2.1 Mamelodi

Mamelodi is a suburb located North-East of the centre of Pretoria. It was originally laid out as a dormitory township under the Apartheid government. The Group Areas Act excluded non-Whites from living in the most developed areas. This caused many non-Whites to have to commute great distances to and from work.

The older parts of Mamelodi, to the west, currently have typical suburb characteristics with residents expressing their pride and aspirations in their kept gardens, house upgrading and elaborate steel gates. To the East however, areas such as Alaska and Phumolong showcase poverty, lack of services, makeshift housing and daily pendulum migration.

Chiloane (1991) argues that the aim for the establishment of Mamelodi was to serve as a labour reserve. It was planned in such a way that it should remain a satellite of Pretoria with no economic viability or industries so that it could not become an independent town but would exist only for the convenience of Pretoria’s industries and White population. The original farm Vlakfontein was renamed in July 1962 to Mamelodi after president S J P Kruger. He was known to the black population by this name for ‘father of whistling’ or ‘man who can imitate’ (Raper, 1987). By 1964 a population of 6 561, comprising of 744 families, were resettled in Mamelodi (Chiloane, 1991).

According to Dewar and Watson (1984:3) these types of settlements were designed to facilitate control. To do this the number of entrances were limited, buffer strips of land surrounded them and they separated African ethnic groups within the township. They were primarily stranded a relative distance from the ‘white’ centres.
Todes (2003:111) states that this separation has resulted in sterile environments with poor services and facilities and that it has undermined small-scale economic activity. Stals (1998: 4) notes that South African cities are often characterised by patterns of fragmentation and extreme low density sprawl, as is also the case in Mamelodi.

Stals (1998) also says that the displacement of the poor to the urban edges due to the legacy of the apartheid system together with the fact that the majority of new urban growth is happening amongst those who are most impoverished, results in increasing numbers of people living on the urban edges.

The average South African city has two separate social structures existing side by side. The spaces linked with these social structures also remain detached into their own “envelopes and enclaves” (Murray 2006:6).

The distance between the township and Pretoria greatly affected the social and political lives of the residents. The high cost of transport to town increased poverty and placed the residents under stress (Chiloane, 1991).

Mamelodi was founded with a buffer zone as a physical boundary between the White residential areas and the black residential areas that enhanced separation. In the case of Mamelodi, both physical and social boundaries exist.

Mamelodi is bordered on the north west by the coloured township of Eersterus, the industrial area of Waltloo on the west, The Magaliesberg mountains on the north and a white farming area on the South and the White Franspoort farming area on the east. Mamelodi used to be fenced to facilitate control (Chiloane, 1991).

Figure 2.6 Adaptation and translation of boundary map done by Mamelodi-Studie (Fortsh, et al., 1987)

In 1953 Mamelodi was rezoned based on ethnic groups. Different ethnic groups were consolidated under four main groups namely, Sotho, Nguni, Venda and Shangaan (Chiloane, 1991).

Figure 2.7 Illegal electricity connections in Mamelodi-East (Mamelodi Mappers, 2015, adapted by Author, 2016)

2.2 Skilled Trade Workers

In 1954, an industrial school, known as Vlakfontein Industrial, was opened in Mamelodi. The school served students from various language groups, environments and cultures (Chiloane, 1991).

Instruction at Vlakfontein Vocational School was given in:
- Bootmaking and Leatherwork (4 years)
- Bricklaying and Plastering (4 years)
- Electrical Wiring and Planting (4 years)
- General Mechanic (4 years)
- Plumbing and Drainlaying (4 years)
- Cabinet-making and Carpentry (4 years)

(Southern Transvaal Regional Secretary and Research Assistant, 1960)

As can be seen in Figures 2.7, 2.8 and 2.9, the Vlakfontein workshops had a communal layout and students also collaborated on projects.

Figure 2.8 Shoe making class (Historical Papers Research Archive, n.d.)

Figure 2.9 Apprentices training as tailors (Historical Papers Research Archive, n.d.)

Figure 2.10 Carpentry students at work (Historical Papers Research Archive, n.d.)

Figure 2.11 Trained as a draughtsman (Historical Papers Research Archive, n.d.)
It is worth noting, however, that the negative sentiments towards TVET colleges do not stem entirely from events that take place within a particular TVET institution; but rather they are rooted in the wider social opinions of vocational work (Winch, 2013: 93).

