share or assume responsibility for the household tasks normally undertaken by the women surveyed (refer to section 2.5.2), would have influenced the dependent variables. However, these factors did not influence the dependent variables.

Time travelled to the courses was positively related to attendance, the further women had to travel, the higher their attendance. This may have been linked to provision of on-site boarding, but substantiates that when women were away from their household responsibilities, and daily transport was not required, attendance improved. Successful completion of training was significantly linked to the transport mode used by women to get to training courses. Women who came by motor car showed lower rates of success. This variable has been previously (and positively) related to resource levels (refer to section 5.4.2). If, as seen by women's participation in informal sector activities, financial need motivated women's participation, then successful completion of training may also be associated to women's motivation to gain income generating skills.

Since significant relationships were found (although not all variables included were significant) between the home management variables and attendance or success rates, *hypothesis three was accepted*. Household size and time travelled to the course were significantly related to attendance, while the mode of transport used influenced women's

training success. Three household attribute variables were significantly related to women's attendance or success at training courses.

5.6 Relationship of education level to independent variables

Hypothesis four stated that women's education levels do not significantly affect the course related, home management and household attribute variables studied. Similar analyses to the above (except using multiple regression analysis) were carried out to identify course related variables, home management and household attribute variables that influenced women's education levels. As mentioned previously (refer to section 5.3.1), education was not influenced by the course related variables (no variables were isolated by regression). It could therefore be assumed that no trend existed between the women's educational levels and these variables. Most importantly, educational levels were homogenous across courses.

The home management variables identified by stepwise regression are contained in Tables 26 and 28 (below). Appendix J contains a summary of the analyses carried out for this hypothesis. The sequential order of influence identified by the regression analysis for home management variables to education levels is reflected in the order of the variables

Table 26 Home management variables related to education levels

<p>Task orientation Women decide which school for children Management style Adults participate in housework How often women work</p>
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listed in Table 26 (opposite). Sequential addition of the listed variables did raise the value of the coefficient of determination (R^2). However, only following the addition of the fifth variable (how often women worked for wages), did the R^2 value become significant. At this point, the

variables significantly accounted for the variance of women's educational levels, and then only at the 0.05 level of significance. Greater influence was expected to arise from this analysis as education level had been identified as an important factor in assessing

management ability or management efficiency by family management researchers (refer to section 2.7.2).

Women with 8 - 10 years of completed schooling were 10% more likely to have completed the tasks they set out to complete before leaving home the morning of the survey, than women with ten or more years of schooling. These women were 10% more likely to have completed their tasks than women with less than eight years of schooling. However, women with higher education levels were more likely to decide which school their children should attend (refer to Table 27, below). It was expected that women with higher education levels could have participated more actively in household decision making, yet this was the only decision found related to education level. The greatest percentage of women who did not participate in this decision were those with between 8 - 10 years of completed schooling. Education level was not proportional to participation for women who shared decision making.

Table 27 Education level by proportion of women who decide which school their children should attend

Education level in years of completed schooling	< 8 years	8 - 10 years	> 10 years
Women decide	18%	37%	45%
Women not involved	21.5%	57%	21.5%
Shared decision making	32%	36%	32%

The only clear trends evident from Figure 15, below (which illustrates the management styles by education level) were the patterns seen among women who followed a daily routine and those who were told what activities to do each day.

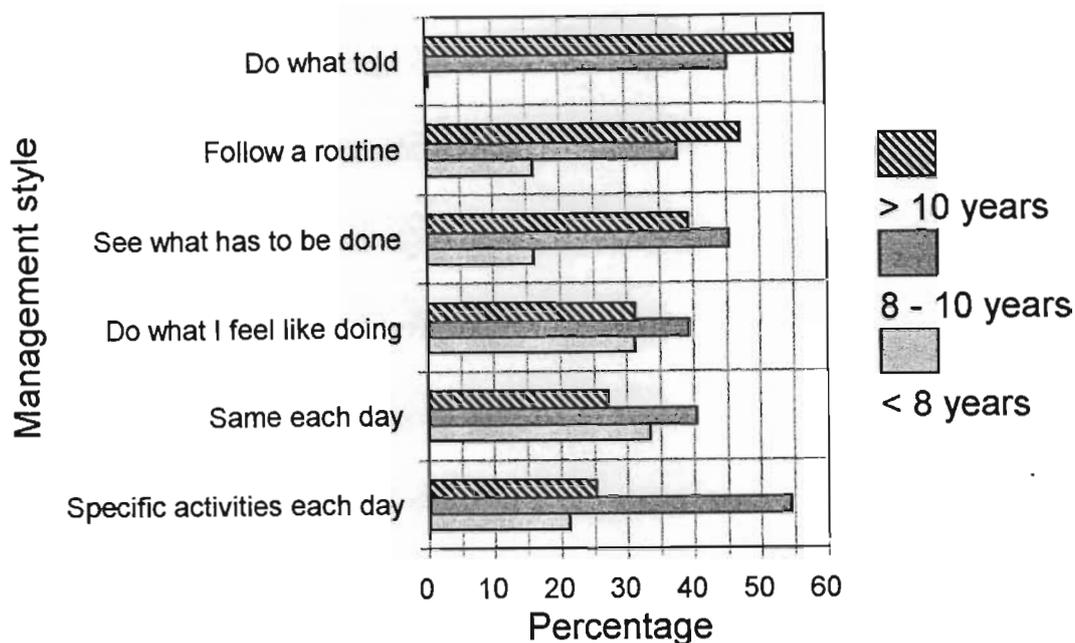


Figure 15 Education level against management style

Women with higher education levels were more likely to be told what to do, and were also more likely to follow routines than women with less education. This result made no apparent sense; the reverse effect was anticipated. Women with 8 - 10 years of schooling were more likely to carry out specific activities each day (ie have a plan of action per week day).

