UNIVERSITY OF NAIROBI
DEPARTMENT OF THE ARTS AND DESIGN

BDS 604: RESEARCH PROJECT THESIS

University of Nairobi partial fulfillment of the requirements for the Degree

M.A DESIGN

ROLE OF DESIGN ON USER EXPERIENCE IN PUBLIC PARKS
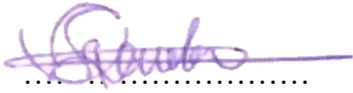
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DECLARATION

This research project is my original work and has not been presented for an award of a degree in any other university or any other award.

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DEDICATION

This research project is dedicated to my Parents, Mr. and Mrs. Omindi, for their unconditional love and support throughout the research period. My brother, Max Omindi for the assistance in every possible way, my friends for the moral support. Above all, I thank the Almighty God for the far he has brought me to the completion of my paper.

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1. INTRODUCTION

1.1 Background to the study

Bacon, (2011) found out that there is urban increase in population. Nonetheless, by 2050, it is set to increase by two thirds. (Bacon, 2011). The need of optimizing the use of open spaces becomes vital as the cities grow larger. In developing countries, there is scarcity of space for parks and landscape. Communal and intrapersonal interaction is improved through cities designs and neighborhood for urban accessibility. According to Chiesura (2004) urban parks and green spaces have an advantage of enhancing human wellbeing. Pataki (2004), also stated that open spaces are not only for industrial or institutional use but also for nature conservancy, agribusiness, national reservoirs, lands with unique sceneries that are yet to be developed, public parks among others.

World Health Organization in (Haskell, 2007) stated that, physical inactivity is the highest public health concern. An example is the population in Australia as approximately half of the population do not exercise. From recent research findings, it was discovered that understanding recommendation for physical activity, an individual who frequently visits a park stood a higher chances than one who does not. There was an assumption that lifestyle related diseases reduced with the implementation of public parks in the cities. This is done by encouraging positive mental health and physical activity. Areas that have been well researched include; regular utilization of parks promotes the health welfare of individuals, management of physical activities in the park; and the impact of the activities on park visitors' adventure (for instance views of overcrowding).Haskell, 2007 noted that there is an increase in the number of researches on structuring of parks connecting to the welfare, design and human health. A study was conducted on a recreational park in Akure, Nigeria about the habitable and viable state of the park in respect to its use. It was found out that the design, habitability and viability together with the financing of an urban park are as a result of several factors. Some of which included; activity provided in the park, natural environment, maintenance, accessibility and sense of territoriality of the users (Olufunto O Ijatuyi, 2014).

Research on the health benefits of public park users and their mental wellbeing have been conducted with less attention on how the same parks promote social interactions and connections. Byrne (2015) discussed on the values such as environmental, mutual and social-perceptual that strengthens relationships are complex, therefore share a common body in terms of park usage. Marketta Kyttä (2011) stressed on more studies to be conducted on the relationship between resident's perception and park design. The study argues that parks offer platforms suitable for synergy, conveyance and meeting point for both residents and visitors. Experience and interaction in parks is different for various users. (Chiesura 2004). (Achmad, 2014, Pg. 585) people have free access to public open space, do various activities at the same place and in return have healthy lifestyle, better social interaction and improvement on the economic status. The quality of public open space can be judged by how long people stay at such places and the range of activities carried out there. The quality of such space relates to its usability and people's need and perception. If it is not usable and perceived better by the public, it will not become useless and unsuccessful. The quality of public open space can be seen in terms of: the function and the physical features. The function refers to the activities carried out in such public spaces. The open space must be accessible to all groups of individuals and reflects the culture and tradition. The significant physical features expected at such spaces are the presence of clear pedestrian pathways and connectivity with the surroundings. If the open spaces are not connected properly, it will not be visited and used by the public. Various researches have been done on well-designed public parks in developed countries on the quality of public open spaces in relation to usability. There are no similar studies in developing countries that faces decrease in the quality of urban environment, public space quality and size. Information gathered through the study from the users behavioral pattern and use of the space of the is valuable for spatial planning of urban spaces. (Achmad, 2014).

The human environment has two components: the physical of everyday life and the social environment of mutual relations. The experience, perception and use of open space by city residents can act as important clues for successfully implementing user-centric spatial planning.

Planners often neglect these since the user's experiences and values are not directly visible. Consequently, space might not suit users' needs and requirements. Hence by studying how people perceive and use these open spaces can help find out the gap between the intention of the planners and users. This will help in better understanding of public needs and perception of such open

spaces. The behavioral patterns by which people experience and use these spaces can act as a valuable source of information for spatial planning of urban spaces.

1.2 Research problem

Many cities around the world value public parks as they serve an important aspect in people's lives. Individuals tend to visit public parks or pocket parks so as to achieve their desired user experiences. These user experiences include: culture, art, music or festivals; recreation; community development; heritage; economic developments; health and wellness; natural environment; education and transportation. Most parks are used for recreation purposes. They offer either passive, spontaneous or structured recreation opportunities (Schwartz, 2016). The quality of life is determined by the relationship between urban open spaces and contentedness level of the public. But it is found that there is the lack of involvement of the park users in the designing of the public spaces. Most parks are designed/made according to the designer's input, although, design for the parks is not just about the architectural/landscaping aspect. The parks should be able to tap into the individual's humanity; how he/she feels about the space.

This research, therefore will shed some light on the understanding of what lies beneath the surface of the appearance and success of public parks, as most public parks hold themselves the recipe for creating an assemblage of prosperity, cultural vitality, innovation, creativity and eventually success.

1.3 Objectives of the study

- To investigate the importance of user involvement in public-park design.
- To identify the characteristics of a good public park design from a user's perspective.
- To identify the characteristics of a good public park design from a designer's perspective.
  To determine the satisfactory factor between the commercial interest and the public interest.

1.4 Research questions

- What is the importance of user involvement in oloolua public park design?
- What are the characteristics of a good public park design from a user's perspective?
- What are the characteristics of a good public park design from a designer's perspective?
- What factors should designers consider in order to develop a well-designed public park that also satisfies user's needs?

1.5 Justification of the study

The main aim of the study is to understand the designers' intention in relation to the user's perception of public parks. There is an actual gap between the designer's intention in the design of Public Park and user perception of a good public park. Hence, there is the need for the study. It was therefore realized that there is a lack of similar studies in a developing country that faces degradation of the urban environment and decrease in public open spaces quantity and quality. (Achmad, 2014). The experience, perception and use of open space by city residents can act as important clues for successfully implementing user-centric spatial planning. Secondly, the study will serve as a blueprint to the park designers to come up with guidelines that meet the expectations of both the designers and the users. Thirdly, the study will help in finding out if the universal design guidelines for public parks are met in the various parks around Nairobi.

1.6 Research scope

The purpose of the study is to understand the designers' perspective as well as the users' perspectives on public parks located in Nairobi. Some of these public parks include:

- Oloolua Nature Trail

1.7 Limitation of the study

This study will be limited to the oloolua public park located in Nairobi County.

1.8 Definition of concept

Park Designer: This refers to a person who plans and decides the look or workings of a public park before being made, by preparing drawings or plans. (Oxford English Dictionary, 1984)

Perception: this is the use of sensory impression of an individual to understand and give meaning to their environment. ‖ (Kashyap, 2018). According to Joseph Reitz, it includes the processes in which an individual receives and interprets his or her environment; seeing, hearing, feeling, tasting and smelling.

Use: The action of using something or the state of being used for a purpose. (Oxford English Dictionary, 1984)

Experience: an occurrence which leaves an impact on someone. (Oxford English Dictionary, 1984)

Urban Park: these are spaces that offer natural features and relaxation to visitors and the public within the municipality. The government is the main management body but at times friends of group, Private Sector Company or a park conservancy are contracted. (Peter Harnik, 2015)

Green Space: This refers to a space used specifically as a nature conservancy for plant life, water features and other natural features. (Albro, 2018). The WHO define this as all urban land covered by vegetation of all kinds. (Admin, 2017).

2. LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical framework builds critique of the existing theories and identifies gaps.

2.2 Theoretical framework

The research aims at making new contributions to knowledge by adding on to the following theories of urban parks: The Design Process for Public park design, User-Centered Design and participatory design theory.

2.2.1 The Design process for Public Park Design

Parks are critical to a community's spirit. Absence of public parks will create less social interaction, lack of outdoor play area for kids and lack of outdoor resting space for adults. Some of these public green spaces, splash parks to dog parks and playgrounds, are recreational areas that serve the needs of community members (Shaftoe, 2018). The designers should be able to come up with a standard guideline for the public parks design. An example of a design guideline has the following;

1.2.2   User-Centered Design

Ethnography, qualitative and quantitative research methods are used by most design consultancies to create people-driven solutions (Schwartz, 2016). Through the observation of lifestyles, habits and values of individuals, design thinkers are able to respond to their hypothesis of problems and solutions as they determine the most adoptive and effective solution. There is need for authorization of community-driven designs by landscape architect, architect, urban planners and designers by scaling the human-centered design model.in return, they create sustainable, aesthetically pleasing and functional projects.   In human-centered design people and end-users are the key to the whole process. Individuals and end-recipients participate in qualitative and quantitative research process that lead to development of solutions from prototypes. The needs and habits of a particular community enlightens the public space amenities among other solutions. (Oswald, 2019).

Community feedback assists the designers in adapting and editing solutions as they are expected to be agile and flexible. Engagement of the community depends on the designer's understanding and interpretation of the problem. The process includes the; predesign, discussion and fact finding,

design concept report and prototype, the community being part of the solution and correcting accordingly. Interpretation of the problem comes into play when one begins to incorporate the point of view. When creating a product, be it a park, a building or a city, it should serve the residents of a community. There is need to study how a community relates to a public space as well as earn a pledge from the same community so as to be able to create a project that serves its intended purpose. (Ewert, Baker, 2001).

