Journal of Construction Project Management and Innovation Vol. 7 SI (1): 1954-1967, 2017
ISSN 2223-7852

SELF-HELP CONSOLIDATION CHALLENGES IN LOW-INCOME HOUSING IN SOUTH AFRICA

Judith T. OJO-AROMOKUDU [1] and Claudia LOGGIA [2]

[1] Housing Programme, School of Built Environment and Development Studies, University of KwaZulu-Natal, Howard College Campus, 4041, Durban, South Africa (+27) 0-31-260-2427, Email: Ojoaromokudu@ukzn.ac.za
[2] Housing Programme, School of Built Environment and Development Studies, University of KwaZulu-Natal, Howard College Campus, 4041, Durban, South Africa (+27) 0-31-260-3144, Email: Loggia@ukzn.ac.za

ABSTRACT

In South Africa, low-income housing is provided by the state by means of subsidies to build a starter house. As a result of accessing housing, it is intended that the socio-economic status of dwellers can improve, allowing them to extend the dwellings to suit the evolving households' needs. In fact, as shown in many settlements across South Africa, dwellers have attempted to consolidate their dwellings through self-help construction, relying on their limited finances and technical know-how. The inherent know-how of households is expressed in the limited construction methods employed, and where expertise is lacking in the household, assistance is sought from social network groups. This study reports on self-help attempts aimed at consolidating low-income subsidised housing in South Africa. It highlights areas of concern in the consolidation process and argues for a more regulatory framework to create an enabling environment for more sustainable self-help consolidation. A pilot study was conducted in the KwaZulu-Natal Province to assess the informal consolidation challenges, while proposing strategies to enhance the self-help construction practices. Through a qualitative approach based on semi-structured interviews and observations, this study revealed the constraints and impact of informal consolidation attempts on the households' livelihood and environment. The research focuses on visible efforts made by purposefully selected households. It is hypothesised that if households are given appropriate guidelines to enhance their skills and flexible realistic options through participatory design practices, their housing consolidation efforts will be more resilient and socio-economically sustainable.

Keywords: Low-income housing, self-help consolidation, enabling approach

1. INTRODUCTION

The development of human settlements from a physical planning perspective requires basic guidelines for the settlement to be resilient. A sustainable human settlement provides not only dwelling units, but also it ensures a healthy environment while encouraging sustainable livelihoods within the broader neighborhood. The housing policy should provide solutions for suitable housing in terms of location, quality, size and price (Iommi, 2009) and, in particular, accessibility to all, irrespective of socio-economic background. In South Africa,

within limited budgetary and land constraints, the product delivered by the municipalities is a basic shell structure comprising two bedrooms, a living room, and open-plan kitchen, along with a toilet and shower (Godehart, 2006). This starter house is located on a single plot (size of 15 x 20 m²) with street access, water and electricity supply. The state targets households considered to be the poorest of the poor in an attempt to address unequal distribution of resources. The households are those earning a total monthly household income of less than 3500.00ZAR (about 206.00GBP). By accessing subsidized housing, all these households are then unable to engage with financial institutions for various reasons. However, there is the assumption that households' economic status will improve by virtue of accessing subsidised housing and consequently being able to improve their dwellings to better suit the households' needs (Adebayo and Adebayo, 2000).

Apart from financial requirements, the formal construction process requires certain basic construction know-how and skills. In fact, municipalities expect adherence to approved building standards and construction processes before and during the construction period. These include adopting a building regulatory framework, using approved construction methods and materials, and engaging competent workmen and professionals for the building works. In South Africa, various regulatory bodies such as the National Home Builders Regulatory Council (NHBRC) and the Construction Industry Development Board (CIDB) are mandated to oversee construction practices nationally. The national building regulations are outlined in the SANS 10400 which provide the regulatory framework for the built environment.

This study reports on innovative ways used by low-income households in consolidating their subsidised homes. A pilot study has been conducted in the KwaZulu-Natal Province and two case studies were selected, namely the uMhlathuzi Village in the uMhlathuzi Municipality and eMagwaveni, in the Tongaat area.

This research seeks to deeply understand the informal attempts of consolidation in subsidised low-income settlements while suggesting some strategies to enhance the self-help consolidation towards more resilient and sustainable settlements. Findings revealed the disconnect existing between the housing policy (with a standard model for subsidised low-income housing) and the real practices, reflecting the actual households' requirements. Thus, there is the need to rethink more flexible and efficient models for subsidised housing that can be easily consolidated by the households' following some guidelines informed by participatory design practices.