Other adults were more likely to help with housework in households where women had more than 10 years of schooling. If linked to the findings of the relationship between management style and education, this may explain why so many women with higher education levels were told what activities to do each day. Perhaps there was a more egalitarian gender relationship in such households, and therefore women did not decide on their own, but agreements were reached within the household. However, the validity of this argument cannot be substantiated with the data collected.

No clear trend was evident from the distribution of how often women worked according to the three categories of education. As discussed the proportion of women who worked

for wages (21% of sample) was low in comparison with those who did not. Women with less education were less likely to work for wages than other women, and were not likely to work occasionally or part-time.

Table 28 Household attribute variables related to education level

Mode of transport to get to course Number of school boys Number of school girls

Three variables were isolated by multiple linear regression for modelling against education levels. These are listed in Table 28 (opposite). However, the resultant coefficients of determination did not suggest a significant influence of the independent variables on education. Therefore, certainty

that the relationships identified occurred by chance alone cannot be established. This was substantiated by the lack of trends within the frequency analyses for these three variables against education level.

5.6.1 Synopsis

The regression analyses conducted for home management and household attribute variables did not show highly significant relationships to education. Only following the addition of a fifth and final related variable did the model infer statistical significance at the 0.05 level. Moreover, no clear trends were evident within data groupings for these variables that could explain the relationships (though not significant) with education. The household attribute regression results showed no statistical relationship.

For the above reasons, it can be assumed that a relationship did exist among the five identified variables and education but that relationships were not highly significant. Yet, no statistically relevant relationship was established between education and household attribute variables. Due to a lack of a highly significant (and therefore more reliable) relationship between education and these variable groups, *hypothesis four was accepted*. Women's education levels did not significantly influence the course, home management or household attribute variables.

5.7 Relationships between dependent variables

Hypothesis five proposed that variables used as indicators of women's home management practices and household attributes could be used as more precise and impartial entry guidelines for successful skills training than education level. The relationship between attendance and successful completion of training and selected home management and household attribute variables has been established. The relationship between these variable groupings to education has been explored in sections 5.5 and 5.6.

Further to this, the relationships between each of the three dependent variables (attendance, success and education) was determined by logistic regression. The summary of these analyses has been included in Appendix K. No significant relationships were found. Attendance and successful completion of course requirements were not related. It can therefore be assumed that perfect attendance would not guarantee success at training. Attending all classes was not a prerequisite for successful completion of the courses. It cannot be presumed that attending a course would transfer the mastery of skills taught in order for women to attain the level of expertise required by course trainers.

Nevertheless, logistic regression did provide evidence of statistically significant relationships between these two dependent variables and isolated home management and household attribute variables. Unfortunately, logistic regression modelling does not lead to a predictor for comparison of strength of relationship between the response (dependent variable) and variables added to regression analyses. Therefore no comparison could be made regarding the resultant strength of the model in predicting the response variable (Pagano & Gavreau 1993). Since no significance was found, no further analysis was necessary.

Neither attendance nor successful completion of the course was related to women's education levels. Education was also not related to the course related variables and therefore the sample could be assumed homogenous across courses for education levels. Multiple regression did provide a significant coefficient of determination (at the 0.05

level) for education verses home management variables, but only following the addition of the fifth and final related variable.

Significant regression results were obtained for both dependent variables and home management factors. The addition of variables to the logistic regression analyses using attendance and success as response variables for both home management and household attribute groups showed more significant relationships than when education was the response variable. Regression results for household attributes were significant at the 0.01 level (with the addition of fewer variables than for the model against education). Although the variables identified by regression were not always the same for attendance and success, it seems possible that the variables isolated and included could influence women's attendance and success at training courses such as those included in the study.

Attendance was recorded by an absolute, proportional value assigned a binomial rating. Successful completion of training courses was not a reliable indicator of skill mastery. Symbols assigned by institutions varied in range, were subjective evaluations, assumed that skill entry levels for women were the same, and differences between courses were not controlled for. Attendance and success rates were not related, substantiating the expectation that attendance alone did not ensure skill mastery. Education level was treated as a nominal variable. The difficulties associated with using the number of years of completed schooling as a measure of literacy has been outlined (refer to section 2.3). This variable was therefore also not as reliable as attendance rates. However, in the absence of a more reliable means of determining relative educational levels demanded the use of the number of completed years of schooling.

From the results, it is not possible to say that the significant home management and household attribute variables could be more accurate predictors of attendance and training success. However, the findings do infer that these variables would be more influential than education levels. Study outcomes suggest that the significant combinations of home management and household attribute variables could provide more appropriate indicators of attendance and success rates for women involved in skills training courses in the study.

Factors proposed for improving the design of development and training programs to accommodate women's situational needs have been supported.