2.2.3 Participatory design theory

There is an increasingly witnessing situation, since the turn of millennium, in a number of European countries where citizens demand a more direct form of democracy like an actual involvement in the decision making process or simply taking the autonomy to self-organize. The need for transparency, citizen involvement in production of public projects and community empowerment to be part of decision power is achieved through the center placement of citizen participation. In short, there is the actual need for participation, mentioned by both citizens and policy-makers. In practice, however, every party voices out their own opinion. For instance, for some citizens, participation implies helping the marginalized, while for others it is a tool used to safeguard their interest. Oswald Devisch, 2019, explained that some policymakers participate because of democracy, others invest in it to get support while others participate for selfish gains as an excuse to outsource public service to civil society. There is little debate going round on the various interpretation of the concept of participation. (Oswald Devisch, 2019).

2.3 Concept of Urban Public Parks

Socializing as well as rest and satisfaction are the healthiest ways in which public parks come in handy. According to Karin Perchardt, (2014), a study was conducted to identify features in a pocket park that promote the two uses. In his paper, he conducted a research on nine Copenhagen's pocket parks through the analysis of the two based on use and shape, size, noise level, greenness and elements (paved and unpaved trails, café, historical features, tables and other seating other than benches, flowerbeds, view outside parks. (Karin K. Peschardt, 2016)The results indicated that the green features are of less importance for socializing, whereas features promoting gathering are prioritized. From the results based on rest and restitution, it was clear that most individuals preferred green-ground cover and enclosed green niches to playgrounds and views outside the parks. (Stigsdotter, 2012)

There are few large green areas to accommodate most people living in the cities in western countries yet most of them leave far from the green spaces reducing the possibility of frequent visit to such spaces. There is need for the public green spaces as they contribute to the outdoor experience. Well-educated individuals of ages 30-49 years were frequent park users and they used it for socializing. Public green spaces were useful to people heading home for the purpose of rest and relaxation and the frequent users were of ages between 50-65 years. Stigsdotter (2012) identified public green spaces as an important feature to an individual's daily life and also serve as an originality to professionals in the fields of landscape architecture, city planning and idealists for future planning of dense areas. (Stigsdotter, 2012)

There is need for research on the size and type of green spaces provision for the well-being of its urban residence. Kirsi Makinon and Lisa Tyruainen, 2008, studied the relationship of adolescents to green spaces and realized that teenagers appreciated beauty, tranquility and opportunity. In the research, it was realized that there was difference between genders. Use of place and affordance was considered. (Tyrainen, 2008)

Benefits of green spaces include psychological wellbeing, public health for urban dwellers and space for various activities. According to Welch (2014), the most affluent in the community and the whites are the largest beneficiaries to the distribution for space. Cultural and environmental friendly functions can easily be held at a park that has been well designed. Mellisa Anne Currie, 2016, identified the design principle that small urban park can share. The principle include accessibility, specificity, authenticity, functionality and adaptability. Physical inactivity is a daily routine to people living in densely populated cities as they are disconnected from natural surrounding and spend a lot of tie inside. The inactivity has led to lifestyle diseases such as obesity, diabetes II osteoporosis and stress related illness. Implementation of urban green structures have a positive influence to the diseases although, there is limited research showing how these urban green structures benefit health. (Matthias Braubach, 2017) The nine pocket parks in Copenhagen were researched on and the study was to evaluate the utilization and the pocket park users connection between the park's attribute and the user's view on relaxation.. The researched achieved from the research carried out to identify the restativeness potential of pocket parks show that parks that contain limited greenery have a restorative potential. Hartig et. al (2014) has the ways in which green spaces affect the human well being;

- Better air quality.

- More individuals tend to be physically pro-active

- Stress alleviation

- Improved social interaction

For improved relaxation and restoration, people with high stress levels have a positive feeling in areas where they are in contact with nature. In areas where urbanization seems to gradually increase, it is important to have urban parks as they boost a society's to better quality lifestyle. A city's green system is made out of an urban park's community-based idea. The benefits of urban parks in the city include;

- Urban green areas enhance the health, sustainability of various living spaces.

- Nature and human beings can co-exist in one place.

- When people have peace of mind then there is increase in the city's health development. Creation of healthy, sustainable and high visual quality living spaces through urban green areas.

The success of urban public park design lie on the understanding of the park usage and people's perception about them. Yucel & Yildizci, (2006) wrote that an effective park is one that is accessible, secure, pleasant, well-maintained, sociable and free for different activities to take place. As urbanization gradually increases, a society's lifestyle quality is improved by urban spaces. When a community participates in planning and designing of the parks, then there is increase in usage. The success of the urban parks depends on observation on how individuals use the park as well as their perception. (Yücel & Yıldızcı, 2006).

2.4 Concept of Public Park Design

Individuals tend to visit public parks or pocket parks so as to achieve their desired user experiences. These user experiences include: culture- these include art, music or festivals; recreation; community development; heritage; economic developments; health and wellness; natural environment; education and transportation. Most parks are used for recreation parks. They offer either passive, spontaneous or structured recreation opportunities. Passive recreation opportunities include relaxation, social gatherings, reading, observing wildlife, walking, and photography or

enjoying the surrounding. Amenities utilized in the passive recreation activities include trees, open turf areas, natural areas, picnic tables or benches. (Schwartz, 2016)

Spontaneous recreation are unplanned activities that do not require registering for a program or a league. Some of the spontaneous recreation activities include: walking, running, children playing, skateboarding among other pick up sport games. Some of the benefits of this type of activity include increased life expectancy, reduced rate of depression, fostering of a stronger sense of community. Healthy lifestyles are achieved through pathways and urban parks, mountain bike skill parks, gravel trails, open turf areas and infrastructures used for spontaneous recreation. (Schwartz, 2016)

Structured recreations are planned or organized activities such as; ball diamonds and rectangular fields are placed in parks since they are the main sites for organized sports. Some of the benefits of a structured recreation pursuit include social benefits, positive affective outcome that encourage physical activity over life course. Public parks play a role of public safety. Community development is enhanced in safe parks. The more a park is used the safer it is perceived. (Schwartz, 2016)

2.5 Concept of User Experience

User Experience refers to how local products and services meet or exceed visitor expectations (Berry, 2011).It is a post utilization that visitors experience from consuming a product or service (Westbrook and Oliver, 1991). User Experience can also be defined as a response to service fulfilment and a change of attitude as a result of use (Lee, Wong and Chong, 2012). Elsewhere, Patrick (2003) describes User Experience as an unconventional concept that looks at the quality of a product or service offered, its condition when purchased as well as the cost.

The root of the user experience process from the various definitions comparing the expected performance with the actual performance of the product or service. Barsky (2006) notes that tourism products are experimental in nature and can only be assessed after actual use. Barsky's research further acknowledges that expectations can be built on past experiences, promotional materials, personal values and   needs (Patrick, 2003).

Similarly, Fuch and Weiermair (2003) noted that User Experience and perception are also shaped by external forces. Basically, before an actual visit to a destination, visitors perceive their expectations will be met. If the performance is slightly less than expected, the visitor will adjust performance upwards to equal satisfaction. If actual performance does not meet expectations then the weaknesses in performance will be exaggerated. However, other models such as the Norwegian Customer Satisfaction Barometer (NCSB) suggest eliminating expectations as a prediction of User Experience because it leads to reassurance rather than assurance.

2.6 Conceptual framework

INDEPENDENT VARIABLES   **DEPENDENT VARIABLES**

Design of Public Parks   **User Experience**

User Involvement Considerations

- Experience
- Timing considerations
- Representativeness

Park Ergonomics Considerations

- Location
- Physical Resource placement
- Safety considerations

USER EXPERIENCE

- Intention to return
- Referrals
- Ratings

Social Cultural Considerations

- Size of Park
- Features in the Park
- Activities scheduled
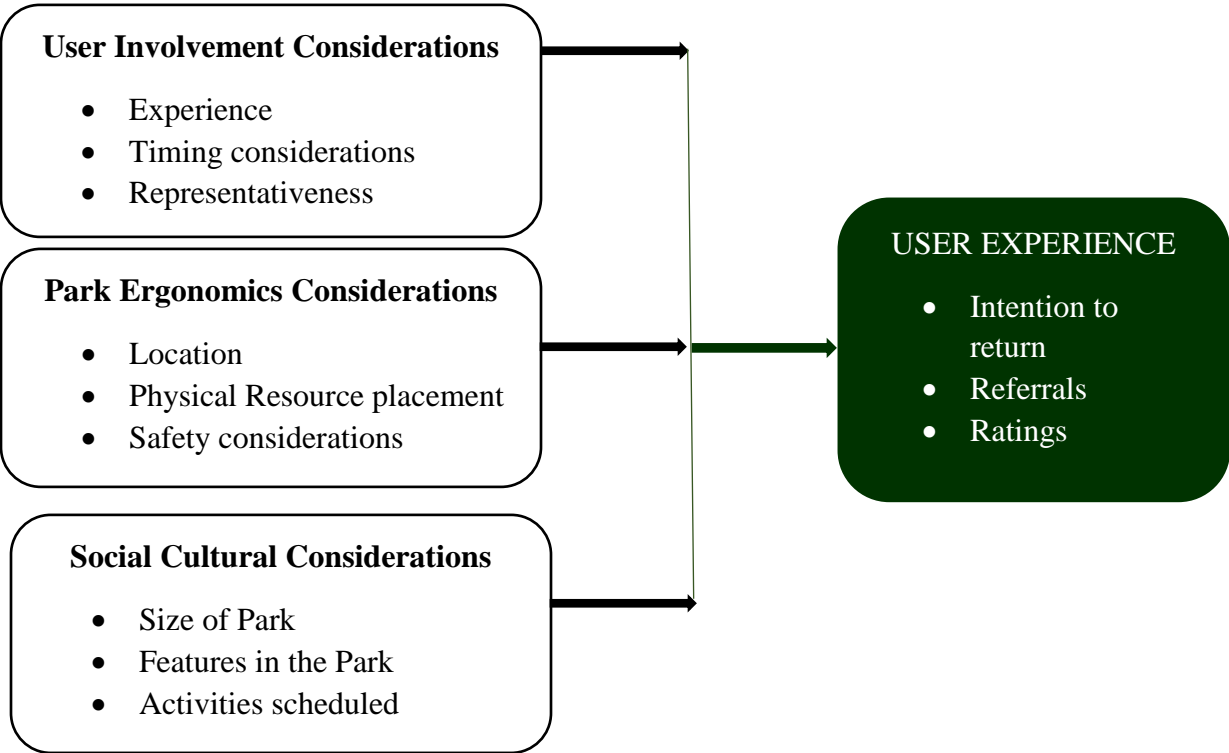
Fig. 1: Conceptual Framework

The urban parks depend on the user involvement, design. Public interest and commercial interest in the enhancement of the public parks.