2. SELF-HELP APPROACH FOR LOW-INCOME HOUSING

Self-help construction practices have been implemented for centuries (Sutherland et al., 2016; Parnell and Hart, 1999), including collective house-building (through cooperatives) and individual building houses on occupied land. Co-operative house building has been important in many countries (e.g. in Brazil). For example, the concept of **Mutirao** (repeated voluntary and cooperative work) is linked to urban upgrading in the so-called **favelas** (the

Brazilian informal settlements).

Policies of self-help housing are mainly attributed to John Turner's thinking (basically the neo-liberal policies largely promoted by the World Bank) and they can be defined as bottom-up, collaborative approaches where households drive the housing process. Turner calls for the "freedom to build" (Turner, 1972), since informal dwellers have local knowledge about their contexts and potential solutions. It can be argued that local knowledge can often be more valuable than technocratic and professional knowledge. Turner based his work on his experiences in Peru. In Lima, for example, self-help approaches have been adopted since the 1950s: local government allocated land to be invaded by organised poor families so that they can self-urbanise and construct their own houses. Lima's pro-poor housing policies were participatory, supported by a national government that promoted incremental home-building (Sutherland et al., 2016).

In South Africa, a community-driven approach called People's Housing Process (PHP) was adopted in 1998. The PHP approach to housing provision, inspired by the work of the South African Homeless People's Federation and saving and housing schemes from around the globe, has been a feature of the national policy. However, many provinces resisted it in favour of private sector delivery (Khan and Thring, 2003).

Ten years later, in 2008, the Enhanced People's Housing Process (EPHP) was adopted to replace the previous PHP programme. The new policy adopts a broader definition of PHP in which beneficiaries actively participate in decision-making over the housing process and housing product in order to achieve some important targets, such as empowering beneficiaries, creating partnerships, mobilising and retaining 'social capital', building 'housing citizenship', promoting local economic development, fostering stable communities, involving women and youth more directly, and nationally creating sustainable and inclusive human settlements which are more responsive to the needs of the community (Tissington, 2011).

The notion of self-help incremental housing has been used in South Africa since pre-colonial times; in fact, Adebayo (2011) records it as the preferred mode of housing delivery for Africans. Over a period of ten years, she reports that the efforts yielded mixed results. This is attributed to local factors such as the technical 'know-how' of available small builders and support from local authorities. Other factors include finance for housing improvements (Rust, 2006), and a rigid building design not easily extendable. Incremental housing is defined as a step-by-step process of a fundamental urban development process, namely building housing communities and citizens (Goetherth, 2010: 23). It is important to note that this concept is relevant in the self-help policy because it displays the notion that government participates in the process, which does not mean that it will speed up the housing construction and the overall process, since decision making on the choice of structure of the dwelling still remains with the owner. The owner of the dwelling within the community controls how much the house will be extended, according to their housing needs, as well as their access to resources. Self-help housing is viewed as a process, a concept that

arises from Turner's notion of housing as a verb (Turner, 1972; Cohen, 2015). Having no time limit to a project that is dependent on voluntary funds and sourcing funds from the state and/ or the private sector, in part, is strenuous to government. This represents one of the main reasons why self-help is usually discouraged as an approach to informal settlements' upgrade in the Durban metropolitan area.

2.1 Housing consolidation

Consolidation in general terms refers to "combine, unify, incorporate, unite, emerge, bring together, band together, join, fuse, amalgamate, league, integrate, federate, compress, condense, concentrate, or …. to strengthen, solidify, make solid, make sure, make firm" (Reader's Digest, 1975:177). It therefore assumes there are various parts to be consolidated into one, and it would require a stock take to appreciate what these parts are. In the life of a building, user needs can change over time and thus implying the need for renovations and extensions. Buildings are consequently often inadequate if they are not flexible and adaptable. According to Slaughter (2001), there are two factors that prompt changes in buildings, the first being building deterioration and environmental conditions, and the second being households' objectives and/or the expected usage. Slaughter groups the causes of changes, irrespective of building type, into three broad categories: change in function, capacity, and flow. According to Murray (1999), these changes can be effected in the building structure, services, enclosure, or the interior finishes. However, the decision to effect the change is dependent on the households' financial and technical capacity.

