UNIVERSITY OF NAIROBI

CO-DESIGN IN THE DEVELOPMENT OF EFFECTIVE MUSEUMS IN KENYA

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DECLARATION

I **Malaki Samson** do declare that this thesis, presented in fulfilment for an award of a **Master of Arts Degree in Design (MA DESIGN)**, is my own authentic work. The work has not been presented in this or any other university for academic qualification. Furthermore, the research provides my own opinion and not necessarily those of The University of Nairobi.

Registration Number: B51/88819/2016

Signed ……………………………………………….

Date …………………………………………………

DECLARATION BY THE SUPERVISORS

This Thesis has been submitted for examination with my approval as the student's supervisor at the School of The Arts and Design, University of Nairobi.

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DEDICATION

This research is dedicated to my best friend and spouse, Naomi Mwangi Malaki, my precious and gorgeous daughters; Samarah, Lakeisha and Imani and more so to my late parents; Wilson Asiligwa Malaki and Ezrine Muhonja Malaki.

Last but not least to my Mum-in-law Sarah Muthoni.

ACKNOWLEDGEMENT

ABSTRACT

In today's changing world, attention for people's time is increasingly growing and museums across the world are crafting means of reaching a wide range of new audiences and repeat visitors to remain relevant in the market. Despite the shifting trends in visitor experiences, museum visitors have not been adequately considered in the design and development of effective regional museums in Kenya. The museum audience has become more of passive consumers instead of engaging actively as cultural participants. The purpose of this research was to investigate the role of co-design in the development of effective regional museums in Kenya. Specific objectives were to: analyse the extend by which museum users have been used in the development of regional museums in Kenya; examine the process of developing museums in Kenya; establish opportunities for incorporating museum users in the development process of museum exhibitions; and propose a Co-design framework that can be used to develop effective museums in Kenya. The findings are expected to inform policy makers, stakeholders, academicians and communities on the roles of co-design in developing effective and sustainable regional museums with special focus on museum users. The research used exploratory research and applied case research design strategy. Case studies including Kisumu, Nairobi and Fort Jesus museums were selected using purposive sampling. A sample size of 180 was considered drawing responses from education officers, school groups, teachers, researchers, exhibition designers, curators, museum education officers, community leaders among other stakeholders. Data was collected using questionnaires, interviews, focus group discussions, observations checklists and document analysis. Analysis was based on descriptive statistics. The research established that co-participation within the social context of museum communities is weak and disjointed; bottom-up approach; top-bottom approach-exhibitions are key opportunities for participatory educational aims. Moreover, the research revealed that co-design strategies can be enhanced through dialogue, awareness, empowering communities to take ownership of museum and develop programs and exhibitions. The research concluded that change toward inclusion in the regional museums is an on-going process that is embedded within the work of a broad range of organizational areas. Museum users should be extensively be incorporated in the development process of museum exhibitions. The research recommended, among other areas, the need for integrating co-design planning, capacity building, community ownership and advocacy to stimulate research through more funding.

ABBREVIATIONS

GoK: Government of Kenya

MEDP: Museum Exhibition Development Process

NMHA: National Museums and Heritage Act.

NMK: National Museums of Kenya

UNESCO: United Nations Educational, Scientific and Cultural Organisations

NNM: Nairobi National Museum

CML: Contextual Model of Learning

TICAH: Trust for Indigenous Culture and Health

PWD: People with Disabilities

ICT: Information and Communication Technology

EDC: Exhibition Development Committee

UK: United Kingdom

USA: United States of America

ICOM: International Council of Museums

E.A: East Africa

BM: British Museum

ISO: International Organization for Standardization

DEFINITION OF TERMS

Co-Design: It is an approach to design that involves all stakeholders in the entire process of design with the ultimate goal of ensuring that the user needs are realised

Curator: A keeper of a museum.

Display: To arrange something or a collection of things so that it can be seen by the public

Exhibit: An object or collection of objects on public display in an art gallery or museum or at a trade fair.

Exhibition Design: The process of developing an exhibition from the concept stage through to the physical manifestation of the same.

Exhibition Designer : Is a professional who creates fixtures and display stands for events such as large public exhibitions, conferences, trade shows and temporary displays for business, museums, libraries and galleries

Interactive: An exhibition feature that engages the visitor by allowing them to get a feedback from it.

Museum Users/ Stakeholders: They denote type of organization or system in which all the members or participants are seen as having an interest in its success.

Museum: A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, research and enjoyment.

Public Programmes: Museum activities that aim at imparting knowledge from exhibitions on display to all the museum visitors.

Regional Museums: These are museums located in different parts of the country showcasing mainly what is local to those areas and they both operate under the National Museums of Kenya.

School children: Refers to school children between the ages of 8-14 years.

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CHAPTER ONE
INTRODUCTION

This chapter provides the background to the research, the statement of the problem, the objectives of the research and the related research questions. The chapter also provides justification of the research, scope and limitations of the research.