Richard Majors, a South African entrepreneur and property developer, has been outspoken in his condemnation of Black Economic Empowerment (BEE), which he says has only served to enrich a “few connected” black business people. He states that the true solution to address the issue lies in training and education. He finds it frustrating that the country has the tools necessary to address poverty and unemployment, but we’re stuck (Skade, 2014).

According to Statistics South Africa (2015), in 2015 as many as 3.6 million young people (15–34 years) were unemployed and actively looking for work, with adults (35–64 years) substantially lower at 1.9 million. Only 6.2 million youth had jobs versus the 9.2 million adults who were employed. Education has long been recognised as providing a way out of poverty and promotes equality of opportunity. The achievement of greater social justice is closely dependent on equitable access by all sections of the population to quality education. Widespread and high quality education and training will allow more rapid economic, social and cultural development for society as whole. Education will not guarantee economic growth, but without it economic growth is not possible and society will not fulfil its potential with regard to social and cultural development (DHET, 2014).

The teaching and learning in the TVET context requires the application of technical skills and knowledge. This type of learning is rooted in contexts, for example; the workplace or communities where livelihoods can be developed. The role of the lecturer is to facilitate learning environments that will develop students holistically (Lave & Wenger, 1991).

Currently there is a so-called “Pivotal” grant policy that industries can take advantage of that would fund for “professional, vocational, technical and academic learning” programmes that lead to qualifications or part-qualifications on the National Qualifications Framework. This policy prioritises scarce and critical skills and also include internships and learnerships. This can be seen as...
An incentive for industries to provide workplace experience to TVET students and tax breaks for moving some of their workforce to the rural areas (Jacobs, 2014).

A decentralised approach to skills training and TVET may play a vital role in facilitating such partnerships. SETAs can also play a vital role in facilitating such partnerships.

The proposed introduction of community colleges should take a phased approach to help inform further development of the concept and its implementation throughout the country (DHET, 2014).

The paper suggests that community colleges should draw on the strengths of the non-formal sector, in particular its community responsiveness and its focus on citizen and social education. Community colleges will be integrated with the Expanded Public Works Programme (EPWP), Community Works Programme (CWP), and others to provide appropriate skills and knowledge. These programmes can provide work-integrated learning opportunities, while the colleges provide classroom and workplace-based learning. SETAs can also play a vital role in facilitating such partnerships.

With this approach a TVET could contribute to a "sustainability in our own way".

Community colleges

The White Paper for Post-School Education and Training (DHET, 2014) proposes a new type of institution to be established for students who do not qualify to study at TVET colleges or universities in order to provide the necessary and appropriate support to the college sector.

This proposal for such an institute shows the importance and need for the existence but the fact that it does not yet exist also suggests the importance and need for the college sector.

A lot of research and experimentation has been done on the spatial requirements of academic education. However, Cutshall (2003) states that the spatial considerations for TVET and non-formal education and training have been relatively neglected. Little research has been done on the spatial requirements of Technical and Vocational Education and Training, especially within the South African context.
The report states that streets are also vital to the identity of cities. Streets should be representative of the lifestyle and culture of the community. Their designs need to respond to the host of activities and functions that streets perform. Streets are one of the most valuable assets in any city. They not only ensure the community’s mobility, but also are a place for people to meet, interact, trade, and recreational activities. Streets make a city livable and foster social and economic bonds, bringing people together. (ITDP, 2011).

Mithath (2003) observed that in all the cities covered in the Street vending in African cities report, street vending was rampant and a source of employment and income for many urban dwellers. It is unaccounted and unrecognised in national economic statistics in most countries however. Street trade has been viewed as an underground activity that undermines the healthy function of the formal economy and the perception has resulted in conflicts with urban authorities over licensing, taxation, site of operation, etc. She mentions that it has been argued that street vending attracts those who have limited opportunities for obtaining formal employment and/or prestigious business, vending attracts those who have limited opportunities for obtaining formal employment and/or prestigious business, not only ensure the community's mobility, but also are a place for people to meet, interact, trade, and recreational activities. Streets make a city livable and foster social and economic bonds, bringing people together. (ITDP, 2011).

The study found that urban authorities in the cities view street vending as temporary while the vendors view them as permanent. It is the urban authorities’ perception of street trading as temporary that makes them not see the need to provide vendors with proper market facilities. Traders were found to use different structures, including tables, racks, wheel barrows, handcarts, and bicycle seats to display their merchandises on their hands, heads or shoulders. Goods, such as clothes, are sometimes hanged on walls, trees, fences and an advanced group that constructed temporary shades with stands for display (Mitullah, 2003).