2.2 Enabling approach

The entrenching self-help housing policy in South Africa shifted from the laissez-faire approach, where the state does not intervene (Duncan and Rowe, 1993), to a more formalised system of housing that is guided by rules. This occurred as a result of government shifting as much responsibility to the house dwellers in order to minimise costs that would be used on each housing plot in order to assist in delivering housing at scale.

Self-help in the housing environment has become an important paradigm in housing delivery in South Africa? Since the 1960s, mainly as a consequence of inadequate supply and government-driven housing, and has been with humankind for centuries (Pugh, 2001). Hence, self-help housing emerged as a solution for the poor to provide affordable shelter for themselves since government may not always meet the demands for housing. According to Ntema (2011), self-help housing is described as a concept which involves practices in which low-income groups resolve their housing needs mainly through their own resources in terms of labour and finance. This approach allows full community leadership and participation, since government acts as a supporter and the community are the drivers of their own housing upgrade projects. As stressed by Parnell and Hart (1999:384), "Self-help housing based on secure tenure and a small government grant is once again the official policy for how to deliver housing to the poor''.

South Africa's policy has demonstrated that the state's role is moving towards a more universal approach in terms of government being more open minded and involved in self-help housing. Limitations of households also promote the concepts of 'laissez- faire self-help housing' and 'freedom to build', especially in situations where government's housing delivery does not meet people's housing demands. This is referred to as dweller-control since the dwellers are in full control of the construction process as opposed to having a contractor building a core house for the dweller (Ntema, 2011). While Turner and Fitcher (1972) argued that local knowledge in many cases is a more valuable resource than the technocratic and professional knowledge, the success of the self-help approach relies on the competence of the households and their social networks. The originality of Turner's ideas advocates for government assistance to owner builders and for support in the process of self-help housing, where they only assist in giving the house owners the means that they cannot afford: access to land, building materials, and basic services (Harris, 2003).

Nevertheless, as stated by Newton (2013) an assisted self-help housing model, officially introduced in 1998 as the People's Housing Process (PHP) and then revised later in 2009 with the Enhanced People's Housing Process, represents a key instrument for housing provision in South Africa.

2.3 Subsidised low-income housing

The 'one man, one plot' prototype was employed, after findings revealed this to be preferred over a row or semi-detached housing units (Frescura and Riordan, 1986). Frescura further records that the design of the housing units – then known as the NE51/9 the Non-European 1951 (Godehart, 2006) – was informed by the then Minister of Native Affairs's who assumed that the natives lacked the civilisation needed to appreciate the conveniences provided in the dwelling (Frescura, 1986). As such, the size of the dwelling unit and fittings were kept very basic and the layout of the structure on the site was such that it intentionally disadvantaged building extensions. The resulting design by Calderwood in the 1950s remained the prototype for RDP state housing (African National Congress [ANC], 1998), even to date. Even though the design considerations shifted from just providing a shell to providing a 'starter house', the design of the initial structure has remained the same.

This differs from the traditional dwellings where the housing typology is basically the circular floor plan and thatched roof. In the case of extending the homestead, an additional unit (**rondavel**) is constructed with reference to the existing buildings. With modern roofing materials, Frescura (1982) records that the rural dweller can extend by adding on a lean-to roof round the existing unit. The layout consequently grows organically with an understood hierarchy between the buildings (Frescura, 1982). Beneficiaries of RDP housing have remained predominantly the black African population – somewhat by default, owing to the history of apartheid. In many RDP settlements, households are first-generation migrants to the city, or from squatter settlements in or around the city where work opportunities exist.

Many came into the RDP settlements with past experiences of self-build dwelling initiatives, either from direct involvement or by observing older family members constructing the dwellings in rural or urban settings. It is noted that the government has always been mindful of the inadequacy of the 40 m^2 house afforded by the state housing subsidy. But this product has remained, on the premise that the inadequacy will be short term, and that households will improve and extend the starter house incrementally (Adebayo, 2011).

2.3.1 Household structures

The low-income RDP settlements are predominantly for migrants from rural areas who seek job opportunities in urban areas. With the advent of democracy in South Africa and the abolishment of segregation laws, many African people took the opportunity to move closer to urban areas, coming with what can be described as the traditional self-help methods of building construction. Migrants into urban areas may find themselves in squatter settlements and their resilient nature, aided by self-help practices, may help them to create shelter. Sometimes these experiences move with them to the formal housing settlements provided by the state.