1.1 Background to the Research

Museums across the world play a critical role in developing societies. They are institutions that shape community identities and knowledge that are preserved and passed on from one generation to another (Janes & Conaty, 2005). Studies looking specifically at museum contents, confirm continued and widespread exclusion and limited co-design strategies in the design and development of successful museums. Furthermore, additional studies indicate the design of the museum's facilities, exhibits, and programs including museum content and collections have undergone changes (Dodd, Hooper-Greenhill, Diez, 2010, 2006). Given that some museums are now beginning to create learning environments that are user-centred, the incompatibility between current museum practices and the needs of people is real and beg for research.

Co-design is an approach to design whose key principle is active participation. It is an approach that involves participation in expressing user experience in the exhibition design process (Sanders and Dandavate 1999). Active engagement of the museum users in the process of developing exhibitions ensures that museums become more dynamic, relevant and essential places to the general public. According to Von, museum users in this design approach are referred to as experts who are used in presenting their needs in the development process (Von, 1986). This is alluded to by Visser who notes that co-design allows selected users to be part of the design team in the Museum exhibition development process (Visser et al., 2005). Museum users are therefore central in the exhibition development process (Mahr, 2014).

Co-design creates an opportunity for museum users to co-design new exhibition products which when done independently by designers cannot yield successful outcomes. Integrating co-design into existing frameworks has proved that when co-creation is

employed in the development process of museum exhibitions, it has an impact on the user experience (Sanders and Stappers, 2008). New design approaches, behaviours and increasing use of information technology are rapidly changing the museum environment and museums with open spaces for recreation and social interaction are increasingly attracting visitors. According to Nina, museums have become central to cultural life where museum users can actively participate through creating, sharing, connecting and engaging with each other to enhance their experience (Nina, 2010).

In today's changing world, museums are facing a lot of competition from other social institutions and they must be able to grow and broaden their audience to remain relevant. *Figure 1* shows the passive and active activities within various museum environments and those which have negative and positive knowledge level. Depending on the visitor interests and needs, various museum visitors will always prefer one gallery to the other and one social institution to the other.
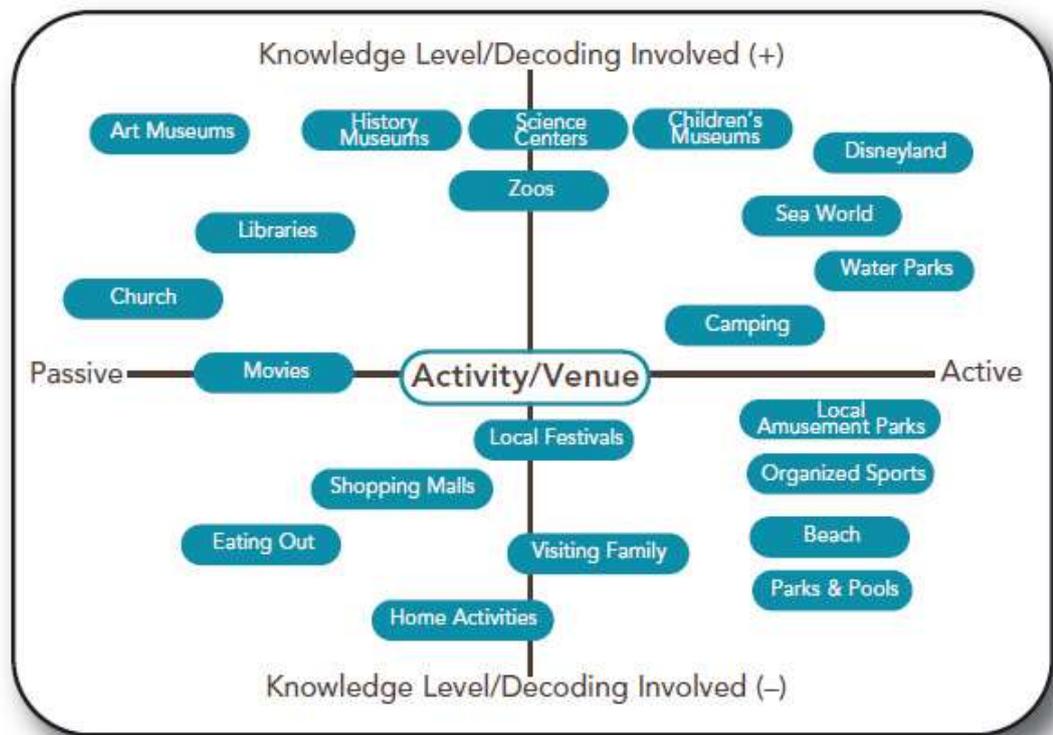
Figure 1.0: Passive and active activities within museums and other social institutions.
(***Source: Cecilia Garibay, 2011***)

Competition for people's time and attention is increasingly growing and the museums across the world are devising ways of reaching new audiences and retaining repeat

visitors. Various museums in Europe like the British Museum have identified interesting ways to attract new visitors and repeat visitors. This is by use of more interactives and hands-on exhibits, use of user-generated content, digital transformation, use of original collections, qualified museum guides, improved education programs, proper marketing among other ventures.