Two percent of the sample had less than four years of schooling, inferring that they were illiterate (refer to section 2.4.1). Another 19% could be classified as functionally illiterate according to Harley *et al's* (1996) recent classification. Reliability of the participating institutions' claims to literacy based selection and determination of whether candidates were literate or not, is disputed. More significantly, the justification for use of literacy based training prerequisites is questioned. Therefore, *hypothesis five was accepted*. Significant variables could be used as more precise and impartial entry guidelines for successful skills training for women than education levels.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

This study set out to establish the relationships between home management parameters, and selected household attributes to the attendance and achievement of Black women engaged in skills training courses in KwaZulu-Natal, with the view to determining the variables' value as more precise and impartial entry requirements than education levels.

The need for training in skills with income generating potential has been highlighted. Women predominate in South Africa's informal sector, but participate at the least lucrative levels. They employ the skills they have to produce and sell items mostly seen as extensions of their domestic roles. Lack of product diversity and product inconsistencies have characterised informal sector activities. Training in income generating skills and business skills is needed to improve women's chances of raising their productivity in this sector above the level of subsistence.

The major attraction of the informal sector for women has been that no specific level of education has been required for entry. Women's low levels of literacy may account for their predominance in this sector. However, skills training courses have often required literacy as an entry requirement. This has barred many women in need of such training from acquiring skills for income generation, or improving the skills they already employ in the sector.

Development and training programs have mushroomed in South Africa during the 1990's. Yet, few training institutions have developed courses to suit the needs and constraints of women. Household roles and responsibilities, cultural norms, and social ideologies have disadvantaged Black women. To be effective, training programs and their entry requirements have to recognise and accommodate women's needs and constraints. Despite their limitations, women have entered the informal sector because its structure and flexibility has suited them. Lessons can be learnt from women's participation in the

informal sector regarding their capacity to adapt to changing environments and new and increased demands. Family management studies may generate understanding of how such women have managed these demands.

Through this study variables related to women's home management practices were investigated to determine their influence on women's attendance and success in skills training courses. Such relationships may suggest possible alternative criteria for entry to training. If attendance and successful attainment of course requirements are linked to home management practices, this may infer that women's management abilities may affect their capacity to cope with the changes and demands of a new situation. This could be applied further. If women can cope within the training situation, they may be more able to cope with the changes and increased demands arising from subsequent participation in informal sector activities.

Four NGO's offering skills training for Black women in KwaZulu-Natal (in Durban, Marianhill and Pietermaritzburg) participated in the study. Surveys of 11 courses at training institutions (run by these NGO's) yielded a sample of 161 women. Data was collected through use of a questionnaire (modified use of the face-to-face survey technique). Inspection of household data indicated that the surveyed women's demographic characteristics (eg household size, household composition) were similar to those for households in the province (refer to Chapter 4). However, due to the use of purposive sampling, generalisations of study findings to other training institutions are limited.

6.1 Conclusions

Attendance rates and the proportion of women meeting the requirements for successful course completion were high (86% and 88% respectively). These rates were significantly related (identified by regression analyses) to the course for which the women were registered, but not related to provision of on-site accommodation for trainees, whether training for income generation was included in the course, and whether women paid to

attend training (or were sponsored). However, the relationships between attendance and success to courses and institution at which training was done, may have shown that training styles, teachers and training situations could have influenced attendance and success. Longer courses showed higher rates of absenteeism.

The skills offered by the participating institutions were cookery, electrical wiring and repair of domestic appliances, sewing and soft furnishings. Hypothesis one stated that differences between courses and institutions would not influence the dependent variables. This hypothesis *was rejected* since course related variables did influence attendance and success at training courses. However, education levels could not be linked to the dependent variables. Education played no determining role in attendance and achievement for the surveyed courses, and education levels across courses were homogenous.

Hypothesis two was supported. Results of multiple logistic regression analyses carried out to determine the existence of significant relationships between course attendance and successful completion of training (dependent variables) and selected variables thought to indicate women's home management practices, were successful. Twelve variables were found to influence the responses in these analyses. Five variables influenced both attendance and success. These were: women had an income, women sold animal products, children helped with housework, management style and participation in child care. Four variables influenced attendance (if women grew fresh produce, decided to purchase a television set, decided which lounge suite to buy, and decided how much money to spend on food). An additional three variables influenced women's successful completion of courses. These variables were: how often women worked for wages, time orientation and task orientation. Investigation of the relationships between the dependent and independent variables and the inter-relationships between the independent variables, has revealed that the characteristics listed in Table 29 (below) improved women's attendance and/or training success. It is important to note that these were not the isolated variables, but a summary of their influences on the dependent variables attendance and training success.

Table 29 Characteristics linked to higher attendance and success rates

<p>Attendance and training success greater if:</p> <p>Women had personal incomes Sold animal products Had greater access to resources Had previous business experience If children present, they help with housework No children in household or more than four Relaxed home management style Less responsibility for household tasks Lower task orientation</p> <p>*****</p> <p>Improved attendance if women not involved household decisions Higher attendance if women grew fresh produce Success improved if women not involved in wage employment</p>
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Participation in child care had contradictory influences on attendance and success rates. Improved attendance was associated with greater involvement in child care (contradictory in itself), but negatively affected training success. The greater the number of children in households, the lower the child care responsibilities of women in the sample.

No common variables were isolated as influential in similar analyses carried out to determine the effect of household attribute variables on women's attendance rates and training success. Household composition was not related to the dependent variables. *Hypothesis three was supported* due to the significant relationship between household size and time travelled to reach the course on attendance and the significant relationship between mode of transport and successful course completion. The characteristic feature of women with higher attendance and success rates for household attributes are illustrated in the Table 30 (below).