Cornwell and Inder (2004) argue that the typical rural worker has the option to remain in the rural area and engage in agricultural production, or migrate to urban areas in search of waged employment. This migration is an individual endeavor, often leaving behind the household in the rural areas. However, it must be understood that households in the rural settling are composed of more than the immediate nuclear family (a man, wife and children). They are more of a family clan, where the individuals are custodians of knowledge and look out for each other. This arrangement gives rise to a strong social network within the settlement and its neighbours.

2.4 Traditional construction practices

Traditional housing construction methods are a joint household effort, using indigenous knowledge and readily available materials to build a form most suited to the natural environment (Whelan, 2001; Kammeyer, 2010). In fact, vernacular architecture of Southern Africa is reported to be of significant character, displaying the charm and personality of the region (Frescura, 1982). The construction method is rudimentary and the know-how of the construction techniques and processes is held with the older members of the clan. This permeates down to the younger members, with specific tasks traditionally assigned to each person, irrespective of gender. Frescura (1982) indicated that the construction process was a community effort whereby members assisted each other, with an understanding that this gesture would be reciprocated, thereby giving rise to an architecture that was responsive to socio-cultural, economic and physical environments.

2.5 Building standards in urban areas

Modern construction practice in Africa has been increasing ever since the colonial years.

In fact, it is seen as an expression of progress, moving from traditional construction practices of self-help to more sophisticated construction methods practised in the urban areas (Folkers, 2011). Unlike communal traditional practices, the urban construction process is an individual effort, requiring financial capacity to pull the process through successfully. Construction methods are thus re-learnt in the urban areas. Many countries which were part of the British Empire were obliged to learn construction practices to meet the requirements of colonial construction methods (Root and Wachira, 2009).

As a basic standard, the RDP policy framework outlines the basic requirements for housing, namely itmust provide protection from the weather, be a durable structure, and offer reasonable living space and privacy. A house must include sanitary facilities, storm water drainage, electricity supply, and convenient access to clean water (African National Congress [ANC], 1998). These requirements are captured in the RDP starter house. For instance, in the case study visited, each unit has been constructed on a levelled platform with street access allowed. The brick-and-mortar structure has one entrance and consists basically of four rooms with an inside toilet and shower. The four rooms can be interpreted as being a dining area and kitchenette, two bedrooms, and one living room. The shell is made of a brick-and-mortar concrete floor and a corrugated iron-sheet roof covering. There is no ceiling in place and the floor-to-wall plate height is 2.3 meters, with a lintel in place over the door and window openings. Walls are bag-wash finished, and in some instances with coloured plaster. Metered electricity is supplied to each unit inclusive of a light and plug point. Pipe borne water is supplied.

The SANS 10400 Part O - Lighting and Ventilation stipulate that "Any habitable room (…) shall be provided with a means of lighting and ventilation which will enable such room to be used, without detriment to health or safety or causing any nuisance, for the purpose for which it is designed" (South African Bureau of Standards, 2011:21). To achieve this, it stipulates some deemed-to-satisfy rules, which include the provision of a zone of space for natural lighting. This rule provides guidelines for the establishing minimum distances between openings and any obstructions such as fence walls or adjacent buildings shall not be less than 500 mm from a boundary line or one meter from a building line.

Part T of the SANS 10400 refer to distances between buildings for fire safety which is based on the occupancy classification. Dwelling units are classified as H4 and in general terms should be a minimum of one meter from any adjoining dwelling.

3. RESEARCH METHODOLOGY

The present study applied qualitative research methods. It combined both primary and secondary sources to contextualise household efforts in housing consolidation. A theoretical approach, based on the available literature on self-help housing and enabling approaches, was combined with a pilot study carried out in two settlements located in the KwaZulu-Natal Province in South Africa. Primary data was gathered from the case study areas through semi-structured interviews and non-participant observations. The case studies

were selected based on the noticeable ongoing self-help construction activities in the settlements. A total of 20 households with visible alterations to their dwellings were approached in each case study and the construction efforts were inspected. A purposeful sample selection method was used to identify households to be included in the study. Interviews were conducted during the day in the dwellings when there were fewer people present (for privacy reasons). Participants were expected to respond to questions related to household income, household structure and particularly to their self-help intervention. In fact, the authors wanted to determine the socio-economic status of the dwelling while understanding the reasons for consolidating as well as the challenges experienced in executing the self-help intervention.