Museums as social institutions are people centred which bring people together for the purpose of education, inspiration and entertainment (Boon, 2011). Moreover, public engagement in museums is a critical catalyst to access vital expertise from the public for the purposes of co-development, co-curation and evaluation of museum exhibitions and museums at large (Davies, 2010). It is therefore necessary to ensure that community members and museum visitors are actively engaged in exhibition development process to ensure that the modern museums are more dynamic, relevant, interactive, and essential places to the general public. In today's changing world, museums must be innovative, creative, people centred, children friendly, interactive and more so community-minded for them to remain relevant in the modern society (Arinze, 1999).

1.2 Research Problem

The visitor base in regional museums in Kenya has been on the decline and the museum audience have become more of passive consumers instead of engaging actively as cultural participants. This is partly because the needs and aspirations of museum users have not been adequately considered in the development of effective regional museums in Kenya. National Museums of Kenya (NMK) has twenty nine regional museums spread across the country. The intension of establishing these museums was to take museums closer to the people but unfortunately they were developed 'for' the people and not 'with' the people. More so the general public within those regions are increasingly turning to other sources for entertainment, learning and dialogue. Review of literature has also shown that there is little information on the role of museum users in the process of developing museum exhibitions in Kenya. Having identified this gap in research, the research was carried out to explore ways by which current regional museums can reconnect and work with the users and stakeholders in order to develop effective regional museums in Kenya.

1.3 Research Objectives

i.   To examine the process of developing museums in Kenya.

ii. To analyse the extent to which museums users are involved in the development of museums in Kenya.

iii. To establish the effect of co-design on the development of museums in Kenya.

iv. To propose a co-design framework that can be used to develop effective museums in Kenya.

1.4 Research Questions

i.   What is the process of developing museums in Kenya?

ii. To what extent are museums users involved in the development of museums in Kenya?

iii. What is the effect of co-design on the development of museums in Kenya?

iv. What co-design framework can be used to develop effective museums in Kenya?

1.5 Purpose of the Research

The purpose of the research is to improve the design process by identifying opportunities for incorporating museum users in Museum Exhibition Development Process (MEDP). To fulfil this, the research first sought to establish if museum users, if any, were involved in the development of the existing regional museums in Kenya.

1.6 Hypothesis of the Research

Museum users have not been adequately considered in the development of effective regional museums in Kenya. Regional Museums, refer to those museums that have been established in various parts of the country but still operating under the umbrella museum; National Museum of Kenya.

1.7 Justification of the Research

In modern societies, it has become necessary for museums to re-define their functions and strategies to reflect the expectations, wishes and needs of the modern museum users and the changing world at large. There is need for museums to develop advanced forms of educational activities, innovative and creative participation in developing museum exhibitions to remain competitive and relevant to the users. The research examined the effects of Co-design strategies in the design and development of effective regional

museums in Kenya. The findings of the research are expected to inform policy makers, stakeholders, academicians and communities on the roles of co-design in developing effective and sustainable museums with special focus on museum users.

This research adds to the increasing body of evidence that co-design and museum exhibition environment are important for visitors' navigation and affective engagement. Central to gaining these insights was the development of a proposed co-design framework that could be adopted in developing effective regional museums in Kenya. From a practical perspective, the research findings provide exhibition designers and visitor researchers with a new approach for characterising exhibition environments in a way that can inform future exhibition development. From a theoretical perspective, the social constructivism theory increases understanding of how museum knowledge, architecture and exhibition design can be enhanced as an important aspect of museums' socio-cultural role.

1.8 Research Scope

The scope of this research contains three tenets; Geographical, Thematic and methodology. Geographically, the research focused on Nairobi National Museum and two regional museums in Kenya namely; Fort Jesus Museum in Mombasa and Kisumu Museum. The thematic scope of this research confined itself to Co-design strategies in developing museum exhibitions, the relevant key players in the process and relevant design aspects of developing museum exhibitions.

1.9 Limitations of the Research

The research was limited to museum visitors who chose to visit the museums at the time when the researcher carried out the research. Due to the limited time factor and the cost of carrying out the research, the research was limited to three case studies in Kenya. The findings of the research may not be applicable to all regional museums in Kenya.

1.12 Conclusion

The increasing attention paid to audience development in the museum sector highlights emerging issues and future challenges for museum management. The gaps emerging from co-design strategies and development of museums, coupled with audience development confirms the central role of museums in national development. The background identified

need to promote research and development of museum studies to support museums in maximizing value creation, with implications for the innovation of co-design policies. Overall, museums need to be reviewed, reassessed, and reformulated to enable them to be more sensitive to competing narratives and to local circumstances; to be more useful to diverse groups; to fit current times more closely.

There is recognition from the background literature that museums have not been providing adequately for the needs of culturally divided communities and that they must create profound changes in their philosophies and activities if they are to address these needs. Within the Social Constructivism Theory and according to Vygotsky, these changes also call for the museum professional to adopt a multidisciplinary approach, to be sensitive to competing voices in interpretations and to be constantly engaged in consultation with communities, (Vygotsky, 2012).

CHAPTER TWO

LITERATURE REVIEW

This chapter discusses the relevant literature related to the research objectives.