User involvement

Project for public spaces is an organizational initiative that shifts its focus to develop corporate social responsibility partnerships that offers more communities the chance to create, transform and sustain their public spaces. The organization has a long history of **place-making: refers to a collaborative process by which one can shape their public realm in order to maximize the shared value.** The identity of a place in form of the physical, cultural and social identities is supported as well as encourage better urban design. The park is designed as per the community interest and preferred style. The people have the freedom to redefined and redesign public spaces. Many public spaces face a gap between what municipalities can do to design, build, operate, and maintain them, and what the community can do themselves to steward and improve these spaces. Parks and recreation departments, for example, are chronically underfunded, representing less than 2% of municipal budgets on average, and rely on private philanthropy not only for extra fundraising capacity, but for additional expertise, flexibility, and the ability to go beyond the scope of their traditional responsibilities (Admin, 2020). While Departments of Transportation, which are responsible for the largest portion of our public spaces, are better funded, they do not always see place-making as a core part of their mission.

Meanwhile, place management organizations, like conservancies, friends groups, community land trusts, business improvement districts, and Main Street programs, do so much to maintain and program the public spaces, but often face similar constraints on funding and capacity when it comes to undertaking larger place-making projects. Effective place-making is very delicate as it requires tender love and care, time, attention and finance plans for it to succeed.. The gradual work of ongoing public participation, observation, and tinkering is what allows a public space to meet the needs of the people it serves and become a beloved community destination. Yet these activities are exactly what go unfunded and unsupported in most of our public spaces. Corporate partners have a unique opportunity to bridge this gap by supporting public spaces and the people who care for them at this pivotal, in-between moment in their life cycle (Admin, 2020).

In this moment of crisis, it is even more urgent to address the need of communities to live more of their lives safely in outdoor public spaces. As foundation leaders Dana Bourland, Sam Gill, Judilee

Reed, and Chantel Rush wrote in a recent article in The Chronicle of Philanthropy, "Public spaces should be at the top of philanthropy investment lists. Intentionally welcoming, spacious, and well-appointed parks, well-maintained hiking and walking trails, robustly programmed libraries and community centers, and even wider sidewalks may be among the most important investments we can make to recover (Admin, 2020)."

Park Ergonomics Considerations

It is the role of landscape architects to develop functional public spaces that are aesthetically pleasing. Their main goal is to link people in a space and at the same time protecting the ecosystem. (Siu, Wong, & Lo, 2020,) the community is protected against felony by professional designers through principle application and ideas into the sustainable environment management. An example is the children's play area that should be visible in all angle.

A playground is a safe haven for children as they can play freely, have fun and not experience injuries. Various aspects are put into consideration when designing children play area so as to avoid risk. Some of which include surfacing, play components, surrounding landscape treatments and proper signage. Working with vendors who provide superior product quality and a robust material mix is necessary as well as selection of materials. There will be less maintenance and the product would last longer. Maintenance is mostly not put under much consideration. It is important to thin of the resources one plans to invest in the upkeep when designing your dream play space. In addition, feasibility for the individuals in charge of maintenance is important for the completion of work. (Langholz, Lassoie, Lee, & Chapman, 2015).

It is important that children play areas are designed in such a way that is welcoming and every family no matter the background, can have fun and can use all playing equipment in the park.

Social Cultural Considerations

The social, physical and economic health of a society has some connection to the built environment. Individuals tend to spend more on transportation system and there is increase in cost for the health system due to the physical inactivity of various individuals. This has been caused by

the stretched-out land use. In order for a town or a city to have a healthy community, decrease in healthcare and transportation cost then the planning for urban parks and relaxation amenities is necessary. In the process, the city is able to conserve the environment as well as promote environmental sustainability. Benefits of park facilities include protection of air and water quality, preservation of park spaces for current and future generations. The public play a key role in conservation as well as creating an awareness of the environmental needs as parks conserve need as park conserve breathtaking views, fit environment maintenance and provision of carbon-reducing sustainable landscapes (Larson, Jennings & Cloutier, 2016).

Benefits of public parks to the community around include include equality for the community, community members have equal access, promotes social gatherings, community members get a sense of ownership. The parks can be used as dream destination and it also helps to connect people with nature. Pocket parks are small urban green spaces open for citizens and children of unjustified areas for the purpose of fun and relaxation opportunities. Successful parks have four key qualities; accessibility, pastime engagement, comfortability and comfortable places. The parks can be made in any place such as vacant lots, rooftops, or previously hardscaped areas along sidewalks and active transportation routes.

Parks provide a venue where physical activity, which is critical to good health, can occur. A reported evidence on the Health Benefits of Parks by the Trust for public land stated that individuals in dense cities who wish to experience physical activities can visit the parks. Accessibility to the parks encourages individuals to exercise more hence a healthier lifestyle and decrease in lifestyle related diseases. This also promotes mental health, reduces stress and symptoms of depression and anxiety as well as providence of psychological benefits. (Parks & Oakerson, 2018).

Economic development grows tremendously through a well-planned park and recreation system. Property values increases as individual's visits parks and recreation systems and promotion of active transport infrastructures. This leads to job creation that promotes the economic developments. The role of parks in sharing the success the success of a city The Role of Parks in sharing the success of a city has various effects which include; promoting local business in downtown areas, increase in tourism as well as the number of local restaurants.. it is futile to

quantify the economic benefits of a well-planned park system. However, Parks & Oakerson,(2018) discovered that the Trust for Public Land came up with a guide for quantifying the economic value of a city park system that summarizes the advantages in seven factors; property value; tourism, direct use, health, community cohesion, clean water, and clean air.

2.7 Empirical Review

Shaftoe (2018) noted that there is no plan for friendly spaces. He discussed on factors that have an impact on the public space. These include the design, geographical location, managerial, sensual and physical elements that can influence public space. He added that importance of non-visuals is not looked at rather the visual aspect is considered of more value. This is due to the visual aspect being the most appreciated sensory experience rather than other senses. We can easily define visual qualities with words and can be explained with drawings, maps and plans. Laundry (2006) pointed out how our sights are better articulated because we have a rich language around physical appearance (Landry, 2006).

Madanipour (2016) was on the opinion that architecture should not only be viewed in the visual aspect but also through sense, and thus the benefit of looking beyond the appearance and start a spatial, three dimensional experiences of urban spaces. Taylor (2018) explains the importance of the non-visual aesthetics of a space; the pavement under our foot, the wind against our skin and the effort of passing through a space and the different surface treatments. These experiences provide the best sensory treatments for our urban space.

A study by Eccleston (2020) discovered that individuals with vested interest in the outcome are less educated and unsophisticated than the citizens and public in attendance there is lack of public resprentativeness in the public involvement in the design process. According to Yao (2016) participants are not part of the sensitive parts of planning, designing and evaluation.

Following this, Doelle & Sinclair (2016) noted the conflict is fueled by lack of significant scheduled participation that daunts participation. When public suggestions and ideas are part of the decision making process, it usually takes more time, costly, drags for too long and the pulic voices must be heard first before they are included. Another factor is the scheduling of participation which is a hindrance in participatory design.(Doelle & Sinclair, 2016; Dola & Mijan (2016)). This

clearly states that a lot of paper work is involved before decision making. Another factor is the timing of participation as one the significant obstacles of participatory design

Various literatures have been written on the question about public participation in the design process. Christensen & Bower (2016) mentioned that the public lack the technical knowhow which is supported by Yao (2016). He stated that there is a lot of scientific, technical and legal jargons in the content that a common citizen would interpret. Dola & Mijan (2016) in the Malaysian scene context noted that the public are of less knowledge on the rights of design and planning.

2.8 Public parks exemplars
2.8.1 Rize Municipal Park (Sanem Özen Turana, 2015)
For effective use of public parks to take place. Community participation is key in planning and designing of urban parks. Designers and community members should be actively involved in the design of their surrounding for grants to city life and design adoption. (Sanem Özen Turana, 2015). A participatory process has been used to redesign Rize Municipal Park in Turkey with the application of features in an urban park. The project used a participatory design approach in Rize city. The project was created by a versatile design team (including disciplines as urban planning, architecture and landscape architecture) on request from Rize Municipality to the team fr Karadeniz Technical University and was done by administration in charge of implementation. The figure 1. Below illustrates the participatory design approach.
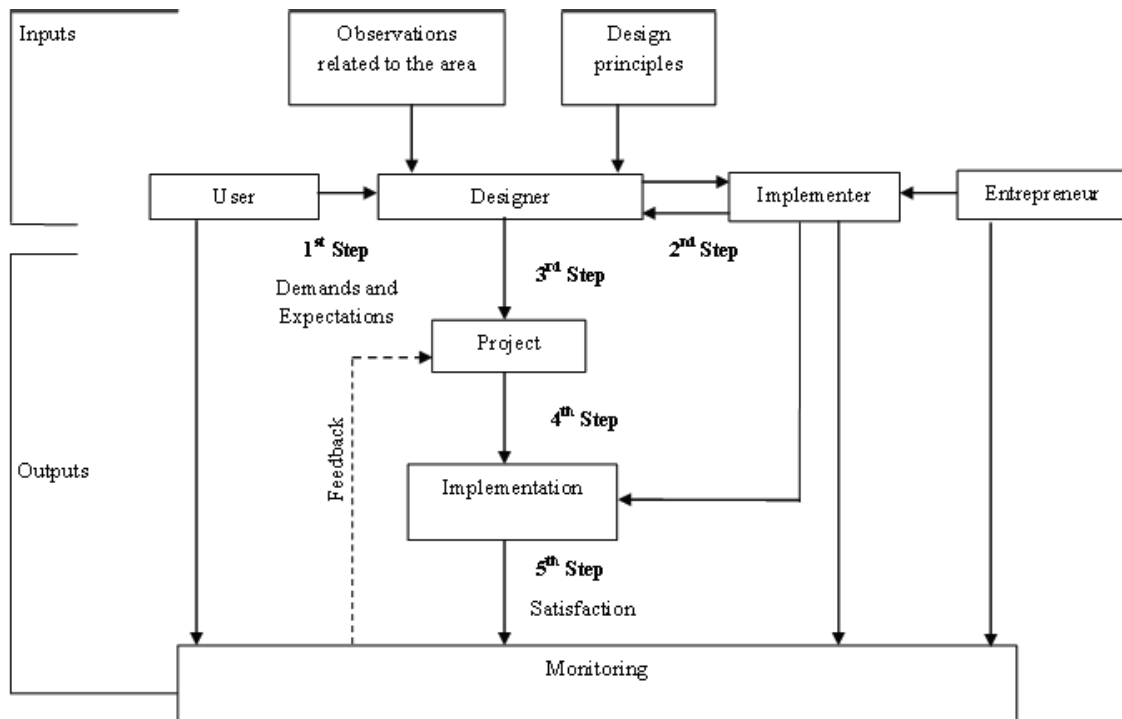
Fig. 2: Chart of Project Process