Lastly, qualitative methods based on thematic analysis have been applied to assess the data gathered and finally structure the discussion.

4. FINDINGS AND DISCUSSION

The two case studies selected are typical low-income settlements in peri-urban areas in the KwaZulu-Natal Province. The socio-economic structure is a low-income and low-skilled household. The majority of the households rely on social grants as a main source of income, and other sources of income are from temporary unskilled jobs. Only few households have regular sources of income.

The first case study is the uMhlathuze Village in the uMhlathuze municipal area, located at 180km north-east of Durban in the KwaZulu-Natal Province of South Africa. The settlement is in close proximity to the Ngwelezana Hospital in the uThungulu, uMkhanyakude and Zululand districts. The hospital offers not only medical care but represents a place of work opportunities.

Another case study is eMagwaveni, in the Tongaat area, considered to be one of the highest potential growth areas in KwaZulu-Natal. It is found in the Durban and Richards Bay development corridor. The greater Tongaat area provides road and rail access for the rural communities who trade in the greater Durban municipal area and it is a more accessible area for other surrounding rural communities, representing an important commercial transit node for many of the people living within the eThekwini Municipality.

The fieldwork conducted revealed some key enabling drivers and challenges underpinning the self-help consolidation activities in the selected settlements. The authors have summarised challenges/constraints and potential solutions/recommendations in the following Table 1.

Table 1: Self-help consolidation: reasons, challenges and recommendations

Reasons for consolidating	Challenges & limitations	Recommendations
Improved social status	Lack of technical know-how	End-user guidelines
Increased number of family members	Financial constraints	Bridging financial mechanisms
Religious/traditional practices	Access to materials	Technical training
Business-related activities: e.g. tack shops, taverns, chicken shed	Health and safety constraints (due to lack of ventilation and natural lighting)	

(Source: Ojo-Aromokudu and Loggia, 2017)

The methods of construction used were examined in terms of the inclination to traditional or modern construction practice as summarised in the following paragraphs. Interestingly enough, the study revealed existing social ties within the community, which offered support during the self-help consolidation. For instance, one respondent in uMhlathuze confirmed that she had received help in building the structure from some community members. However, no reference is made to any formal or informal building guidelines (e.g. NHBRC or traditional practices).

4.1 Reasons for consolidation

The findings revealed a range of reasons why households extend their dwellings. Firstly, the decision to extend can be related to the status of the household, ranging from ownership to rentalship. In fact, when the occupant is also owner, he or she is more willing to make substantial upgrades to the house structure as an expression of improved social and economic capacity. For example, it was found that some households opted to demolish the entire structure and built a more structurally sound building adorned with modern concrete tile roofs (Figure 1).

Figure 1: Demolition and reconstruction in self-help, uMhlathuze Village (Source: Ojo-Aromokudu and Loggia, 2017)

Nevertheless, it has been found that not all units were occupied by the original owners. Both in uMhlathuze and eMagwaveni, some respondents, who were owners, explained that they had to extend their houses to increase the number of rooms as children become adults and required more privacy and also to make space for the grandchildren. For example, a single mother interviewed indicated that: "…the extra room was needed for my daughter who needed more private space for studies after gaining admission to the University to study Law". The dwelling was extended by employing the traditional circular building floor plan to increase the number of rooms. This is an external room built of a single-skin brick wall and with a traditional type roof and one window (Figure 2).

In this case, the underside of the roof is neatly fitted with isolating material to aid the cooling of the interior of the room. There are no lintels over openings. The room is furnished with a bed and bedside table; no plug points are noted or ablution facilities. The toilet and shower are in the main (RDP) house.

Figure 2: Extension in self-help, uMhlathuze Village (Source: Ojo-Aromokudu and Loggia, 2017)

In response to financial challenges this household had not only increased the number of rooms, but has also built a chicken shed where agricultural chickens are bred and sold for economic purposes. The shed is made of timber and other recycled materials, and it is fitted with a door. Ventilation is through wire-mesh openings in the timber walls, which are covered with plastic sheets as a sun-shading device. Other households opt for running tuck shops or taverns from their homes, also for economic benefits.

Other households interviewed in both of the case studies revealed that when their social and economic status changed, they have upgraded the house finishes to reflect the improved status (Figure 3).

Figures 3a & 3b: Extension in self-help, eMagwaveni settlement (Source: Ojo-Aromokudu and Loggia, 2017)

Such improvements included the fitting of ceilings, aluminum window frames, changing floor finishes from screed to tiles and building external social furniture such as a 'braai' stand and welcome porch.