2.1 Overview

This chapter reviews the literature published on museums and museum exhibitions in relation to Co-design. The objective is to determine available studies on co-design strategies in designing and developing effective museum exhibitions and identify the gaps. This chapter also reviews draws comparison on empirical studies of other museums in the developed countries with emphasis on the museum users and stakeholders. The review is discussed based on the research objectives including: museum developing process; involvement of museums users in the development of museums; effect of co-design on the development of museums; and a co-design framework that can be used to develop effective museums in Kenya.

2.2 Overview on the role of Museums

"The museum sector has been playing an important role in as a reference centre particularly about the past or history. A definition of a museum by the International Council of Museums (ICOM) is, A non-profit making, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researchers, communicates and exhibits, for purposes of research, education and enjoyment, material evidence of people and their environment" (ICOM, 2010). Traditionally museums were designed to preserve culture, display artefacts and tell tales of the past but this has since changed with modern museums. This is exemplified by museums in the more developed countries where museum spaces have become so much more interactive and have been laced with information, communication and technology for better sustainability in the market since the 1980s. This has resulted in the increase in museum visits both internationally and locally (Isa, 2012).

"Museum sector is acknowledged to contribute significantly towards the tourism industry worldwide and is categorised under cultural tourism. Cultural tourism has been a major contributor to the tourism industry for more than twenty years, and plays an important role

to many developing nations' economies. Cultural tourism activities are a combination of cultural and tourism sectors" (WTO 2004). However, in Kenya, the regional museums are still non-profits based and are owned by the government. Entry charges are often quite minimal for visitors to encourage museum visitors by individuals from various backgrounds (Zan, 2000).

"A reputation of a museum depends largely on its vital collection and methods use to disseminate them through exhibition techniques, interpretation programs, marketing and publication on various mediums. Collection provides identity and enhanced popularity to the museums, but other modern elements such as architecture, conservation methods, and technology contribute significantly in attracting visitors" (Stephen, 2001). Most data within the museums are displayed on the basis of the number of visitors in attendance without much consideration on the visitor's interests or feedback (Goulding, 2000). This has led to criticism on museums for not integrating client needs and overall interests coherently while doing designs (Isa, 2012). The museums have also failed to significantly apply their findings to advance an overall understanding of the nature of the visit (Stephen, 2001).

2.3 Museum Exhibition Development Process

Regarding the interdisciplinary aspect of museum development process, studies show it varies between projects and also depends on the organization or the museum. However, the three principal and consistent collaborators crucial to a museum exhibition development process are the curatorial staff (Downey, 2002). There are various models of creation and exhibition used in various types of museum.

- *Idea Generation*

"In principle, there are endless sources for exhibition ideas. In practice, they are much more limited. If internal research and curatorial interests drive an exhibition plan, with respect to both exhibitions developed in-house and those brought in from other places, then curators tend to define the ideas. If museums are sensitive to the public interest, they will seek out ideas that serve that interest" (Simon, 2010). "Museums that emphasize the public's interests have much more open systems for soliciting ideas. For example, the exhibition committee of a university anthropology museum developed an exhibition based on an idea from a Native American in the community. One source of exhibition

ideas that is becoming increasingly important is the pool of travelling exhibitions from other museums and commercial organizations. In this case, most of the "ideas" come as fully developed exhibitions. Here again, the mechanisms for sorting and selecting may eliminate exhibitions that would be of interest to visitors" (Downey, 2002).

"Museums without an in-house research staff rely on overall exhibition plans to identify topical areas for exhibitions and solicit ideas within those frameworks. In those institutions, as well as in a few "traditional" institutions, the sources of exhibition ideas are as varied as their topics, ranging from a chance comment by a staff member's to systematic processes that review current and planned exhibitions at similar museums, their own collections, on-going research projects and suggestions from throughout the museum" (Faron, 2002).

- *Concept Development*

"The making of an exhibition begins once the museum has allowed an idea to move forward into concept development. Concept development is when the "serious" work on the parameters for content, ideas, design, size and cost begins. The product of this stage is a relatively well-defined proposal for additional review and possible presentation to potential funders. Some museums consciously generate several concept options for the same idea. Other approaches include "brainstorming" workshops among internal staff or with the assistance of outside facilitators to open up the possibilities. Universally, the control of the process remains essentially with the same group of people who initiated the idea for the exhibition and saw it through the initial approval process" (Faron, 2002).

"Assessments with visitors are particularly helpful during concept development. Some museums routinely try to assess potential audiences' levels of interest in and understanding of basic concepts. For example, the Minnesota Historical Society collects data about audience interest and baseline knowledge in a formal exhibition proposal, then tests assumptions further during the concept development phase. One natural history museum developed several alternative concepts for an exhibition, made preliminary drawings and sketches and tested them systematically with visitors. Most museums, however, do not include visitor assessments at this stage in their process" (Downey, 2002).