From the chart, it shows the design performers, internal and external factors that informs the designers and the results of the process. Internal input of designer actors refers to the design theories and scrutiny made on the area. External input to designer actor is made up of the user's ideology and executors. Output process are the results, implementation and keeping a track of the process while accessing. There is the emphasis on the last step of the process, user contentedness that involves keeping a track of and assessment which amounts to examining both adopted participatory design process and implementation. It is known that, participatory design process has a positive effect on user satisfaction and it is embraced by users. In conclusion, it is clear that participatory design process plays an important role in guaranteeing user comfortability.

2.8.2 Public Parks In African Cities (Fataar, 2017)

As urbanization continues to grow in cities, African public spaces become a rare gem. Rahiq Fataar (2017), had open discussions and episodes known as the future of public space in 2016. In South Africa, non-white citizens were and are still denied quality public space due to the apartheid. Cities that are selective to the kind of visitors they have are unsuitable. These cities encourage social division and unhealthy social relationships. Citizens of different background in South Africa, are in need of physical spaces. Public parks are important section of a city. – they strengthen bonds,

one feels being part of the process and their ideas are heard as well as their non-verbal cue felt to a society that has more freedom of speech and is fair (Fataar, 2017).

In light of these considerations, different users have different perception about public spaces, most specifically South Africa as the public spaces have become complex. How are we to begin reimagining how these spaces work and how do we work together to improve them?

The 2016 future of public space lecture emphasized on an individual's effort on creation and take out the public domain against city urbanization, deepening inequality. It also posed a question on the difference between creators and maintainers of the public domain and inhabitants. In Africa the topic is sensitive as size does not fit all. Therefore, there is need for a flexible, engaging, compromising and unifying approach. The series was summarized to a report with the following 10 discoveries (Fataar, 2017):

1. **Identify new champions for urbanism:** planning for the future is vital and presence of an equitable approach to designing public space is necessary.

2. **Incorporate the arts and new technology into public space research and development:** control of the future of cities and public space is determined by the fast-paced global process engagement. The civil domain can be used in numerous number of ways. Playable City Lagos project, for example, had a several fun ideas that promoted interest within citizens examples include a speaking mirror and a taxi-to-taxi phone.

3. **Map and understand non-traditional and in-between public spaces that define the broader public realm:** defining the concept is rather difficult as different people have different analogies about parks. A public space also includes markets, train stations, bus-stops, streets and sidewalks. The public space is a part of the public domain. There should be an understanding of how they are involved in the prospective definition of public space.

4. **Understand the future citizen:** the current park designing is for the future citizen who will be younger, energetic and sociable people. There is need for associating with them by understanding their ideas of space, identities and getting them involved if the public spaces are to serve the needs of the future generation.

5. **Big change needs a long term effort:** People's ideas for their public spaces can be realised by powerful citizen-activations that take the form of long-term advocacy movements.

Often starting out as small groups with specific concerns or aims, what they would soon discover is that, in actual fact, these concerns/ aims were shared by many others. This served to grow support and collaboration within communities, thereby creating an active citizenry over time.

6. **Activate the streets and the boardrooms:** In many cases, various processes of activism need to be applied to inspire a wider range of individuals. This creates an opportunity for different voices to be heard. Activations can sometimes be in the streets on a skateboard and at other times in the boardroom.

7. **Work within the law, or change it:** Urban actors need to engage with and challenge the constitutional processes, legislations and policies that govern our urban areas and public spaces. While the constitution makes provision for protests in public spaces, it does so only with very strict and somewhat bizarre regulations. For example, The Constitution states that a gathering of more than 15 people requires a formal application. In certain instances, these regulations need to be actively challenged. Within the series, this sparked additional conversation and questions regarding the availability of important information, the definition of public space and possibilities for collaboration with the City and different stakeholders.

8. **Encourage the private sector to play a role in public space**: Involvement of the private sector in the development of integrated public spaces, beyond merely their existing and planned developments, so that they contribute meaningfully to public spaces and the urban fabric through community activation. Building more inclusive, democratic and successful cities requires a greater collaboration aiming to cross the divide between designers and users.

9. **Create flexible spaces for diverse businesses:** recognition of non-standard spaces and markets is vital. The Sustainable Livelihood Foundation's research carried out in 2015 revealed that the highest growth of informal traders is by 108% since 2011, 46% being around public spaces. In order for these systems to enhance multi-stakeholder participation process and visualization of different outcome, there is need for examination and understanding of the range, estimate and spatiality of the everyday economy.

10. **Work with the Government:** Recognition of the government involvement in design, management and maintenance of urban parks is of importance. Great public space provision is the responsibility of city department; areas where people socialize and spend their free time. Increase in awareness is also important within these programs so as to create more possibility of public-private ownership. An example is the Regent Road Parklet, a collaboration between Future Cape Town, Architects and Cameron Barnes, in association with The City of Cape Town's parklet guidelines (2015). It aimed to introduce public space into a dense urban area; "the Sea Point parklet is about taking a stand to reclaim and beautify public space along Regent Road for the people using the street" was stated by Architects in 2015.

Technology have widen the scope of public action, not only relying on the concept of direct interaction with public spaces. "The future of public space is a future of the elision of boundaries […] we need more, and better quality, public spaces in which to interact as the virtual world collapses artificial boundaries" – Guy Briggs. Faatar,(2017) realized that idea of a public space is incomplete. This was a view from the series collection. It recognizes that urban life is made up of both formal and civic, informal, earthly and ordinary. It therefore recognizes that public life is made up of all forms of life and individuals especially in South Africa – whether this be political discourse, cultural engagement or commercial activity (Fataar, 2017).

CONCLUSION

Human- and user-centered design is an evolutionary idea in the product and services. People are the main focus in most design consultancies in coming up with solutions either by use of ethnography, qualitative and quantitative analysis. The most appropriate solution by design thinkers is to start by looking into the lifestyles, habits and values of individuals as they respond to their ideas on problem-solving. Community feedbacks determine the final decision to be implemented by designers. Most parks are used for recreation parks. They offer either passive, spontaneous or structured recreation opportunities. Passive recreation opportunities include relaxation, social gatherings, reading, observing wildlife, walking, and photography or enjoying the surrounding. Amenities utilized in the passive recreation activities include trees, open turf areas, natural areas, picnic tables or benches. (Schwartz, 2016)

From the various research already carried out, it is clear that there is the need in coming up with ideas and solutions that involve the co-designing process. There is an actual gap in understanding the importance of involving the communities/ users together with other stakeholders and the contribution they can offer to the design of the public parks. It also fails to state the benefits of co-designing.

3. RESEARCH METHODOLOGY

3.1 Introduction

The methodology used to carry out the research is presented in this chapter. Methods used in collection of both primary data and secondary data were critically examined. Analysis of the observation, questionnaire and survey was relevant to the research so as to meet the objectives of the research. Research tools used for the study included use of digital equipment such as audio-visuals, phones among others. Qualitative method was used in combination of primary and secondary sources. This chapter covers: Research Design, Research Population, Sampling Procedures, Variables and conceptualization and methods of data collection.

3.2 Research Design

This is a method used by the researcher to gather responses to research questions. The researcher used a case study approach with deductive reasoning. The research design used was both descriptive and correlational.

I. Descriptive Research.

The research design sought to narrate the ongoing stature of an identified variable. The researcher was likely to develop one after collecting data. Saunders et. al. (Saunders M, Lewis P, Thornhill A, 2009)and Miller (P, 1991) mention that descriptive research illustrates the exact description of persons, events or situations.

II. Correlational Research.

This type of research design uses statistical data to indicate the level of connection between two or more variables. There is the analysis of the relationship as well as expounding on a number of facts.

Aaker A, Kumar VD, George S. Marketing research (Aaker A, Kumar VD, George S, 2002), stated that for appropriate information of a study to be achieved, important decisions in the research design are the best choice in regards to the research approach.

3.3 Research Population

This refers to the subjects, participants or stakeholders who were involved in my study/research and the specific participants who would benefit from my research/study. Fraenkel and Warren (2002) explained that it means undivided group of individuals, events or subjects that have a common characteristic that fascinates the researcher. The population to be studied included;

- **Landscape Designers/Architects**
- **Urban Designers**
- **Public Park Users**
- **Administrators**

3.4 Location of the study

The research was limited to Nairobi County, specifically Oloolua Nature Trail, located in the suburbs of Karen, Nairobi.

3.5 Sampling Procedures

Sampling methods are classified into two parts: probability sampling method and non-probability sampling method. Three sampling methods used in the research. In probability sampling method, the researcher starts with a complete sampling frame of suitable individuals from which he/she selects their sample, stratified sampling was used. Under the non-probability sampling method, convenience sampling and purposive sampling were used. Convenience sampling entails selection of individuals based on availability and willingness to be part of the research while purposive sampling is based on the researcher's shrewdness. This means that the researcher selects individuals with specific characteristics that meet their needs.