4.2 Challenges in self-help consolidation

The lack of access to technical know-how proved to be a challenge. Some uncompleted attempts were also noticed. A single-skin circular floor plan structure, less than one meter from the existing building, built out of concrete blocks stood without walls nearing wall plate level and without any roof. There is no evidence of foundation trench preparations or establishing floor levels for adequate flooring. No provision has been made for ablution facilities. One home owner interviewed in the uMhlathuze Village, who was a single mother of two teenage boys and who worked two days a week as a domestic worker, explained that she had engaged a builder friend to build her external room. In this way, she relied on her available social network for the necessary construction assistance. Another key challenge that she pointed out was a financial one. In fact, with no capacity to approach financial institutions, consolidation attempts were left uncompleted. Unfortunately, owing to financial issues, she was unable to buy the required materials and consequently she had to abandon the project. On further probing she indicated that she needed only R10000 (about 580 GBP) to complete the room.

Other efforts recorded were the addition of a temporary shack utilising one of the building walls as a support.

4.3 Limitations of consolidation attempts

Evidence shows that the self-help endeavours of building additional units to accommodate additional household members might threaten the health and safety of the inhabitants when these additions are inadequately positioned on the site. For instance, the health challenges might relate to the close proximity of additional units to the existing one(s) when located in the zone of natural lighting and ventilation, as already discussed above and shown in Figure 4.

Figure 4: Health limitations. Obstruction to adjacent unit, uMhlathuze Village
(Source: Ojo-Aromokudu and Loggia, 2017)

Other lost pockets of spaces created in-between and behind the units or in uncompleted buildings can provide opportunities for devious activities.

Other limitations relate to financial matters, namely poor financial planning and the

consequent delayed return on investment. For instance, one of the interviewees reported that her limited resources were tied up in the uncompleted building.

5. CONCLUSION AND RECOMMENDATION

The present study shows that the consolidation attempts in the RDP settlement are merely self-help initiatives with no assistance or monitoring from the state. As a result, consolidation steps are left to the households who are technically unskilled in terms of building construction, even at a rudimentary level. This may be attributed to the disruption of traditional knowledge systems of the rural households due to rural-urban migration. Knowledge and support systems are left behind and households seek support from social networks nearby or pay for services from skilled labour.

The findings reveal the inability of low-income households to adequately consolidate their homes. This is due to the unpreparedness for self-help construction in terms of construction management, financial planning and environmental design and management.

This study suggests the need for rethinking new flexible and more responsive self-help assisted models, based on participatory design practices. In fact, self-help consolidation can be enhanced by first understanding the available skills and practices within the community and addressing the existing gaps.

Moreover, great potential has been envisaged for enhancing the self-help consolidation practices by providing households with some end-user practical guidelines (e.g. a self-help owner-builder manual) to improve construction, financial and environmental management skills. This should be also accompanied by construction management training sessions offered by the municipality as part of the enabling approach.

Further studies are expected to design and test a more flexible prototype (with different configurations) for subsidised housing, applying participatory design methods and co-production with the local community.

6. ACKNOWLEDGMENTS

The present research has been carried out since early 2014. Preliminary findings were presented at the XXV World Congress of Architecture UIA 2014, held in Durban. The study is also part of two ongoing research collaborations. The first one is funded by the Royal Society and the Newton Fund, through the Newton Advanced Fellowship and the second one, the ISULabantu Project (www.isulabantu.org), is funded by the Economic and Social Research Council (ESRC) as part of the Newton Fund, in collaboration with the National Research Foundation (NRF) in South Africa through the ESRC/NRF Newton Call for Collaborative Research Urban Transformations in South Africa.

7. REFERENCES

Adebayo A.A., and Adebayo P.W. (2000). Sustainable housing policy and practice – reducing constraints and expanding horizons within housing delivery. In: Proceedings of the Strategies for a Sustainable Built Environment, Pretoria, pp.23-25

Adebayo PW (2011). Post-apartheid housing policy and a somewhat altered state role: does incremental housing still have a place in South Africa? The Built & Human Environment Review. 4 (2): 3-16.

African National Congress (ANC). (1998). The Reconstruction and Development Programme (RDP). Johannesburg: Umanyano Publications.