Table 30 Characteristic household attributes for higher attendance and success

<p>Higher attendance if:</p> <p>Household size was between 4 - 7 members Distance of household from the course was greater than two hours</p> <p>*****</p> <p>Success higher if:</p> <p>Women used taxis to get to training</p>
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Therefore, home management and household attribute variables were significantly related to the independent variables attendance and success, but was education level related? Women participating in the study supposedly fulfilled the educational entry requirements of the study, however this assumption was not true as 2% of the sample was illiterate (had completed less than four years of formal schooling). Another 19% of the sample had completed between four and seven years of schooling (senior primary). Selection based on literacy could be questioned in the light of the debate focussed on determination of an appropriate measure for literacy. Following the South African guideline proposed by Harley *et al* (1996), 21% of the sample was functionally illiterate. Yet, education level did not influence attendance and success rates for women at the participating institutions. In addition, the influence of education on the home management variables included in the study was not clearly depicted by frequency analyses. Sequential addition of five home management variables was required before multiple linear regression indicated a significant relationship between the included home management variables and the response (education level), and then only at the 0.05 level. Frequency analysis could not account for the relationships between the household attribute variables isolated by this regression method. Also, the influence of these variables was not significant.

Therefore, *hypothesis four was accepted*. Education did not exert a clear and significant enough influence on women's attendance and success at training. The assumption that

women's management practices and household attributes were not directly related to literacy skills was supported. Women with different education levels participated in varied management related activities and exhibited assorted household attributes.

Hypothesis five was accepted after regression analyses yielded no indication of relationships between the dependent variables (attendance, training success and education levels). Differences between courses would have to be controlled for in combining data from various courses and institutions as course related factors influenced attendance and success rates. Significant relationships were established in support of hypotheses two and three. Therefore, home management and household attributes did play a significant role in women's attendance and training success. The relationships between these variable groupings and education was not as significant and no clear trends could explain the relationships.

Consequently, the significant home management and household attribute variables are proposed as potentially more impartial predictors of women's attendance and training success than education level. The absence of significant influences of education levels over the dependent and independent variables substantiates this. The common and wide use of literacy as a training entry requirement is therefore challenged. If attendance and success were valid measures of the women's home management output, and indicate their capacity to cope with changing demands and environmental adjustments then, such women may be more able to cope with training situations and their resultant changes in the women's environments. Entry requirements based on the significant variables could be more impartial and appropriate for women. Further refinement of the measurement of the dependent and independent variables and development of regression models could have predictive value. Use of the significant variables may lead to more impartial selection criteria than using literacy as an entry requirement for skills training. However, characteristics identified with higher attendance and success rates did not correspond with factors which could identify women in need of skills training for income generation (for entry into the informal sector).

6.2 Recommendations for improvement of the study

Data was collected via questionnaires in either English or Zulu. It was assumed that the questions were unambiguously phrased and that translation into Zulu did not alter the meaning or interpretation of questions. Use of genuine face-to-face survey techniques (rather than the modified technique used) could have lead to greater understanding of the situations that influenced responses, especially if these interviews were conducted in respondents' mother tongue. The questionnaire lead to forced response situations that may have limited insight into responses. Accurate translation of management concepts and terminology into Zulu is wordy, requires a thorough knowledge of Zulu language and culture, and a fastidious command of management theory.

Measures to ensure response reliability included: use of a standardised questionnaire for data collection, promised confidentiality of responses and results, absence of the teachers during surveys, and use of the same survey assistant throughout the study. It seemed that teacher's warnings regarding the visits of the researcher to conduct surveys ensured that there were no absentees on survey days. Class records indicated that entire classes were surveyed. Surprise visits may have overcome these problems.

Increased sample size could have improved the reliability of the results, as this would have overcome small data cell sizes. It is not likely that increasing the sample size would alter the proportion of women with perfect attendance to women without perfect attendance, or rates of success versus unsuccessful training. By using only the variables identified as significant, the collection of data could be limited to only these variables. This would reduce the database size, which was too large to manage efficiently. Trends may be more visible with the use of the significant variables only. Alternatively, the variation between courses could have been more closely controlled by drawing the sample from only one institution with courses of the same duration, teachers, and skills.

No attempt was made to compare the standard of products produced by women at different institutions. It was not known how grades differed from those assigned for courses not surveyed. Results could have been manipulated to impress the researcher. Should the researcher have assessed the end products for each woman, a more accurate and consistent measure of women's achievement could have been derived. However, this method would have to control more accurately for differences between teachers and teaching situations. Assessments of this nature would be more threatening to the teachers, who may view the judgements as an assessment of their teaching effectiveness. This could affect results. Even if teachers were to agree on a standardised grading system, rather than providing the researcher with the grades as assessed according to their usual criteria (as was used), more comparative scores could be used for success grades. Perhaps the easiest way to overcome problems with inconsistent grading systems would have been to include only one institution in the study, although this would further limit generalisation of the findings to other institutions. In addition, assessment of the design and delivery of skills training programs was not intended as part of the study, but should have been included.

Through a larger sample size and more accurate grading, the dependent variables attendance and success could have been included as continuous or nominal variables. This would have allowed the use of multiple regression analysis for all three dependent variables. This analysis results in coefficients of determination and leads to development of regression models. In these ways the predictive value of the independent variables on the dependent variables could be assessed. In addition, the variables for attendance and successful completion of training did not necessarily measure skill mastery.