3.6 Research method

The design research method used to carry out the research was survey study. Doyle (2004), defined survey as a series of approaches used in collecting data on behavior, thought and attitude by procuring responses from individuals to a set of questions. Survey as per Coope and Schindler (2006) refers to a process used in collecting information during an interview either with a human or not. The researcher discussed the various methods of data collection to be used in the research. Four methods of data collection used in the research included;

i.   Interview Survey; The researcher came up with structured questions as guidance to collecting data from individuals, groups and community at large. The objectives of the study was to get answers to the questions on; use of public parks, attractive features of the parks, factors to be considered when designing parks and the importance of user involvement in park design. Emphasis was on government owned parks as well as the privately owned; main focus being on their user experience. The researcher was to visit Oloolua Nature Trail, after the approval of the letter of request, to study the design and the user experience.

ii.   Observation; in this method, the researcher has to be part of the participant's settings and environment, take notes and recordings. This method did shed some light on various conditions such as why people like visiting parks, suitability of the method to the population and sample to be studied as well as reliability and objective. This method also acts as an add-on technique as researchers get to see the non-verbal responses as well as their behavior against their report.

iii.   Publication/ Secondary Data; this type of data collection is cheap and easy to obtain and sample. The advantage of this method is that it provides accurate data which later can be used for reference purposes. The integrity of research findings increases if it is used in several studies. Its disadvantage is that there are a thousand of studies in the archives that the researcher found it hard to get one with variable of interest in user experience and public parks.

iv.   Case Studies; in this approach, real life situations are used to come up with different explanations and understanding of an unclear subject. Yin (RK, 2009) explains further that case studies give more intel, information about situations or circumstances.

3.7 Research Instruments

These are tools used to collect, obtain, measure and analyze data pertinent to the subject of the research. (Discovery Phds, 2020). Edekin (2018) also explained research instruments as tools designed to support the collection of data for the purpose of analysis. (Edekin, 2018). There are various research instruments to be used in the research study. Some of which include:

i   Questionnaire:

It is believed that questionnaires are vastly used in construction research. It is good for collecting standardized data and making generalization. This questionnaire was designed for collection of qualitative data. (D, 1997). When designing a questionnaire, it should reflect the research's objectives. The researcher used a questionnaire, attached in the appendix, as a research instrument in collection of data from the park. The type of questionnaire used was a closed-ended questionnaire since it is easy, fast and reliable since it collects accurate data.

ii   Interview Guides

Bird (2016) defined an interview guide as a listed interesting topics that a researcher plans to cover in an interview with specific questions to be answered under each topic. This tool helps in maintaining consistency and direction during an interview. The researcher used a semi-structured interview guide. Kelly Angus (Angus, 2013) explains that the researcher does not follow a particular order when selecting the question rather the discussion should be able to flow naturally. The researcher can also go "off-script" and ask more questions so as to gain more information in the responses.

iii   Observation

This type of data collection technique entails the researcher being part of the individuals and studying them in their daily routine and lifestyle. The processes occur naturally and it involves individuals, groups or an entire community. The information provided is top notch and its all natural (S., 1985). Video and audio recordings were used for data collection. They were later analyzed using qualitative analytical tools. The researcher was going to carry out an observation in the park of how the users are using the space. In my case, I carried out some note taking, video recording for the analysis process.

3.8 Data Analysis

Since the research was a qualitative research, then qualitative data analysis method was used. Qualitative data is analyzed in two approaches; deductive and inductive approach. In this research, deductive approach was used. In this approach, the researcher analyzes data on a structure that he or she has set. Questions are used as a guide for the analysis. (Admin, Qualitative Data, 2020). There are four categories of analysis to be used in the research. These include:

i   Content Analysis: As the name suggests, the method is used to analyze documentations such as texts, media and physical items collected from interviewees. (Bhatia, 2018).

ii   Narrative analysis: it focusses on the stories shared by the people. Analysis was done on responses from interviews. (Bhatia, 2018).

iii   Grounded analysis: information is gathered from the data itself as stories and concepts emerge from the discussions. This has no definite starting point.

iv   Social Network Analysis: it studies how different individuals co-related in a way that the researcher understands what motivates their behaviors. Visual approach is used to generate a network diagram. (Admin, Analyzing Qualitative Dta, 2011-2021).

Table 3.1 Data Analysis Strategy

Objective	Type of Data	Analysis
To investigate the importance of user involvement in public-park design.	Ordinal	Descriptive Analysis
To identify the characteristics of a good public park design from a user's perspective.	Ordinal	Descriptive Analysis
To identify the characteristics of a good public park design from a designer's perspective.	Ordinal	Descriptive Analysis
To determine the satisfactory factor between the commercial interest and the public interest.	Ordinal	Descriptive Analysis

3.9 Ethical Consideration

This is an important part of the research. Bryman and Bell (Bryman A, 2007) stated ethical consideration is represented in the following ten points:

1. Research participants were not subjected to harm in any ways whatsoever.

2. Respect for the dignity of research participants was prioritized.

3. Full consent was obtained from the participants prior to the study.

4. The protection of the privacy of research participants was ensured.

5. Adequate level of confidentiality of the research data was ensured.

6. Public and organizations who participated were kept anonymous.

7. Elaborations on the aims and objectives were set aside.

8. There was a statement made on the association, sources of funding and possible conflict of interest.

9. Honesty and transparency were key values in communication during the research.

10. Lack of biasness in primary data findings constitution as well as any deceitful information.

Consideration of the six ethical areas is required in research and it is explained below:

1. Importance of deliberate participation of the responders in the research. The participants are assistants to the researcher and it is not their duty to be part of their research since they have the liberty to choose not to participate, understanding that there will be no adverse outcome if they refuse to assist. (Dudovskiy, 2018).

2. Respondents should participate after they agree to do so. An information sheet has necessary guidelines that explains to the responders about the research and what the researcher is asking them to be involved in, be it on the positive or negative side. (Sanders M, 2012). An information sheet is used to ensure that the participants are fully aware of what they are being asked to do and are aware of any potential negative consequences of such participation, attached as Appendix 4 is the ethical consideration form that is to be shared to all participants. For better response rate, it should have an official university letter head and it also shows that the research is an official university activity.

3. coming up with questionnaire, interview guides or focus group questions should not have abusive language, biased or unacceptable language.

4. There is importance in privacy and anonymity of respondents. The researcher does not need to know who the participant are, this can be achieved through random phone surveys or distribution of a survey by an organization on behalf of the researcher. In confidentiality, the researcher knows who the respondents are but their identity is kept secret in the resulting report.

5. Harvard/ APA/ Vancouver referencing system is used to acknowledge the works of the other authors in the dissertation as per the dissertation handbook.

6. objective should be met and maintained during the discussion and analysis of the research.

3.10 Logical Framework

Objective 1: To investigate the importance of user involvements in public park design				
Data Needs	Data Source	Data Collection Tool	Analysis Method	Expected Output
Determine the contributions of the users towards the designing of public parks.	Kenya Forest Service Public Park User Community Forest Association	Closed-Ended Questionnaire Audio and Video Recording Review of Literature	Narrative Analysis Content Analysis	To determine how users contribute to the successful designing of public parks.
Objective 2: To identify the characteristics of a good public park design from a user's perspective				
Data Needs	Data Source	Data Collection Tool	Analysis Method	Expected Output
Perceptions of the different users visiting the public parks	Public Park User	Closed-Ended Questionnaire	Content Analysis Grounded Analysis	Public Park design that incorporates the user's inputs
Objective 3: To identify the characteristics of a good public park design from a designer's perspective				
Data Needs	Data Source	Data Collection Tool	Analysis Method	Expected Output
Existing Data in the archives of the administrations and the various parties involved in the design process.	Kenya Forest Service Community Forest Association Forester's In-charge	Review of Literature Audio and Video Recording.	Narrative Analysis Content Analysis	• User Involvement in the design process. • Features that attract users to the parks.
Objective 4: To determine the satisfactory factor between the commercial interest and public interest				
Data Needs	Data Source	Data Collection Tool	Analysis Method	Expected Output
Determine the factors to consider when resolving the commercial interest and public interest	Park administration Kenya Forest Service	Review of Literature Audio and Video Recording	Content Analysis Social Network Analysis	To achieve a consensus between the commercial interest and the public interest on parks

4. DATA ANALYSIS, INTERPRATATION AND DISCUSSION

4.1 Introduction

This chapter sought to analyze the data collected. Demographics of the respondents were analyzed and responses based on the research objectives were also analyzed. Questionnaire responses and interview responses were analyzed. From a total of 55 respondents, 50 questionnaires were returned. The response rate was 90.9% which was considered sufficient for the study.

4.2 Demographics

The study analyzed the demographics of the respondents. Age of the respondents, education level of the respondents and the gender of the respondents were analyzed.

Age of the Respondents

The study findings indicated that 12(24%) of the respondents were below 30 years, 25(50%) were 31 – 40 years while 13(26%) were 41 – 50 years.

Table 4.1: Age of the respondents

Age	Frequency	Percent
Below 30 years	12	24
31 - 40 Years	25	50
41 - 50 Years	13	26
Total	50	100

Education level of the Respondents

The study findings indicated that 1(2%) of the respondents had Phd level, 8(16%) had masters level, 20(40%) had degree level while 21(42%) had diploma level.

Table 4.2 Education level of the Respondents

Education	Frequency	Percent
Phd	1	2
Masters	8	16
Degree	20	40
Diploma	21	42
Total	50	100

Gender of the Respondents

The study findings indicated that 2(40%) of the respondents were male while 3(60%) were female.

Table 4.3 Gender of the Respondents

Gender	Frequency	Percent
Male	28	56
Female	22	44
Total	50	100

4.3 Analysis based on Objectives

The study sought to analyze the study objectives responses

4.3.1 User Involvement Considerations

The study findings indicated that 88% (mean 4.4, Std Dev = 0.89443) of the respondents were of the opinion that community members were technically gifted to participate in the park design, 80% (mean 4, Std Dev = 1,22474) were of the opinion that time/scheduling was a big challenge for community members participating in the park design, 76% (mean 3.8, Std Dev = 1.09545) were of the opinion that there was even representation among community members during the park design , 76% (mean 3.8, Std Dev = 0.83666) were of the opinion that the members of the

community were represented by chosen and agreed respondents during park design while 72% (mean 3.6, Std Dev = 0.89443) were of the opinion that community members were consulted on the development of the park.