- *Design Development*

"While some museums use outside contractors for design, especially if the exhibition involves complex technology, most design takes place within the initiating museum. The core team, exhibition developer, or lead curator work with the designer to orchestrate the exhibition design. Some museums are moving to in-house design after years of contracting. For example, according to the vice president of exhibitions at a major museum, they moved away from contract designers to strengthen their in-house exhibition staff. The decision involved cost as well as how the museum represents itself in terms of control and accountability. The concept model of the exhibition generally drives decisions. Exhibition development in science centres and children's museums, and in exhibitions that involve visitor-object interaction, includes prototyping and other forms of testing" (Siskel, 2002).

- *Fabrication and Installation*

In most cases fabrication begins once most of the decisions have made. At this point the fabrication is either solicited through contracts or done within the institutions. The latter is most commonly adopted due to lack of resources within the museums despite contracting out being the preferred option (Morris, 2002)

- *Post-Opening Activities*

Many museums do not have a correction or adjustment period once the museums are installed. The post opening activities are meant to act as a testing period on the functionality of the museum in general. The only centres that are afforded this chance for adjustments are commonly the some science centres and children museums (Morris (2002). According to (Morris (2002), even with full-scale visitor evaluations, rarely is this period followed through by any changes. Though some funds are often allocated to cater for these adjustments these are most often viewed as contingency funds and are consequently used for other purposes.

"A number of museums include a "post-partum" stage in their process documents. In the case of one museum, tasks at this stage include documentation, an audit of expenses, evaluation and revisions, and recommendations for future projects. In practice, by the time an exhibition has opened, most of the actors have moved on to the next project, and

enthusiasm for revisiting decisions has evaporated. In small museums, there is a sharing of lessons learned from exhibition to exhibition. This is less the case in larger museums, where the individuals who occupy specific exhibition-making roles change repeatedly. Since unsuccessful experiments in design, presentation and process are rarely reported in the professional literature, there is little sharing of lessons across museum lines" (Faron, 2002).

2.3.1 The Field Museum in Chicago

"The Field made a distinction between a "committee" and a "team" that is still useful in looking at the variation in exhibition development structures and processes today. They felt that a committee guides an exhibition, while a team works to create it. According to the Field, a committee is any group of people that works to accomplish some end. On a team, however, the mix of people is crucial. There are particular areas of expertise that must be represented, and individual team members have a responsibility to represent a particular point of view. Majority rule and reliance on position of authority are not the interaction styles for a team; compromise and collaboration are. The "original" Field Museum team specified three kinds of expertise and related responsibilities" (Munley, 1986, p. 31).

- *Curator:* a curator is usually someone with extensive scholarly knowledge of the collection. It is from this knowledge that he or she is expected to be able to lay down a functional conceptual framework in regards to which the overall nature of the exhibit is built (Munley, 1986, p. 31).
- *Designer:* the designer on the other hand is responsible for the visual aesthetical requirements in ensuring smooth flow of the concept. He is tasked with ensuring that the exhibit is appealing, communicating and attractive to the consumers (Munley, 1986, p. 31).
- *Educator:* the educator links the audience with the exhibit. He is tasked with establishing relevance of the exhibition, the museum programs and activities and linking them to various institutions including schools. He later on performs an assessment on the success of the exhibit in comparison to its intended objectives (Munley, 1986, p. 31).

"The team approach stresses roles and process. The team needs to establish shared goals and objectives for the exhibition, share and balance authority and responsibility for a

project's vision and outcome, and reach agreement by consensus. The original shift from *linear* to *team* model represented an attempt to negotiate authority between subject matter or content experts (curators, for the most part) and subject matter interpreters (educators, primarily). At the extreme, in the linear model, the curator has complete authority; in the team approach, the emphasis on consensus somewhat dilutes curatorial authority. Aside from consensus as a process, the most innovative component of the Field's team approach to exhibition design was the formalization of the role of museum educators" (Kamien, 2002).

A variety of explanations have been offered for the current focus on structure and process, including resource shortages and the need for greater efficiency, responses to trends in other sectors of the economy, and the increase of occupational specialization within the museum labor force. Whatever the main reasons may be, it is clear that museums are critically examining, changing and documenting their exhibition-making processes (Morris, 2002)   .

2.4 Involvement of museums users in the development of museums

The modern museums across the world are laying focus on museum visitors as part of their strategic plan to ensure that their visitor base is enhanced (Murphy, 2016). The move is geared towards shifting focus from the museum collections or content of the exhibition to focusing on the experiences of visitors within museum galleries and environment in general. According to Murphy (2016), museum audiences are different and they are looking for different experiences when they visit museums. It is thus based on the different audience experience that the museums are spending more time and resources on research to ensure that they shape and enhance visitor experiences. National Museums of Kenya has started the process of investing in visitors to enhance their experience after realising that they are losing some of their target audience to other modern social institutions (Galgalo, 2017).

Traditionally, the vast majority of museum professionals have viewed the relationship of the museum to their visitor as a one-way transmission of information (Weil, 2002). The visitor, the unknowing subject, was thought to come to the museum to learn from the curator, the expert in their field. Little thought was given to the mode of transmission, which was usually through exhibits. Museum mission statements or charters were often filled with vague promises and commitment to "education". Through the early decades of

the American museum (1900s-1950), the majority of museums put their focus on their collections as their primary purpose and reason for existence – museums were in the "salvage and warehouse industry" as Stephen Weil would term it (2002).