Interviews conducted with women close to the end of courses could be used to find out reasons for absenteeism. This would enable more accurate identification of which women experienced problems thought to influence management, and women who were not efficient managers (according to some defined criteria).

The claims that the participating women were literate could have been tested through the administration of a literacy test. The sample selection was based on the assumption that there would be a normal distribution of literate and illiterate women. More normal distributions within variables would have increased the reliability of the statistical tests.

6.3 Implications for further research

The home management variables included in the study were thought to be indicative of women's management. Attendance and successful completion of training were assumed to be measures of management output. No attempt was made to assess if more efficient managers could be identified in this manner. The cry of family management theorists and researchers for empirical research to develop valid methods of measuring home management, is echoed. Further investigation into the relationships between effective home management and attendance and success of such courses is required.

A more accurate assessment of women's incomes may yield more insight into which incomes (informal sector activities, pensions, grants etc.) classified in this study as a group, have the greatest influence on management output. Since selling animals was significantly related to attendance and successful training, perhaps informal sector participation may have a greater influence than was evident from this study. As discussed in the literature review (section 2.7.2), family management researchers have identified the influence of wage employment on management, resource levels and women's time for household production. Considering the role that informal sector activities have played in South Africa's economy, a comparison of the demands faced by women in wage employment and those who earn an income through informal sector participation may be insightful. Such studies could uncover valuable clues into the management strategies adopted by women in the informal sector, especially if informal sector participation is a 'survival strategy'.

An assessment of how women who have completed skills training use the newly acquired skills after training would be a more accurate determinant of whether training was successful or not. Confident use of the newly acquired skills may infer successful training, but this relationship needs investigation. Further to this, if these courses are used by women to gain skills that they employ for income generation, then business skills must be included in training programs since women's lack of business skills has been seen as a major obstacle to progress in the informal sector.

A similar study to investigate whether the personal attributes associated with entrepreneurs can be linked to training success. This would lead to greater insight into valid criteria for entry requirements specifically for Black women engaged in skills training for income generation or entrepreneurship in South Africa.

The original ⁺insension of this study was to use the identified variables in the development of a selection instrument for organisations offering courses such as those included in the study. However, this proved to be too complicated statistically. Nevertheless, such a selection tool would be invaluable to training organisations. The discovery of relationships as revealed by the study may be the start of such a development process.

It is hoped that at least the organisations who participated in the study would reassess their literacy requirements and begin to develop more impartial and women-sensitive entry requirements for skills training for income generation. This would increase the access opportunities for illiterate women to skills training. Perhaps also the design of special courses targeted to illiterate women would benefit many women in need of incomes or improved informal sector returns.

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APPENDIX A

List of participating training organisations and contact persons

List of Participating Training Organisations and Contact Persons

Evangelical Bible Seminar of South Africa:

PO Box 2400

Pietermaritzburg

3200

Renee McCracken (Teacher): 0331 - 941679

Foundation for Entrepreneurship Development:

PO Box 18405

Dalbridge

4014

Training Administrators:

Ella Jacobs (Durban): 031 - 3016681

Norma Hopley (Pietermaritzburg): 0331 - 424425

Khuphuka Skills Training and Employment Programme:

3A Eaton Road

Congella

Durban

4000

Mr German (Manager): 031 - 255530

KwaZulu Training Trust (KwaZulu Finance and Investment Corporation):

PO Box 10094

Ashwood

3605

Khetsiwe Mtshale (Head: Home Industries): 031 - 7031155

Midlands Community College:

PO Box 40

Nottingham Road

3280

The Director: 033 - 36556

Tembaletu Community Centre:

206 Burger Street

Pietermaritzburg

3200

Ray Lhalla (Manager): 0331- 947821

APPENDIX B

Survey questionnaire

Questionnaire number: _____

RESEARCH PROJECT QUESTIONNAIRE FOR SL HENDRIKS

Please could you assist by answering the following questions about your home and the way this functions. The information which you give will not be shown to the organisers of this course, but are confidential and will be used for the purpose of selecting women for future training. Please be honest with your answers. There are no wrong and right answers.

Thank you for your help.

Name of Participant _____

Course attending: _____

Date: _____

Questionnaire number: _____

Please read the questions carefully and answer them as fully and truthfully as you can. Do not ask or discuss anything with anyone, except the researcher and assistant.

1 Fill in whether you do these activities or not. Please put a tick (✓) in the block that is appropriate.

1.1 Do you grow food for your family? yes

no

1.2 Do you care for animals? yes

no

1.3 Do you work for wages? yes

no

If yes, how often?

5 - 8 hours a day

2 - 4 hours a day

1 - 2 hours a day

occasionally

1.4 Do you gain an income from any other source (eg selling clothes, pension, etc)?

yes

no

If yes, then please list these sources: _____

1.5 Do you sell extra vegetables and fruit that you grow? yes

no

1.6 Do you sell products from the animals you keep? yes

no

1.7 How many children under six years of age live in your home? _____

1.8 How often do you care for these children?

all day

half the day

a short while each day

occasionally

never

2 What is the highest level of education you have achieved?

- none
- class I to standard 1
- standard 2 - 5
- standard 6 - 8
- standard 9 - 10
- higher than matric - say what: _____

3 Transport to the course.

3.1 How do you travel to the training course? Did you:

- walk
- come by bus
- come by car
- come by taxi/combi
- other - please say how: _____

3.2 How much time does this take you? _____

- 4 How do you come to a decision with regards to your daily activities? Tick the **ONE** statement that is most true for you.