"If we can develop and design streets so that they are wonderful, offerable places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people—then we will have wonderful, fulfilling places to be community-building places, attractive for all people."

Carr et al (in Oktay, 2002:263) feels that public open space provides a fundamental place for people to carry out the functional and ritual activities that bind a community together. Spaces “… provide a source of community pride, and offer opportunities for people to play an active part in caring for the local environment” (Tshwane Open Space Framework, 2005).
2.4 Urban Intention

Most street traders have no lease for the sites/pavement they use and this can be assumed as the reason for the temporary nature of the structures.

According to Mittulah (2003) the South African National Government is committed to creating a conducive environment for small informal economic activities, including street trading. New laws are in place or about to be put in place. In order to realise this, at National, Provincial, and Local levels. She further states that he Business Act of 1991 changed the legal approach to informal trading.

The Act acknowledged street traders as business people who contribute to the economy. The Act has also provided the traders with the right to trade, whereby the Local Authorities merely regulate but cannot prevent traders from trading.

The South African legal provisions have enhanced the business environment of street vendors. In cases where vendors have not organised themselves, Local Governments have insisted on umbrella organisations to be formed to represent street traders organisations. In some cases street vendors have formed organisations for negotiation and lobbying. Associations such as SEWU, Queenmakers Handicraft and Gompo Associations in South Africa are serving these purposes (Mitullah, 2003).

2.5 Site Skills Analysis

Figure 2.13 Hector Pieterson Road - Street of Skills (Author, 2016)

Steyn (2008) describes market streets are crucial elements in informal settlements. Their function and typology does not only impact on spatial organisation, but also on the way they are used as social spaces and to create places for activities that are intrinsic to the coherence of the community. He suggests that since these are never going to disappear, we must now devise a strategy for their sustainable future in environmental, social, and especially political and economic terms. Steyn further argues that there is considerable expertise available locally, but political will is essential to consider shantytowns as an asset, their concomitant market streets as vital for income generation. Before professionals and communities can start to collaborate on finding ways to transform the contested space in a convivial, supportive place.

--Tim Pursey (Blender, n.d.)
Carpentry
- Cupboard makers

Welding
- Window frame and gate makers

Brick making
- Brick makers and building supplies

Recycling
- Metal, plastic, glass & cardboard

Ice-cream
- Ice-cream in the yard

Spaza shops
- Take-aways, fruits & vegetables

Mechanic
- Auto Mechanics

Zozo
- Steel sheet and wooden pallet Zozo makers

Tyre shop
- New tyres and repair

Tavern
- Sidewalk taverns, tousing inwards

Butchery
- Fresh meat suppliers

2nd Hand clothing
- Informal shops selling 2nd hand clothing

Figure 2.14 Hector Pieterson Road - Langa (Author, 2016)
Informal settlements have a rich layer of social infrastructure informing the built form (Hamdi, 2010). This infrastructure should be utilised in the process of improving the physical built environment.

Frescura (2000) states in his paper, Deconstructing the Apartheid City, that although the Group Areas Act was repealed in 1991, the component elements of Apartheid planning have been indelibly etched into the urban fabric of our cities. Their effects will probably continue to be felt for many years to come, and that their traces may never be entirely expunged from the South African urban fabric (Frescura, 2000).

Frescura (2000) looks at the identification of the Apartheid city which features could be interpreted as part of a segregationist residential policy:

- a. The Segregation of Residential Areas.
- b. Use of Buffer Zones.
- c. Use of Natural Features.
- d. Industrial Belts as Buffer Zones.
- e. Extended City Planning.
- f. Extended Road Links.
- g. Military Control.
- h. Social Infrastructure.
- i. Housing.

Frescura (2000) states in his paper, Deconstructing the Apartheid City, that although the Group Areas Act was repealed in 1991, the component elements of Apartheid planning have been indelibly etched into the urban fabric of our cities. Their effects will probably continue to be felt for many years to come, and that their traces may never be entirely expunged from the South African urban fabric (Frescura, 2000).
2.6 Possibilities

A scholar’s aptitude will be used to place them into one of three streams. Adequate facilities and resources have not yet been provided for these additional streams. Opportunities exist to expand current schools by using local skills and resources.

The skills deficiency in South Africa is one of the biggest obstacles to finding employment and poverty reduction. Shared resources could lessen the burden on an already fragile system and provide new opportunities for collaboration.

Improved access to transport would ease the burden of daily pendulum migration and could provide local job creation. Networking could help individuals to tender for bigger contracts that they would normally not be able to handle. Guilds can also facilitate in the training of future artisans.