"The last decade has seen a continuation of earlier work to incorporate visitors into exhibition planning with two major shifts in focus. First, some researchers made a concerted effort to understand the experience of visitors in museums without assuming that the goals of visitors and of museums were necessarily the same, namely "education" or "learning." Second, researchers have been defining "learning" more broadly. Most generally, researchers have drawn on both communication theory and constructivist theory to emphasize personal "meaning-making" in exhibitions" (Hein, 1999, 2001a and 2001b; Silverman, 1993 and 1999). "The "meaning-making" literature stresses the view of museum visitors as active agents in the museum, rather than passive recipients of messages. It recognizes that individuals bring to the museum visit their own backgrounds, experiences, orientations and attitudes and are not necessarily predisposed to "learning" what the museum has in mind for them" (Doering and Pekarik, 1996).

Downey notes that, "There are strong advocates for museums to support a full range of visitor evaluation activities during development. For example, he urges museums to develop audience input at three stages in the process: before design (concept assessment), during design (prototyping) and post-installation (evaluation). At present, while many policies and some procedures specify visitor input and assessment, the evidence suggests that implementation of a complete approach is limited. Museums are more likely to conduct post-opening evaluations than to include either concept assessment or prototyping as part of the exhibition development" (Downey, 2002).

"In part as a result of a shift in focus, museums are increasingly establishing systems to incorporate the "visitor voice" in the exhibition-making process. Many museums undertake one of three types of visitor-related studies: testing and prototyping to aid exhibition/program development; evaluation to assess existing products; and market research to promote the museum's offerings. The extent to which museums support dedicated, trained staff to study visitors and potential visitors varies by type and size of museum" (Downey, 2002).

2.4.1 Participatory approaches and museum development process

"Globally, museums are increasingly experimenting with novel exhibition models, including interactive and participatory elements, multimedia, and digital technologies to attract more visitors. Moreover, an observable trend in museum is a growing attention to sociable, recreational, and participative experience that redirect the traditional and singular focus on collections and exhibits, letting interpenetration of elements of popular/informal and elite/formal culture in a wide-range of cultural experiences, including interactive and participatory experiences at many different levels of audience engagement" (Kotler 2012). " Trying to outline a definition of the notion of 'participation' in the domain of museum studies, may be useful to consider that the term is much more common referred to practices of citizens' participation in other disciplinary domains, such as architecture, urban planning, and in projects of environmental sustainability. Sometimes the term is used as a deepening of the concept of responsible and informed citizenship; sometimes it refers to public consultation about decisions that have already been defined or even already taken; and other times, less frequently, participation implies a real involvement of a group of stakeholders in the decision-making process, that are actively enabled to contribute to social life, and produce concrete actions.

The LITMUS project (Local Indicators to Monitor Urban Sustainability) in South London, starting from Arnstein's ladder of participation, identified five levels of participations related to the evaluation of community projects" (InterAct 2001):

- "Information- in which the public has a passive role as a recipient of information;
- Consultation- in which the public has a passive role as a provider of opinions and ideas;
- Participation- in which the public has a more active role as provider of opinions and ideas, but without authority to make decisions;
- Partnership- in which the public has an active role as provider of ideas and opinions, and has some authority to make decisions;
- Delegation of authority- in which the public has a majority, or full authority to make decisions"

Harder defines a "participation framework" composed of six categories in a scale from non-participation (or "denigration") to full partnership (or "learning as one"), providing

for each level the description of the typology of relationships between the diverse of actors in relation to intercultural education. The diverse level of citizens' participation described above could actually be generalized for multi-disciplinary use, and may constitute a theoretical basis for outlining the approaches of co-design strategies in museum development in respect to audience participation in museums in Kenya.

In the framework of this research, the notion of participation within heritage is intended in a wider meaning that considering the social role of the museum, defines cultural institutions as open places for informal learning, conversations and interactions, aimed at a shared construction of meanings and social inclusion" (Harder et al. 2013).

Adopting Simon's definition, "a participatory cultural institution is "a place where visitors can create, share, and connect with each other around content: Create means that visitors contribute their own ideas, objects, and creative expression to the institution and to each other. Share means that people discuss, take home, remix, and redistribute both what they see and what they make during their visit. Connect means that visitors socialize with other people, staff and visitors; who share their particular interests. Around content means that visitors' conversations and creations focus on the evidence, objects, and ideas most important to the institution in question.

Public curation includes all the projects that have the goal of being inclusive and participatory without giving up to create a meaningful and engaging experience for visitors, considering both projects in which participation occurs during the experience of heritage and projects based on various methods of participatory design" Simon (2010).

