1. INTRODUCTION

The aim of this chapter is to answer the sub-problems set in chapter one.
The chapter **(refer to figure 69)** will begin by addressing issues that have implications for the design and provision of housing, difficulties and successes (experiential learning) within the process of the study; and finally looks at ideas for further research. Figure 70 indicates the final stage of the dissertation.

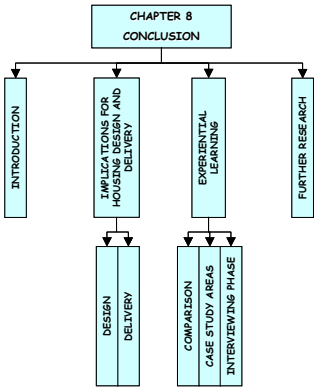

FIGURE 69: Structure of chapter

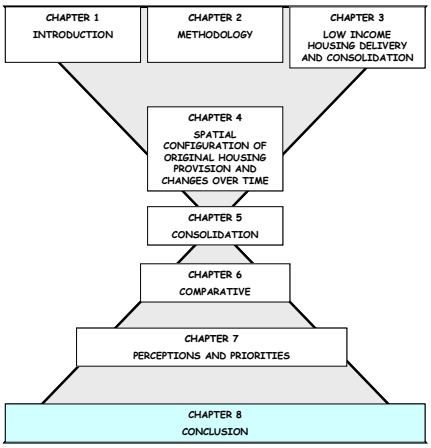

FIGURE 70: Position of chapter within dissertation

2. IMPLICATIONS FOR HOUSING DESIGN AND DELIVERY

WHEN DESIGNING LOW-INCOME HOUSING THE FOLLOWING SHOULD BE TAKEN INTO CONSIDERATION:

2.1. DESIGN

- From the research, it has been shown that, in the case of Extension Ten the placing of the roof structures has prevented the efficient use of space. The original configuration of housing provision followed engineering standards and costs. No thought was given to the actual placing of the structures. Limited erven sizes and large families imply that the amount of living space should be maximised. The placing of the roof structures tends to create small, odd, dysfunctional spaces between structures or too much of wasted space at the front of the erven, thereby minimising the amount of living space. In Extension Six, the placing of the water closets did not seem to affect the placing of the structures built. The pattern that appeared was of structures being placed toward the back and side boundaries, maximising the space of the rest of the erven, in anticipation of the placing of the permanent house in the centre of the erven. This was also the trend within Extension Ten. Residents indicated the desire to build houses in the centre of the erven. The recommendation is therefore to maximise the amount of living space by placing top structures at the front of the erf with a little space for a garden in front. More privacy and living space will be created at the back of the erven.

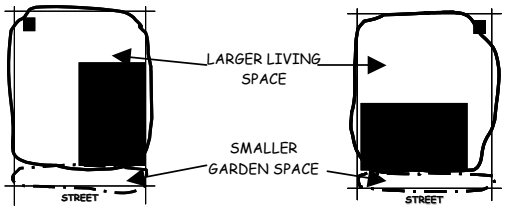

FIGURE 71: Alternatives for the use of space

Space within the structures is not seen as important by the residents of both case study areas **(refer to chapter 6 – 4. Overall picture)**. However, space on the erven appears to be important:

- Today uses within structures include kitchens, bathrooms, bedrooms, lounges, dining rooms, and indoor toilets. The more formalised structures have luxury uses like lounges and dining rooms and the least formalised have bedrooms and kitchens. It appears, therefore, that households begin initially with the division of space into kitchens and bedrooms. These appear to be the basic essentials. This should be considered in the provision of top structures. However, if considered, the space within top structures should be of reasonable size according to the family sizes prevalent.

- Gardening tends to occur popularly at the front of the erf and vegetable gardening at the back. Flower gardens were more of a decorative part of the entrance to the erven, whilst vegetable gardens were part of the survival strategies employed.

As such, the value of the vegetables grown is great and security is needed. Placing the vegetable gardens at the back prevented passers access to the vegetables. Sufficient space should allow for this. Many residents desired space for vegetable gardens, but space is very restricted.
Space is most often made for vehicular parking as well. It is provided sometimes at the back, side and front depending on the arrangement of the structures. This should be incorporated in the design of the layout.

- In terms of what government has already provided, many residents preferred the roof structures in comparison to RDP and site and service schemes. Two factors motivated for this choice. The **first** was the cost of the roof itself. Residents felt that the roof was the most expensive material of a house and as such reduced the cost of building the actual house since the major component was already provided. The **second** motivating factor was the space that the roof structure offered, much more than the RDP houses.

2.2. DELIVERY

- Of the many problems in the area, the most glaring were financing and unemployment. Of the economically active population, in both areas (approximately 70%) less than 35% are employed in Extension Six and less than 25% are employed in Extension Ten. These are very low levels of employment. Of the employed population, formal full-time employment amounts to 55% and 35% in Extension Six and Ten respectively. Stable income sources are low.

- The ability of households to save is limited and expenses are high. A savings scheme should be introduced to support and educate the residents on budgeting.