Do you:

- do the same activities every day of the week;
- do certain activities on a specific day of the week (for example, on Thursdays)
- see what has to be done for that day,
- do what you are told to do for that day,
- do what ever activities you feel like doing
- have a routine to follow, but also do anything that has to be done in addition to the usual things.

5 Tasks

- 5.1 Did you finish all the tasks that you wanted to finish before it was time to leave home this morning?

yes

no

- 5.2 What did you not finish doing? _____

5.3 When will you do these tasks?

sometime

tomorrow

next week

never

if I have the time.

6 Tonight's meal

6.1 Do you know what you will be having for supper tonight?

yes

no

6.2 Who will prepare it? _____

7 Do you attend any organisations or attend meetings where people come together to chat, work, listen to someone talk, or to help each other?

yes

no

If yes, then please list the names of these organisations below:

9.1.3 How many school girls live in your home? _____

9.1.4 What activities do they help with at home? Please list these activities:

9.2 Adults who live in your home.

9.2.1 How many women (not counting yourself) live in your house (ie do not have another home and sleep there every night)?

9.2.2 How many of these women have a money income (wages, pension, hawking etc)?

9.2.3 What activities do these women carry out at your home? Please list these:

9.2.4 How many men live in your house (ie do not have another home and sleep there every night)?

9.2.5 How many of these men have a money income (wages, pension, hawking etc)?

9.2.6 What activities do these men carry out at your home? Please list these:

9.3 Adults who come home occasionally.

9.3.1 How many women only come home for weekends or occasionally?

9.3.2 How many of these women send food or money home to your household?

9.3.3 How many men only come home for weekends or occasionally?

9.3.4 How many of these men send food or money home to your household?

10 The household

10.1 What is your position in relation to the household head?

- I am the head of the household
- Wife of the household head
- Sister of the household head
- Daughter of the household head
- Mother or mother-in-law of the household head (ie Grandmother/Gogo)
- Sister-in-law to household head
- Not related to household head

10.2 Who, in your household, makes most of the decisions concerning the following household affairs?

WHO MAKES THE FOLLOWING DECISIONS IN YOUR HOUSEHOLD?	RELATIONSHIP ((ie you, your husband, your mother-in-law, father-in-law, brother etc)
10.2.1 Who decides what food to buy each week/month?	
10.2.2 Who decides how much money is spent on food?	
10.2.3 Who decides whether your household needs to buy a television or not?	
10.2.4 Who decides if your household needs to buy a new lounge suite?	
10.2.5 Who decides which lounge suite your household will buy?	
10.2.6 Who decides how you will save your money?	
10.2.7 Who makes decisions regarding children's schooling?	

Questionnaire number: _____

RESEARCH PROJECT QUESTIONNAIRE FOR SL HENDRIKS

Besicela usisize ngokuphendula lemibuzo elandelayo emayelana nekhaya lakho nangendlela eniqhuba ngayo. Yyonke imininingwane ozositshela yona ngeke itshengiswe abaphathi baloluhlelo, kodwa izoba yisifuba sethu futhi izosetshenziselwa ukwenza indlela yokukhetha abesifazane ukuqeqeshelwa ikusasa. Sicela uphendule ngokwethembeka. Zonke izimpendulo zamukelekile.

Siyabonga ngosizo lwakho.

Igama lomfundi: _____

Ufundani: _____

Usuku: _____

APPENDIX C

Zulu translation of the survey questionnaire

Questionnaire number: _____

Sicela ufunde lemibuzo elandelayo ngokucophelela okukhulu futhi uyiphendule ngokwethembeka. Ungabuzi noma uxoxe utho nomunye.

1 Gcwalisa ukuthi uyakwenza yini lokhu noma cha. Sicela ukhombise ebhokisini elifanelekile✓ .

1.1 Uyazitshala izidlo zomndeni wakho? yebo

cha

1.2 Kungabe ufuyile? yebo

cha

1.3 Kungabe usebenzela iholo? yebo

cha

Uma uthi yebo, usebenza isikhathi esingakanani?

5 - 8 amahora ngosuku

2 - 4 amahora ngosuku

1 - 2 amahora ngosuku

kuqabukela

1.4 Kungabe kukhona enye imali oyithola ngokwenza okuthile (njengokudayisa izingubo, impesheni, nokunye)?

yebo

cha

Uma uthe yebo, sicela usho lezozindlela _____

1.5 Kungabe uyayidayisa imifino nezithelo ezisalayo? yebo

cha

1.6 Kungabe uyadayisa ngemikhiqizo evela emfuyweni?

yebo

cha

1.7 Bangaki abantwana abangaphansi kweminyaka eyisithupha abahlala ekhaya lakho?

1.8 Ubanakekela isikhathi esingakanani lababantwana?

usuku lonke

uhhafu wosuku

isikhathi esincane usuku ngalunye

kuqabukela

awuzinakekeli

2 Iliphi izinga lemfundo onalo?

awufundile

ugcine ebangeni lokuqala

ebangeni 2 - 5

ebangeni 6 - 8

ebangeni 9 - 10

uma kungaphezulu, yiliphi: _____

3 Ukuza ezifundweni.

3.1 Uze ngani lapha? Kungabe

uhambe ngezinyawo

ufike ngebhasi

ufike ngemoto

ufike ngetekisi

uma kungokunye - ikuphi: _____

3.2 Kukuthathe isikhathi esingakanani? _____

5.3 Uzozenza nini lezozinto?

ngesinye isikhathi

kusasa

ngesonto elizayo

angeke uzenze

uma uthola ithuba

6.1 Kungabe unolwazi lokuthi uzodlani namuhla kusihlwa?

yebo

cha

6.2 Ubani ozosilungisa? _____

7 Kungabe unayo inhlangotho noma uyaya emihlanganweni lapho abantu beza bakhulume, basebenze, balalele omunye ekhuluma, noma nje ukusizana?