Table 4.4: Descriptive Statistics results on User Involvement Considerations

Descriptive statistics	N	Mean	Std. Deviation	Percentage mean
Community members were consulted on the development of the park	50	3.6	0.894	72
Community members were technically gifted to participate in the park design	50	4.4	0.894	88
The members of the community were represented by chosen and agreed respondents during park design	50	3.8	0.837	76
Time/scheduling was a big challenge for community members participating in the park design	50	4	1.224	80
There was even representation among community members during the park design	50	3.8	1.095	76
Valid n (listwise)	50			0

Study findings indicated that the respondents had the necessary technical capacity to participate in the design of the park. This results were interpreted to mean that the community members had professionals among them whom they felt could represent them in the design of the parks and that they also knew what they wanted to propose in the parks. They felt that their contribution through their representatives was necessary for them to be able to have parks designed to serve their need. This findings are supported by a study by Eccleston (2020) found out that the highest number of public participants is from educated and sophisticated individuals compared to the individuals with personal stake in the outcome. It is therefore clear that representativeness is an obstacle to public participation in the design process.

4.3.2 Park Ergonomics Considerations

The study findings indicated that 80% (mean 4, Std Dev = 0.707) of the respondents were of the opinion that the park is considered very safe for use by all, 80% (mean 4, Std Dev = 1) were of the opinion that natural resources including trees and vegetation are sufficient at the park, 80% (mean 4, Std Dev = 1) were of the opinion that the park is located in the most convenient location in relation to other structures, 68% (mean 3.4, Std Dev = 0.894) while 52% (mean 2.6, Std Dev = 0.548) were of the opinion that physical resources in the park are sufficient including sitting and lighting appliances

Table 4.5: Descriptive Statistics results on Park Ergonomics Considerations

Descriptive Statistics	N	Mean	Std. Deviation	Percentage mean
The park is located in the most convenient location in relation to other structures	5	4.0	1.000	80
The park is accessible to all members of the public	5	3.4	0.894	68
Physical resources in the park are sufficient including sitting and lighting appliances	5	2.6	0.548	52
Natural resources including trees and vegetation are sufficient at the park	5	4.0	1.000	80
The park is considered very safe for use by all	5	4.0	0.707	80
Valid N (listwise)	5			0

The park is considered very safe for use by all, that natural resources including trees and vegetation are sufficient at the park and that the located in the most convenient location in relation to other structures. This results were interpreted to mean that the park ergonomics had been carefully considered during the design of the park due to the many characteristics of the park that the respondents were able to pick out as ergonomics that make the park a suitable, practical and

attractive place to visit for relaxation. This features are key for the park to be attractive to the public.

Mellisa Anne Currie, (2016) supported this findings by noting that projects created from design are aesthetically pleasing, functional and sustainable but with community-driven design, it comes out as a human-centered design model. She identified the design principle that small urban park can share. The principle include accessibility, specificity, authenticity, functionality and adaptability. People living in urban settlement are dissociated from nature, spend a lot of time indoors where there is no space for physical activities in their daily life.

4.3.3 Social Cultural Considerations

The study findings indicated that 92% (mean 4.6, Std Dev 0.894) of the respondents were of the opinion that the park is mainly for environmental protection, 84% (mean 4.2, Std Dev = 0.837) were of the opinion that the park serves as a health and recreational facility, 84% (mean 4.2, Std Dev = 0.837) were of the opinion that the park has sufficient space for all, 64% (mean 3.2, Std Dev = 0.837) were of the opinion that the park spaces are mainly used for socialization while 52% (mean 2.6, Std Dev = 0.894) were of the opinion that the park grounds are mainly for cultural purposes.

Table 4.6: Descriptive statistics results on Social Cultural Considerations

Descriptive statistics	N	Mean	Std.	Percentage
The park has sufficient space for all	50	4.2	0.837	84
The park spaces are mainly used for socialization	50	3.2	0.837	64
The park grounds are mainly for cultural purposes	50	2.6	0.894	52
The park serves as a health and recreational facility	50	4.2	0.837	84

The park is mainly for environmental protection	50	4.6	0.894	92
Valid n (listwise)		5		0

The study findings indicated that the park is mainly for environmental protection. This results were interpreted to mean that the park plays an important social cultural role where the natural environment is protected. The trees, birds, natural artifacts and basic small wildlife are let to grow in together. The environment in the park is natural and only small space is created for members of the park recreational purposes.

This study findings are supported by findings are supported by Larson, Jennings & Cloutier, (2016) who noted the benefits of parks and relaxation infrastructure that include conversation and environmental sustainability, retain air and water quality, space preservation for current and future generations. Through directives, park users can be involved in conservation of the parks and create awareness about environmental needs. Parks and open space conserves scenic vistas, maintains healthy ecosystems, and provides carbon-reducing sustainable landscapes. Schwartz, (2016) also notes that passive recreation opportunities include relaxation, social gatherings, reading, observing wildlife, walking, and photography or enjoying the surrounding. Amenities utilized in the passive recreation activities include trees, open turf areas, natural areas, picnic tables or benches.

4.4 Dependent Variable / User Experience

The study findings indicated that 80% (Mean 4, Std Dev = 0.707) of the respondents were of the opinion that the park serves multiple purposes to visitors, 80% (Mean 4, Std Dev = 0.707) were of the opinion that the park still has a lot of areas to improve in, 84% (mean 4.2, Std Dev = 0.836) were of the opinion that I recommend the park to all, 76% (Mean 4, Std Dev = 0.707) were of the

opinion that the park is rated among the best in the region while 56% (Mean 2.8, Std Dev = 1.483) were of the opinion that I visit the park regularly.

Table 4.7 Descriptive statistics on User Experience

Descriptive statistics	N	Mean	Std.	Percentage
I visit the park regularly	5	2.8	1.483	56
I recommend the park to all	5	4.2	0.836	84
The park serves multiple purposes to visitors	5	4.0	0.707	80
The park is rated among the best in the region	5	3.8	1.095	76
The park still has a lot of areas to improve in	5	4.0	0.707	80
Valid n (listwise)	5			0

The study findings that the park serves multiple purpose and the users would recommend it to others is interpreted to mean that the park has met the needs of the users and the users are more than happy with the functionality of the park. The park has brought about a level of satisfaction to the users and would wish to continue using the park and the facilities of the park.

This is supported by the findings of Fuch and Weiermair (2003) noted that User Experience and perception are also shaped by external forces. Basically, before an actual visit to a destination, visitors perceive their expectations will be met. If the performance is slightly less than expected, the visitor will adjust performance upwards to equal satisfaction. If actual performance does not meet expectations then the weaknesses in performance will be exaggerated.

4.5 Relationship between Variables

The study sought to assess the relationship that existed between the variables under study. The study findings were as presented in table 4.8

Table 4.8: Correlational Results on Relationship between Variables

		User Involvement	Park Ergonomics	Social Cultural Considerations	User Experience
User Involvement	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	87			
Park Ergonomics	Pearson Correlation	0.653	1		
	Sig. (2-tailed)	0.001			
	N	87	87		
Social Cultural Considerations	Pearson Correlation	0.414	0.541	1	
	Sig. (2-tailed)	0.000	0.002		
	N	87	87	87	
User Experience	Pearson Correlation	0.685	0.645	0.732	1
	Sig. (2-tailed)	0.003	0.004	0.003	
	N	87	87	87	87

The study findings indicated that there was a significant relationship between user experience and all the design determinants including user involvement ($\beta = 0.685$, $p = 0.003$), park ergonomics ($\beta = 0.645$, $p = 0.004$), and social cultural considerations ($\beta = 0.732$, $p = 0.003$). This meant that all the design determinants had an effect on user experiences in a moderate to strong perception

5. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

The study findings indicated that majority of the respondents were of the opinion that community members were technically gifted to participate in the park design. few of the respondents were of the opinion that the park is considered very safe for use by all and most of the respondents were of the opinion that the park is mainly for environmental protection.

The study findings indicated that less of the respondents were of the opinion that the park serves multiple purposes to visitors, most were of the opinion that the park still has a lot of areas to improve in, quite a number were of the opinion that I recommend the park to all, some were of the opinion that the park is rated among the best in the region while very few participants were of the opinion that I visit the park regularly. This was due to the transportation cost.

The study results indicated that park ergonomics contributed alot to user experience while user involvement in design contributed less to user experience while social cultural considerations contributed averagely to user experience. The results indicated that all the design factors were significant and that they were all likely to influence user experience.

The study findings indicated that there was a significant relationship between user experience and all the design determinants including user involvement, park ergonomics and social cultural considerations. This meant that all the design determinants had an effect on user experiences in a moderate to strong perception

5.2 Conclusion

The study concluded that the user involvement is important because users poses necessary technical capacity to participate in the design of the park. The community members have professionals among them whom can represent them in the design of the parks and that know what local users need for proposed and existing parks. User involvement contribution through representatives is necessary for them to be able to have parks designed to serve their needs.

The study also concluded that good park design from a users perspective on the other constitute a number of characteristics. Most important are parks that integrate safety and ergonomics in them. Good park are those that are considered safe for use by all, those that natural resources including trees and vegetation are sufficient at the park and that the located in the most convenient location in relation to other structures. Park ergonomics are also carefully considered during the design of the park due to the many characteristics of the park that make the park a suitable, practical and attractive place to visit for relaxation.

The study also concludes that good park design from a designers perspective is a park that integrates environmental protection. The park plays an important social cultural role where the natural environment is protected. The trees, birds, natural artifacts and basic small wildlife are let to grow in together. The environment in the park is natural and only small space is created for members of the park recreational purposes.

The study concluded that the design factors including user involvement, park ergonomics and social cultural considerations were significant and that they influence user experience. Park ergonomics was the most important followed closely by user involvement then social cultural considerations.