Cohen, M. (2015). "John F.C. Turner and housing as a verb". Built Environment. 41(3): 412-418(7)

Cornwell K., Inder B. (2004). Migration and unemployment in South Africa: when motivation surpasses the theory. Australia: The Department of Economic and Business Studies.

Duncan, S.S., Rowe A. (1993). Self-provided housing: the first world's hidden housing arm. Urban Studies. 30(8): 1331-1354.

Folkers, A. (2011). Modern architecture in Africa - critical reflections on architectural practice in Burkina Faso, Tanzania and Ethiopia 1984-2009. Utrecht: Van Hooren bv.

Frescura, F. (1982). Self-help housing: some rural examples and prototypes. Johannesburg: Department of Architecture, University of the Witwatersrand, Johannesburg.

Frescura, F. (1986). Jozi a history of black Johannesburg. Available online at: http://www.sahistory.org.za/franco/urban-issues-jozi.html

Frescura, F., Riordan R. (1986). Motherwell Housing Survey Report, Port Elizabeth: Builder's Warehouse.

Godehart, S. (2006). The transformation of townships in South Africa: the case of KwaMashu, Durban. Dortmund: Spring Research series.

Goetherth, R. (2010). Incremental housing, A proactive urban strategy. In: Monday Developments (September). Cambridge: Massachusetts Institute of Technology.

Harris, R. (2003). A double irony: the originality and influence of John F.C Turner. Habitat International, 27(2): 245-269.

Iommi, S. (2009). The target efficiency problem in Italy's housing policy. The case of Tuscany. Housing Studies, 26(1): 41-67.

Kammeyer, H. (2010). Reciprocity in the evolution of self through the making of homes-as-artefacts: a phenomenological study of the BaSotho female in her vernacular architecture. Bloemfontein: University of the Free State.

Khan, F., Thring P. (2003). Housing policy and practice in post-apartheid South Africa. Johannesburg: Heinemann.

Mhlaba, D., Awuor-Hayangah R. (2013). Social impacts of rural-urban transformation. Botswana. Journal of Technology, 22(1): 27-31.

Murray, C. (1999). Framework for assessing a facility's ability to accommodate change, application to renovated buildings. Cambridge: Massachusetts Institute of Technology.

Newton, C. (2013). The people's housing process...getting the quality in the quantity? Journal of Housing and the Built Environment. 28: 639–651.

Ntema, L.J. (2011). Self-help housing in South Africa: paradigms, policy and practice. Unpublished PhD thesis. University of the Free State, Bloemfontein.

Parnell, S. and Hart D. (1999). Self-help housing as a flexible instrument of state control in 20th-century South Africa. Housing Studies: 14(3): 367–86.

Pugh, C. (2001). The theory and practice of housing sector development for developing countries. 1950-99. Housing Studies. 16(4): 399-423.

Reader's Digest, 1975. Family Word Finder. Montreal: The Reader's Digest Association, Inc.

Root, D., Wachira N. (2009). A legacy of empire; the imposition, evolution and filure of construction skills training systems in Kenya and South Africa. Nottingham UK: Association of researchers in Construction Management. pp. 665-74.

Rust, K. (2006). Analysis of South Africa's housing performance. Midrand: FinMark Trust.

Slaughter E 2001. Design strategies to increase building flexibility. Building Research & Information. 29(3): 208-217.

South African Bureau of Standards, (2011). SANS 10400 Part O - lighting and ventilation. In: The application of the National Building Regulations. Pretoria: SABS Standards Division.

Sutherland, C. et al. (2016). Policies towards substandard settlements. In: DupontV et al. The politics of slums in the global south: urban informality in Brazil, India, South Africa and Peru. Routledge Studies in Cities and Development. Boca Raton: Taylor & Francis.

Tissington, K. (2011). A resource guide to housing in South Africa 1994-2010. Legislation, policy, programmes and practice. Johannesburg: Socio-Economic Rights Institute of South Africa (SERI)

Turner, J. F. C. (1972). Housing as a verb. In: Turner JFC, Fichter R (Eds.). Freedom to build: dweller control of the housing process. (pp. 148–175). New York: Macmillan.

Turner, J., Fichter, R. (Eds.). (1972). Freedom to build: dweller control of the housing process. New York: Collier- Macmillan.

Whelan, D. (2001). The recent transmutation of the indigenous vernacular architecture of the people at kwaMthembu and kwaMchunu, Msinga district, Kwazulu-Natal, South Africa. Durban: University of Natal.