yebo

cha

Uma uthe yebo, sicela usisize usinike amagama ayo ngezansi:

- 8 Kungabe kukhona ikomiti olihambayo? yebo
- cha

Uma uthe yebo, sicela usho amagama awo bese usho ukuthi yiliphi iqhaza olibambile kuwona:

- 9 Sicela usinike ulwazi mayelana nokwakheka kwekhaya lakho.

9.1 Abafundayo

9.1.1 Bangaki abafana abafundayo abahlala ekhaya lakho?

9.1.2 Yimiphi imisebenzi abasiza ngayo ekhaya? Sicela usibalele yona.

9.1.3 Bangaki amantombazana afundayo ahlala ekhaya lakho?

9.1.4 Yimiphi imisebenzi asiza ngayo ekhaya? Sicela usibalele yona.

9.2 Abadala abahlala kwakho.

9.2.1 Bangaki abesifazane (ungazibali wena) abahlala kwakho (njengalabo abangenakhaya\abalala kwakho zonke izinsuku)?

9.2.2 Bangaki abanemali (iholo, impesheni, ukudayisa)?

9.2.3 Yimiphi imisebenzi abasiza ngayo? Sicela usibalele yona.

9.2.4 Bangaki abesilisa (ungazibali wena) abahlala kwakho (njengalabo abangenakhaya\abalala kwakho zonke izinsuku)? _____

9.2.5 Bangaki abanemali (iholo, impesheni, ukudayisa)? _____

9.2.6 Yimiphi imisebenzi abasiza ngayo? Sicela usibalele yona.

9.3 Abadala abafika ekhaya ngalanga.

9.3.1 Abesifazana abafika ngezimpelasonto noma ngalanga? _____

9.3.2 Bangaki abesifazana abathumela imali noma ukudla ekhaya lakho? _____

9.3.3 Abesilisa abafika ngezimpelasonto noma ngalanga? _____

9.3.4 Bangaki abesilisa abathumela imali noma ukudla ekhaya lakho? _____

10 Endlini kwakho

10.1 Uhlbene ngani nonhloko yekloya?

Ngiyinkosikazi yenhloko yekhaya

Ngingudadewabo wenhloko yekhaya

Ngiyindodakazi yenhloko yekhaya

Ngingumamezala noma umamezala wenhloko yekhaya (njengokuthi unguGogo)

Ngingumakoti wabonhloko

Angihlobene nenhloko

10.2 Ubani othatha izinqumezimayelana nezindaba zomndeni (njengokuthi nguwe, umkhwenyana wakho, urnamezala wakho, ubabezala, umfowenu)?

UBANI OTHATHA IZINQUMEZIMAYELANA NEZINDABA ZOMNDENI?	Njengokuthi nguwe, umkhwenyana wakho, urnamezala wakho, ubabezala, umfowenu
10.2.1 Ubani ethatha isinqumo sokuthi ikuphi ukudla okuzothengwa ngesonto\ngenyanga?	
10.2.2 Ubani ethatha isinqumo sokuthi malini echithwa ekudleni?	
10.2.3 Ubani ethatha isinqumo sokuthi malini echithwa ekudleni ufuna ukuthenga i-TV nomacha?	
10.2.4 Ubani ethatha isinqumo sokuthi ufuna ukuthenga o-sofa abasha?	
10.2.5 Ubani ethatha isinqumo sokuthi yibaphi osofa ozobathenga?	
10.2.6 Ubani ethatha isinqumo sokuthi uzoyonga kanjani imali yakho?	
10.2.7 Ubani ethatha isinqumo sokuthi mayelana nokufunda kwezingane?	

APPENDIX D

Questionnaire completed by course organisers

Questionnaire for Course Organisers

Dear Course Organiser,

Thank you for allowing your students to participate in this programme. I hope that the findings will be of benefit to your organisation. Please can you assist by providing the following information regarding your course.

1 Name of course: _____

2 Organisation: _____

3 Name of Organiser/contact person: _____

4 Duration of course: from _____ (date) to _____ (date)

5 How often do these students attend classes? _____

6 Course costs:

6.1 What do the students pay for the course, if at all? _____

6.2 Is the course sponsored? _____

7 Is overnight accommodation provided for the students for the duration of the course?

8 What are the objectives of the course?

9 What skills do the students use during the course? _____

10 Are students instructed in small business skills? _____

11 How is the performance of the students evaluated at the end of the course?

Thank you for your help.