According to Proctor (2012), "five actions that describe five diverse visitors' approaches for what concern participation within cultural institutions include: watching, "haring, commenting, producing, and curating *(Figure 2.0)*. These activities, recognized through visitors researches conducted at the Smithsonian Institutes may be arranged in a pyramidal order because everyone watches contents, while only few people want to participate in curating contents.
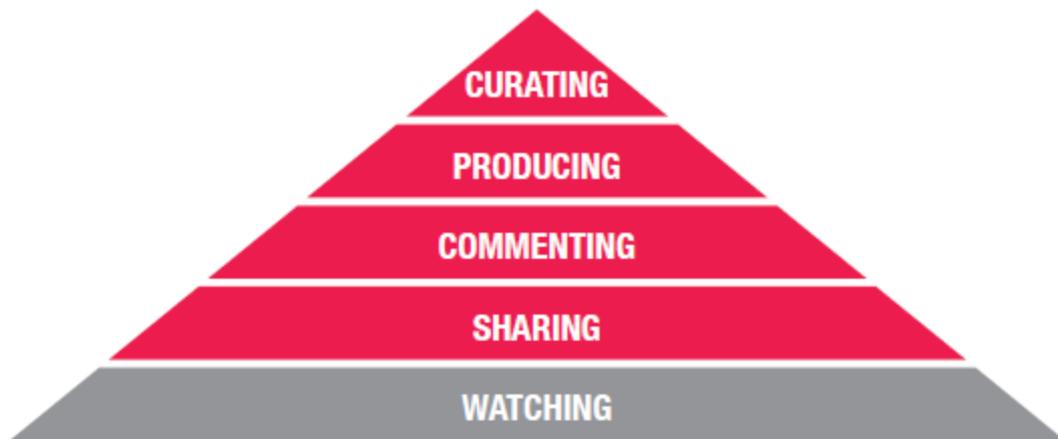
Figure 2.0: Five possible audiences' approaches for what concern participation within cultural institutions
(Source: Proctor, 2012: 103)

Another categorization, proposed by Simon, is based instead upon visitors' involvement in the co-design process". "Simon (2010) applies to cultural institutions the models defined by Bonney et al. (2009) in reference to public participation in scientific research, and distinguishes between three different models of public engagement in cultural heritage: contribution, collaboration, and co-creation. With reference to public participation in the artistic production, Brown et al. (2011) identify a scale of public involvement that goes from a zero level of participation, to an active involvement in projects of crowd-sourced art, to the co-creation of a work of art, until the situation in which the artist and the public work together in all phases of the creative process. These levels of engagement correspond to different levels of audience's creative control on contents, ranging from "curatorial", to "interpretive", to "inventive", that may be transferred and applied to Simon's "contributory", "collaborative", and "co-creative" models of participation.

Simon adds "hosted projects" to the Bonney et al.'s classification, identifying those projects in which "the institution turns over a portion of its facilities and/or resources to present programs developed and implemented by public groups or casual visitors" (Simon 2010). This may happen both in actual and virtual contexts, as institutions may both share physical spaces and digital tools with community groups that may use cultural object registries or scientific data online as the basis for their own research.

"At the core of co-design is a systematic reflection on how to involve users as full partners in design and how this involvement can unfold throughout the design process, by means of a diverse collection of principles and practices to encourage and support this direct involvement. These design tools and techniques include various kinds of design workshops in which participants collaboratively envision future practices and products; scenarios, personas and related tools that enable people to represent their own activities to others; various forms of mock-ups, prototypes and enactment of current and future activities used to coordinate the design process; and iterative prototyping so that participants can interrogate developing designs and ground their design conversations in the desired outcomes of the design process and the context in which these will be used" (Robertson and Simonsen, 2012)

2.4.2 Demographic changes and co-design in museums

Considering the effects of demographic changes on cultural attendance, the impact of an ageing population has also been debated, analysing challenges and opportunities that museums will have to face in the near future (Benitez, 2013). Moreover, the importance of understanding the reasons of non-attendance has been discussed (Miller, 2011), focusing on young people and examining teen-centric programmes (Szekely, 2013). As argued by Mason and McCarthy, the younger age groups, (teenagers and young adults) are the groups that "museums continually fail to cater to, despite their efforts to broaden and diversify their audiences" (2006: 22). In particular, so few young people go to art galleries because they are excluded by a kind of psychological barrier ("threshold fear"): they feel museums are not for them and do not feel as if they are part of museums. Immigrant populations, too, have been put on the agenda.

Shifting from theory to practice, despite a shared and increasing interest in value creation in museum studies, data on museum attendance reveal several gaps to fulfil. A survey on the participation of Europeans in cultural activities conducted by European Commission in 2013 showed that less than half of respondents had undertaken a range of cultural activities once or more in the last years. Similar studies show that despite changes having happened in society since the beginning of the 21st century, it seems that museum visitors are still upper education, upper occupation and upper income groups (Coffee, 2007).

"Distinct researches about the profiles of museums visitors interestingly highlight pretty much the same demographic patterns, with only slightly differences between researches carried out in the US and in Europe. Women represent a slight majority of museums' visitors, with the exception of visitors to war and space museums" (Bollo 2003; Ligozzi and Mastandrea 2008, Falk 2009). According to a demographic study by the America Alliance of Museum, "adults age 45–54 are traditionally the core audience of museum-goers" (Center for the Future of Museum 2008), and similar data provided by the National Endowment for the Arts2 suggest that 75 percent of visitors to museums in the US are aged under 55, with a small majority in the 45-54 category.