- Residents do not consult anyone for advice when wanting to build additions as in the case of Khayelitsha and Inanda Newton **(refer to chapter 3, 7.)**. There doesn't seem to be an authority or body within the community that they can consult and get advice from, in terms of loans (financing), builders to use, where to source building materials, etc. A community 'building advice' centre could be established where people can get advice on every possible aspect about constructing additions.
- The awareness and location of building material suppliers should be enhanced, i.e. many residents were not aware of local building suppliers (temporary building materials). Many others sourced permanent building materials from other areas outside of Mamelodi, a great distance away. Being located great distances from the place of residence increases the amount of money spent for the transportation of the materials. Many have no car or truck and pay for the building supplier to transport the materials. Others hire trucks from friends or other sources depending on the size of the load. The additional cost of transport reduces the amount of money for further additions to be built.
- In addition to the cost of transport, the cost of the building materials are increasing and many are affected. Majority of the time, savings and monthly salaries was used to pay for additions. Large numbers of people found the cost of building materials too expensive.
- The lack of building skills in the area resulted in the use of private contractors which tend to be expensive at times. An initiative to develop building skills of the residents would enable residents to build without being restricted by finances.

- A recommendation would be to assist in the establishment of '**permanent building material supplies** in the area. This would create *employment*, *improve on the economy within the area*, it would provide people with a *cheaper option*, and *save on transport costs*. From this, initiatives can be sparked to develop the *building skills* of the residents, by employing a person from within the building material supply business to assist in the construction of the additions. Skills transfer can take place between the employer and employee. Residents will be empowered.

- Security of tenure in the case of both case study areas and other cases **(refer to chapter 3, 7.)** appeared to be very important. The provision of security of tenure is the initial step toward motivating for consolidation. Security of tenure should be a non-negotiable.

- Communication between the providers of housing and the recipients seemed to be broken at some point. The residents of extension ten were under the impression the roof structures provided would be built up by government. As a result, there are some ill feelings reserved against government whilst some waited for government to fulfil the promise, instead of dong it themselves. There should be clear lines of communication between beneficiaries and those providing housing so that situations like this can be avoided.

- The definition of housing development within the National Housing Code is met partially. Security of tenure is awarded and in the case of Extension Ten a structure is provided for protection from the elements. However, privacy is not created and the environment created is a healthy one – layout design is monotonous.

3. EXPERIENTIAL LEARNING

3.1. COMPARISON

Although the intention was to compare the two case study areas in terms of the level of consolidation, many differences in the process of information gathering and the type of information gathered have made the task impossible, e.g.:

- The number of households selected in each area differs, i.e. fifteen were chosen in extension ten and twelve in Extension Six,

- The period of housing provision differs, i.e. residents of extension ten had been provided with housing between 1994 and 2000, whereas residents of Extension Six have been provided with housing between 1997 and 1999.
- Typologies developed within both areas also differ. The typologies within extension ten were concerned with the progression of housing development, whereas typologies of extension six were concerned with the placing of the structures on the erven.

Considering the many differences, comparison would not have been possible. There were too many variables.

3.2. CASE STUDY AREAS

It was the initial aim of the study to have three different types of RDP housing forms, i.e. site and service, inhabitable core units and core houses. However, the aim was also for quality research of a manageable size. It was decided upon to use two case study areas.

3.3. INTERVIEWING PHASE

The process of acquiring information directly from the source proved to be both a difficult task and a positive growth experience. It was difficult in the sense that residents were not always willing to allow the interviewers into their homes. There was a lot of scepticism in the air. As a result, the lack of information in certain areas could not be avoided.

Apart from this, the entire interviewing phase was an eye-opening experience. It was a privilege to be on the ground and to meet the kinds of people found in these areas. Whilst some appeared sceptical of the intrusion, others were very willing and welcoming to the entire process. Learning through experience is still the best way to gain knowledge. Being in the environment, the homes, the erven, and interacting with the residents informed and served as a back up to putting together this dissertation. There were intricacies of being in the area and speaking to people that cannot be replicated by reading books. The experience in itself holds value vital to the understanding of the lives of residents in these areas, their experiences, problems, and the process of housing provision.

4. FURTHER RESEARCH

- More studies of this nature should be done at a larger scale (in different areas across South Africa) to acquire a greater understanding of different environments and circumstances. Restrictions of two types of low-cost housing need not be adhered to. The analysis of all types can be done.
- Comparisons between the different types of low-cost housing can be investigated in terms of the level of consolidation achieved. This would indicate to government where to improve on providing housing in other cases.
- More efforts should be made toward the investigation of the use of space and how it can be optimised to satisfy the needs of the beneficiaries of low-cost housing and improve on the environment.
- The design of housing should be looked into, not only in relation to providing choice in the type of top structure provided but also in terms of the layouts, taking into consideration the daily activities and needs of the beneficiaries as in the case of the Cato Manor study conducted **(refer to chapter 3, 7.1.)**.
- When considering choice of housing, it is quite evident that people are in different phases of transition from rural to urban, which implies that greater choice should be provided to cater for the various levels. Further research should be conducted in this area.