APPENDIX E

Schedule to obtain women's scores

APPENDIX F

How data was derived from survey questionnaire

Table relating research hypothesis, variables and survey questions

Dependent variables: SUCCESS (supplied by Course Organisers: refer to Appendix C)
 ATTENDANCE (refer to Appendix C)
 EDUCATION (question 2 of questionnaire: refer to Appendix A)

Hypotheses:	Independent variables	Question number
Hypothesis one	<i>Course Variables:</i> Course number Institution number Course duration Day of survey Accommodation provided Income generation training Skill type	Information gained from Courses Organisers (see Appendixes D and E)
Hypothesis two	<i>Home Management variables.</i> Demands: Presence of small children Women work for wages Resources: Women have income Adults help with housework Children help with housework Women sell fresh produce Women sell animal products Throughput and related factors: Planning Delegation Women decide what food to buy each week Women decide to buy a new lounge suite Women decide which school for children Women decide how much to spend on food each week/month continued	1.7 1.3 1.3 + 1.4 + 1.5 + 1.6 9.2.3 + 9.2.6 9.1.2 + 9.1.4 1.5 1.6 6.1 6.2 10.2.1 10.2.4 10.2.7 10.2.2

Hypotheses:	Independent variables	Question number
	Women decide how to save their money	10.2.6
	Women decide to buy a new television set	10.2.3
	Women decide which lounge suite to buy	10.2.5
	Household position	9.2
	Management style	1.6
	Participation in child care	1.8
	Women grow fresh produce	1.1
	Women keep animals	1.2
	How often women work for wages	1.3
	Do women attend committees	8
	Do women attend organisations	7
	Task orientation	5.1
	Time orientation	5.3
Hypothesis three	<i>Household Attributes.</i>	
	Demographics:	
	Transport mode	3.1
	Time taken to get to course	3.2
	Number of schoolgirls	9.1.3
	Number of school boys	9.1.1
	Number of men	9.2.4
	Number of women	9.2.1
	Household size and number of earners:	
	Household size	1.7 + 9.1.3 + 9.1.1 + 9.2.4 + 9.2.1
	Number of household earners	(1.3 or 1.4 or 1.6 or 1.7) + 9.2.5 + 9.3.2 + 9.3.4
Hypothesis four	Education versus <i>Home management and Household attribute variables.</i>	As above
Hypothesis five	Dependent variables	As above
Data entry checks:		Questions 1.4.2, 5.2, 7.2, 8.2

APPENDIX G

Summary of regression analyses for course related variables

Course-related variables against independent home management variables

Dependent variable	Independent variable	df	Change in regression deviance
Attendance	Course number	10	68.12**
	Course duration	1	29.4**
	Institution number	4	57.98**
	Skill type taught	2	6.63*
Success	Course number	10	55.26**
	Day of survey	1	23.6**
Education	None	0	0

** Significant at 0.01 level

* Significant at 0.05 level

APPENDIX H

Summary of regression analyses for home management variables

Attendance against independent home management variables

Independent variables added to model	Change in regression deviance ☆	df
Add growing fresh produce	4.41 *	1
Add caring for children	8.04	4
Add women decide to buy new television set	4.32	2
Add women choose new lounge suite	5.38	2
Add women decide how much to spend on food per week	8.91 *	2
Add children's participation in housework	8.98 *	2
Add women sell animal products	8.23 **	1
Add women has own income	17.72 **	1
Add management style	15.12 **	5
Add adult's participation in housework	2.78	2
Drop women have income	0.00	1

* = significant at 0.05 level ** = significant at 0.01 level ☆ = read off χ^2 tables

Successful completion of training against independent home management variables

Independent variables added to model	Change in regression deviance ☆	df
Add women care for children	7.54	4
Add how often women work for wages	7.57 *	2
Add management style	6.95	5
Add women have income	3.67	1
Add time orientation	15.15 **	5
Add women sell animal products	4.03 *	1
Add task orientation	10.72 **	1
Add children's participation in housework	12.77 **	2
Add women choose new lounge suite	5.54	2
Add growing food	2.77	1

* = significant at 0.05 level ** = significant at 0.01 level ☆ = read off χ^2 tables

APPENDIX I

Summary of regression analyses for household attribute variables

Attendance against independent household attribute variables

Independent variables added to model	Change in regression deviance ☆	df
Add time travelled	8.8 **	1
Add household size	5.7 *	1

* = significant at 0.05 level ** = significant at 0.01 level ☆ = read off χ^2 tables

Successfully completed training against independent household attribute variables

Independent variables added to model	Change in regression deviance ☆	df
Add transport mode	7.6 *	2

* = significant at 0.05 level ** = significant at 0.01 level ☆ = read off χ^2 tables

APPENDIX J

Summary of regression analyses for education

Education against independent home management variables

Independent variables added to model	F value	Regression df	Residual df	R²
Add task orientation	4.9	1	96	0.049
Add women decide which school	4.48	3	94	0.125
Add management style	2.75	8	89	0.198
Add adults' participation in housework	2.58	10	87	0.229
Add how often women work	2.42	12	85	0.255*

* = significant at the 0.05 level

Education against independent household attribute variables

Independent variables added to model	F value	Regression df	Residual df	R²
Add transport	2.49	2	156	0.031
Add number of school boys	2.12	3	155	0.039
Add number of school girls	2.13	4	154	0.052

APPENDIX K

Summary of regression analyses for dependent variables

Logistic regression: Attendance against education

Response variable =	Regression df	Deviation ☆
Attendance against		
Education	2	4.036

☆ = read off χ^2 tables

Logistic regression: Success against education

Response variable =	Regression df	Deviation ☆
Success against		
Education	3	2.515

☆ = read off χ^2 tables

Logistic regression: Attendance against success

Response variable =	Regression df	Deviation ☆
Attendance against		
Success	2	2.610

☆ = read off χ^2 tables