5.3 Recommendations

The study made the following research recommendations;

Modernization of the parks from floodlight installation to provision of other facilities like restaurants and library assist in making the park lively as well as encourage the revenue collection. There is need for control development in large existing parks and new park layouts so as to be able to include the desired features. Other Redesigning features include, Relocation and widening of entrances , they should be inclusive to allow free movement of the physically challenged and Introducing Pedestrian crossing and bumps adjacent to the new entrances for safe access

For Social Cultural purposes, there is need for Establishment of Statues, historical tables and a notice board. This will be important for discovery and historical preservation of the park while the notice board would inform the park users of the upcoming events and jobs adverts. For enhanced social purposes, there is need for installation of WI-FI hot spot in the park to help users accesses internet in the park using their laptops, cell phone or tablets. This would help student study in the park and also make the park more attractive to all income group of town residence. Installation of CCTV that would help in improving security, supervision and data collection about number of visitors.

Strengthening institutions and coordination in management of Public Parks. There is need for required professionals in the designing of the Parks and also in management to afford all the

required facilities and the best location in the park, as well as ensuring proper departmental coordination and synergy in administering of Public Parks. There is need for establishing a "Park management Committee" that should constitute different professionals and selected stakeholders who should champion overall management of the garden.

Stakeholding and partnership is a vital element in achieving successive planning, implementation and management of any project. The study recommends that Sub-County should look for ways of engaging stakeholders and partners who should help in administration of the park. This can be achieved through public awareness and direct and formal persuading potential partners and stakeholder and pursue them by explaining the importance of such a move to the community.

Enabling sustainability in the design and management of Public Parks. The study recommends that sustainable approach be employed in designing and utilization of public parks. This can be realized by ensuring that the designs and utilization take in to consideration the physical/environmental, social and economic interests of the park without diminishing the future needs.

Designers have the responsibility to consider a number of factors in order to develop a well-designed public park that also satisfies user's needs. To be able to do this, there is need for conducting further customer surveys such as this study related to specific geographical locations where the parks are to be established in-order to fully understand the needs of the users in the location. This is important as all regions are not same in terms of user needs. This will go a long way to ensure that well-designed public park that also satisfies user's needs.

5.4 Suggestions for Further Studies

Household survey by use of questionnaires should be considered for further studies. Household heads are the sample population used to gather information about the household, composition,

type of housing, ownership of households among others. The interview will also gather information about their recreation activity as a household. An objective of the study can be to investigate the impact of recreation supplies upon demands. If the survey is carried out in two contracted areas (in terms of available facilities) it can show the significance of supply in creating or stimulating demands.

Further research should also be done to determine the level of demand and design requirements of Public Parks at the Neighbourhood level and community level.

There are still a lot of dimensions that remain open for further research. James et al, (2009) has highlighted some of these and for Nairobi they include amongst several dimensions of themes:

a) Quantifying ecosystem system services provided by open and recreational areas in Nairobi;

b) Quantifying in the case of Nairobi, social interaction improvement created by recreational spaces;

c) Modelling how to plan, design and manage recreational space(e.g. interconnectivity with different elements in the city);

d) Modelling how green recreational spaces will behave under socio demographic and environmental change;

e) Quantifying the total biodiversity within recreational, urban gardens and open areas in the city;

6. APPENDICES

6.1: Questionnaire

I am a Master's student undertaking a Masters of Art in Design School of the Arts and Design, as a partial requirement of the course, I am required to conduct research on:

RELATIONSHIP BETWEEN AND USER EXPERIENCE IN PUBLIC PARKS.

I shall highly appreciate if you will kindly complete the Questionnaire for data collection. Your information alongside others will help me in my research and will be treated as confidential used strictly for academic purposes as such you are requested not to write your name on the questionnaire.

Thank you in advance,

Part I: Background/Demographic Information

1. Kindly indicate your age bracket

   Below 30[ ]   31-40[ ]   41-50[ ]   above 51 [ ]

2. Indicate your Level of Education.

   PhD   [ ]   Masters [ ] Degree [ ] Diploma [ ] Others Specify............

3. Gender

   Male [ ]   Female [ ]

Part 2: Specific Information

Kindly rate the extent to which you agree with the following statements;

User Involvement Considerations	SA	A	UD	D	SD
Community members were consulted on the development of the park					
Community members were technically gifted to participate in the park design					
The members of the community were represented by chosen and agreed respondents during park design					
Time/scheduling was a big challenge for community members participating in the park design					
There was even representation among community members during the park design					
Park Ergonomics Considerations					
The park is located in the most convenient location in relation to other structures					
The park is accessible to all members of the public					
Physical resources in the park are sufficient including sitting and lighting appliances					
Natural resources including trees and vegetation are sufficient at the park					
The park is considered very safe for use by all					
Social Cultural Considerations					
The park has sufficient space for all					
The park spaces are mainly used for socialization					
The park grounds are mainly for cultural purposes					
The park serves as a health and recreational facility					
The park is mainly for environmental protection					
USER EXPERIENCE					
I visit the park regularly					
I recommend the park to all					
The park serves multiple purposes to visitors					
The park is rated among the best in the region					
The park still has a lot of areas to improve in					

6.2: Interview Guide For Management

- What is the importance of user involvement in oloolua public park design?

  _____

  _____

- What are the characteristics of a good public park design from a user's perspective?

  _____

  _____

- What are the characteristics of a good public park design from a designer's perspective?

  _____

  _____

- What factors should designers consider in order to develop a well-designed public park that also satisfies user's needs?

  _____

  _____

Appendix 6.3: Research Permission

UNIVERSITY OF NAIROBI
COLLEGE OF ARCHITECTURE & ENGINEERING
School of The Arts And Design
P. O. Box 30197, GPO 00100 Nairobi, Kenya
Tel. 0720317860 Email:stad@uonbi.ac.ke

REF: UON/CAE/StAD/6/7   3rd March, 2021

Chief Conservator of Forest
P. O. Box 30513-00100,
Nairobi.

Dear Sir/Madam,

RE: B51/33818/2019   -   OMINDI SONIA OGEMBO

The above named is a Masters student in the School of the Arts and Design at the University of Nairobi. She is undertaking research as part of her project entitled **"Analysis of the public satisfaction on Public Parks".**

As part of the project, the students are expected to collect samples, take photographs and conduct interviews towards the attainment of the project objectives.

The purpose of this letter is therefore to request you to kindly accord her the opportunity to undertake this exercise and to assure you that this work will be used purely for scholarly purposes.

Yours faithfully,

DIRECTOR
SCHOOL OF THE ARTS & DESIGN
COLLEGE OF ARCHITECTURE & ENGINEERING
UNIVERSITY OF NAIROBI

Dr. Lilac Osanjo
Director
School of the Arts & Design

Appendix 6.4: Proposal Budget

					APPENDIX 4.4		
	BUDGET SUMMARY						
Proposal Title:	**ENHANCING USER EXPERIENCE IN PUBLIC PARKS**						
Duration of The Project: 6 Months							
Fees		3000					
Expenses		13000					
Data collection		0					
Travel		6000					
Overhead		3000					
Total budget		25000					

Principal and co-Investigators	Role	Number of days	Daily rate (Ksh)	Total cost (Ksh)	Justification: Researcher to perform data collection on the respective parks
	Researcher	3	1500	4500	
		Subtotal		4500	

Materials	Description of item	Quantity	Cost per Unit (Ksh)	Total cost (Ksh)	Justification: 30 questionnaires to be handed out to various recepients from the administration to the public park users.
	Closed-ended Questionnaire	30	40	1200	
	Interview Guides	5	20	100	
Other data collection costs	Description of item ; incentives, data purchase, software subscription	Quantity	Cost per Unit (Ksh)	Total cost (Ksh)	
		5	500	2500	
		Subtotal		3800	

Dissemination costs	Description of item food for the researcher and the 3 participants attending the interview	Quantity	Cost per Unit (Ksh)	Total cost (Ksh)	Justification (e.g. discussion withadministration on the research findings
		4	200	800	
Other direct project cost	Description of item: Activities present in the park	Quantity	Cost per Unit (Ksh)	Total cost (Ksh)	Justification
		2	500	1000	
		Subtotal		1800	

Park travel	Description of item: Park Entrance fee and other inhouse expenses	Number of days	Daily Rate (Ksh)	Total cost (Ksh)	Justification: Researcher to conduct field visits
		5	1200	6000	
			5000	5000	
Subsistence	Description of item: subsistence for 1 Researcher	Number of days	Daily rate (Ksh)	Total cost (Ksh)	Justification; trip to meet with field staff in Oloolua and Kenya Forest Service Lahore)
		2	500	1000	
Other travel costs	Description of item ; Travel to and from	Number of days	Daily Rate (Ksh)	Total cost (Ksh)	Justification: Trip to visit the administration of The oloolua Nature Trail
		5	500	2500	
		Subtotal		14500	

Indirect cost	Total direct project cost	Overhead (%	Overhead amount		
	24600	10%	2460		

Overhead

Overheads typically cover the institution's IT infrastructure, printing cost,time, electricity, etc.

The total overhead **cannot exceed 15% of all direct costs specific to the project.**

TOTAL BUDGET	25000				

KENYA
Forest Service

Kenya Forest Service Hqs
Karura, Off Kiambu Rd
P.O. Box 30513 - 00100
Nairobi, Kenya

RESEA/1/KFS/VOL. VI (49)
Ref: No...

9th March 2021
Date:................................

Dr. Lilac Osanjo
Director- School of the Arts and Design
University of Nairobi
P. O. Box 30197-00100, GPO
NAIROBI

Dear Dr. Osanjo,

REF: B51/33818/2019- OMINDI SONIA OGEMBO

Reference is made to your letter Ref: UON/CAE/StAD/6/7, dated 3rd March 2021 on the above named subject.

In order to process your request, please avail a summary on the research (email to: jmwangombe@kenyaforestservice.org) and pay **Kshs 5,000** (Kenya Shillings five thousand only). The fee should be deposited in the account detailed below and the deposit slip delivered to the office of the Head, Forest Health and Biodiversity Conservation at Kenya Forest Service Headquarters.

Bank: Kenya Commercial Bank
Account number: 1106770021
Account Name: KENYA FOREST SERVICE
Swift Code: KCBLKENX
Branch: Sarit Centre

Yours sincerely,

Ms. Charity Munyasya 'ndc' (K)
For. Chief Conservator of Forests

Trees for better lives
.... 2014663, (254)020-2020285, Fax: (254)020-2385374

Appendix 6.5: Time Frame for the Research

ACTIVITY	OCT 2020	NOV 2020	DEC 2020	JAN 2021	FEB 2021	MAR 2021	APR 2021	MAY 2021
Proposal Writing	███	███	███					
Reviewing Literature								
Proposal Presentation				███				
Proposal Submission				███	███	███		
Data Collection						███	███	
Mini Presentation							███	
Data Analysis						███	███	
Submission of Draft Report from supervisor								███
Final Presentation								
Report Submission								

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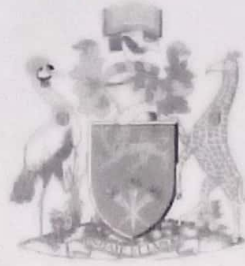
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FACULTY OF BUILT ENVIRONMENT & DESIGN
Department of Art And Design

P.O.Box 30197, GPO 00100 Nairobi, Kenya
Tel.0204913505, Email:stad@uonbi.ac.ke

REF:UON/FBED/DAD/6/7   **DATE:** September 07, 2021

To: Dean
    Faculty of Built Environment and Design

RE: CERTIFICATE OF CORRECTION

I hereby certify that Omindi Sonia Ogembo has made the required corrections to her thesis
which was examined on June 23, 2021 for the award of M.A. in Design. The corrections have
been appropriately and satisfactorily carried out. The Title is "ROLE OF DESIGN ON USER
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07.09.2021

Dr. Michael Munene
Supervisor

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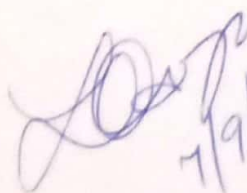
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UNIVERSITY OF NAIROBI

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This form must be completed and signed for all works submitted to the University for examination.

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Registration Number ___B51/33818/2019___

College _____

Faculty/School/Institute ___BUILT ENVIRONMENT AND DESIGN___

Department ___ART AND DESIGN___

Course Name ___MASTER OF ARTS: DESIGN___

Title of the work

___ROLE OF DESIGN ON USER EXPERIENCE IN PUBLIC PARKS___

DECLARATION

1. I understand what Plagiarism is and I am aware of the University's policy in this regard
2. I declare that this ___Thesis___ (Thesis, project, essay, assignment, paper, report, etc) is my original work and has not been submitted elsewhere for examination, award of a degree or publication. Where other people's work, or my own work has been used, this has properly been acknowledged and referenced in accordance with the University of Nairobi's requirements.
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.... ROLE OF DESIGN ON USER EXPERIENCE IN PUBIC PARKS ....
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.... OMINDI SONIA OGEMBO B51/33818/2019 ....
Author: ....

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B51/33818/2019 SONIA OGEMBO OMINDI   (Regular/Integrated)

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Academic Year : 2019/2020						
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2180442549	2019-11-01	FEES PAYMENTS	0.00	3,000.00	-103,000.00	KES=1
2180464478	2020-01-10	FEES PAYMENTS	0.00	42,000.00	-145,000.00	KES=1
2180464733	2020-01-11	FEES PAYMENTS	0.00	25,000.00	-170,000.00	KES=1
2180474712	2020-02-05	FEES PAYMENTS	0.00	2,000.00	-172,000.00	KES=1
2180539808	2021-01-07	FEES PAYMENTS	0.00	65,000.00	-237,000.00	KES=1
2180543960	2021-01-18	FEES PAYMENTS	0.00	17,500.00	-254,500.00	KES=1
B51/33818/2019-2019/2020-SEM1	2021-06-30	FEES PAYABLE FOR SEM1 DETAILS				
		BDS503	12,000.00	0.00	-242,500.00	KES=1
		BDS505	12,000.00	0.00	-230,500.00	KES=1
		BDS507	12,000.00	0.00	-218,500.00	KES=1
		BDS509	12,000.00	0.00	-206,500.00	KES=1
		BDS511	12,000.00	0.00	-194,500.00	KES=1
		CAUTION MONEY	5,000.00	0.00	-189,500.00	KES=1
		ACTIVITY FEES	2,000.00	0.00	-187,500.00	KES=1
		FIELD WORK FEES	2,000.00	0.00	-185,500.00	KES=1
		ICT SERVICES	5,000.00	0.00	-180,500.00	KES=1
		ID CARD FEES	1,000.00	0.00	-179,500.00	KES=1
		LIBRARY FEES	3,000.00	0.00	-176,500.00	KES=1
		MEDICAL FEES	5,000.00	0.00	-171,500.00	KES=1
		REGISTRATION FEES	2,000.00	0.00	-169,500.00	KES=1
		BDS501	12,000.00	0.00	-157,500.00	KES=1
		EXAMINATION FEES	6,000.00	0.00	-151,500.00	KES=1
		FEES PAYABLE FOR SEM1 (Grand Total)	103,000.00			
B51/33818/2019-2019/2020-SEM2	2021-06-30	FEES PAYABLE FOR SEM2 DETAILS				
		BDS520	12,000.00	0.00	-139,500.00	KES=1
		BDS522	12,000.00	0.00	-127,500.00	KES=1
		BDS524	12,000.00	0.00	-115,500.00	KES=1
		BDS542	12,000.00	0.00	-103,500.00	KES=1
		BDS518	12,000.00	0.00	-91,500.00	KES=1
		EXAMINATION FEES	5,000.00	0.00	-86,500.00	KES=1
		FEES PAYABLE FOR SEM2 (Grand Total)	65,000.00			
		Academic Year Totals :	**168,000.00**	**254,500.00**	**-86,500.00**	
Closing Balance : -86,500.00						
Academic Year : 2020/2021						
	Opening Balance		0.00	86,500.00	-86,500.00	
2200044228	2021-06-12	FEES PAYMENTS	0.00	76,500.00	-163,000.00	KES=1
B51/33818/2019-2020/2021-SEM1	2021-06-30	FEES PAYABLE FOR SEM3 DETAILS				
		BDS601	12,000.00	0.00	-151,000.00	KES=1
		EXAMINATION FEES	2,000.00	0.00	-149,000.00	KES=1
		BDS603	12,000.00	0.00	-137,000.00	KES=1
		FEES PAYABLE FOR SEM3 (Grand Total)	26,000.00			
B51/33818/2019-2020/2021-SEM2	2021-08-18	FEES PAYABLE FOR SEM4 DETAILS				
		BDS604	12,000.00	0.00	-125,000.00	KES=1
		BDS602	12,000.00	0.00	-113,000.00	KES=1

UNIVERSITY OF NAIROBI ASSISTANT ACCOUNTANT FINANCE DEPARTMENT
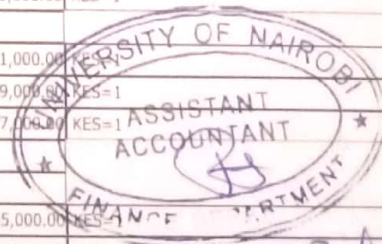
07/09/2021

EXAMINATION FEES	2,000.00	0.00	-111,000.00	KES=1	
ACTIVITY FEES	2,000.00	0.00	-109,000.00	KES=1	
FIELD WORK FEES	2,000.00	0.00	-107,000.00	KES=1	
ICT SERVICES	5,000.00	0.00	-102,000.00	KES=1	
ID CARD FEES	1,000.00	0.00	-101,000.00	KES=1	
LIBRARY FEES	3,000.00	0.00	-98,000.00	KES=1	
MEDICAL FEES	5,000.00	0.00	-93,000.00	KES=1	
REGISTRATION FEES	2,000.00	0.00	-91,000.00	KES=1	
FEES PAYABLE FOR SEM4 (Grand Total)	46,000.00				
Academic Year Totals :	72,000.00	163,000.00	-91,000.00	KES=1	
GRAND TOTALS :	240,000.00	331,000.00	-91,000.00	KES=1	

Closing Balance : -91,000.00

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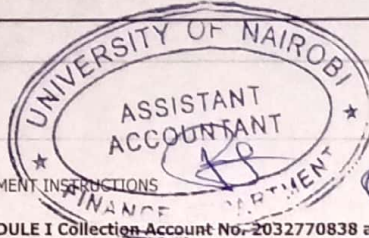
GOVERNMENT-SPONSORED (MODULE I) STUDENTS PAYMENT INSTRUCTIONS

1. Cash Deposits, EFT or RTGS transfer to UON MODULE I Collection Account No. 2032770838 at ABSA Bank, Plaza Branch

SELF-SPONSORED PROGRAMMES (MODULE II) PAYMENT INSTRUCTIONS / OPTIONS

1. Bank Account

=> Cash Deposits, EFT or RTGS transfer to UON MODULE II Collection Account No. **2032771362** at ABSA Bank, Plaza Branch

=> Cash Deposits, EFT or RTGS transfer to UON US$ Dollar Account No. **2032770625** at ABSA Bank, Plaza Branch

2. M-Pesa Pay Bill

=> The Business Number is **300059**

=> The Account Number is your **"Student Registration Number"** (or **"Admission Ref Number"** for new student)

NOTE: CASH, AGENCY BANKING AND ATM DEPOSITS ARE NOT ALLOWED

UNIVERSITY OF NAIROBI
Towards World Class Excellence

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Website: www.uonbi.ac.ke

POSTGRADUATE STUDENT ID CARD

OMINDI SONIA OGEMBO

Reg. No:B51/33818/2019

ID/PP NO:32813032

MASTER OF ARTS IN DESIGN

SCHOOL OF THE ARTS & DESIGN

Holder's Sign

Director Graduate School Sign

This ID/Card is valid up to 25-SEP-2020

ISO 9001:2008 Certified

Issued : 26-SEP-2019 **Expires : 25-SEP-2020**

B51/33818/2019

9 7 5 3 2 5 4 7