Analogously, "recent surveys on UK visitors suggest increasing problem in attracting adults under 35, as well as, at the Australian Museum in Sidney, 28 percent of visitors are within the 35-49 age range" (Black 2012, 21). "A ten years demographic study at the Smithsonian Institution indicates instead a slight diverse pattern suggesting that adults between the age of 25 and 44 are disproportionally represented among museum audiences, with a prevalence of older visitors to art and history museums in respect to science museums" (Falk 2009). Similar data also emerges from a research at the Minneapolis Institute of Art with 34 percent of visitors included in the age group up to 45 (Ligozzi & Mastandrea 2008), and a study on museum visitors in Canada reveals comparable attendance with a majority of adults visitors in the 35-44 range (Black 2012). "Up to 33 percent of museum visitors are under 16, making it likely that more than 60 percent of visitors include children in the group, either as families or school trips" (Black 2012,). "All these data highlight that senior citizens are significantly under-represented within the museum population, even if they could be an important target group for specific services and promotion of events, as they represent a segment of population characterized by increasingly high levels of education, which is expected to grow numerically" (Bollo 2003).

The analysis of the levels of educations and the occupational categories confirms that lower class groups and citizens characterized by a lack of specialized knowledge and a cultivated aesthetic taste are largely extraneous to the cultural offer. Demographic and socio-graphic studies in fact reveal that the majority of museum visitors are better educated, wealthier, and hold better-paying jobs than the average citizen, and value worthwhile leisure time experiences that focus on learning and discovery (Black 2012).

"It is however important to underline that not all educate people visit museums, and like-wise many less well-educated people visit museums regularly. So other factors must play a key role in the scarcity of museum-goers in the lower socio-economic groups, including for example the lack of exposure to museums as a child, high admission charges, and lack of access to private transport in rural locations" (Black 2012).

There has been a small portion of museum studies literature that addresses gendered aspects of the museum experience. Primarily, these have been written by exhibit designers, educators, and curators reflecting on their own experience or their own practice. Gendered studies of museums have been performed where the focus is the content of the exhibits in UK museums (Porter, 1995), the gendered aspects of UK collections (Porter, 1990), the gender make-up of educators in American museums (Stanton, 1996), administrative staff in American museums (Levin, 2010), and even how children's learning is affected by gender, again in an American museum (Crowley, 2001).

"Museum attendance is also affected by the patterns of work and the changing structure of family life. Although these social forces affect all kinds of citizens, demographic categories of ethnicity and social classes shape these structures in ways that may prevent minority groups from visiting museums. In recent year particular attention has been focused about whether museums in US are under-utilized by non-majority population (African American, Asian American, and Latino populations), highlighting that non-Hispanic white Americans are over-represented among adult art museum visitors" (Falk, 2009). According to the 2001 survey by Ipsos-MORI (Black 2012), "a similarly pattern emerges in UK where all groups other than whites (Asian or British Asian, black or British black, mixed ethnicity, and Chinese) are under-represented. These differences in museum attendance according to in ethnic patterns may have several explanations, including historically-grounded cultural barriers to participation that make museums feel exclusionary to many people, no strong tradition of museum-going habits, and the influence of social groups to encourage museum-going rather than other leisure activities" (Center for the Future of Museum, 2008). "However, these data must be framed and re-considered in the scenario of the rapid changes in terms of race and ethnic composition that affect especially the cities of the Western world. For example, in the US the group that has historically constituted the core audience for museums, non-Hispanic whites, will

be in the probable future a minority of the population" (Center for the Future of Museum 2008).

2.5 Effect of co-design on the development of museums

Co-Design is an approach to design that involves all stakeholders in the process of design with the ultimate goal of ensuring that the user needs, wishes and more so desires are realised (Mitchell et al., 2015). The design approach creates avenues that are appropriate and more responsive to their users' emotional, spiritual cultural and practical needs. According to Sanders and Stappers, (2008), co-design is the collective creativity process that is applied across the process of service design before, during and after the design process. Through participatory design approach visitors contribute their own ideas through self-expression and share what they see and what they make during their museum visit. The goal of applying participatory techniques is therefore to meet visitors' expectations through active engagement and participation.

Participatory museums collect and share personalized, diverse, and changing contents co-produced with visitors and not produced for the visitors. This approach often enable visitors to respond and add to the content of the exhibition on display or when developing new museum exhibitions. Australia is one of the countries where a bigger section of people believed that they were being planned at and for and not necessarily being planned with them (Nichols, 2009). Co-design as an approach to design has attempted to create a platform where people use museum environments as meeting grounds for dialogue on topical issues and around what has been exhibited within its galleries. The Smithsonian National Museum of Natural History in Washington D.C is an example of a national museum that is a meeting ground for various dialogues within its premises. Museums should therefore develop platforms where visitors can share ideas and more so connect with each other in real-time.

Museum experiences are diverse have to be structured in the context of what visitors want and need. Therefore museum cannot rely on traditional exhibition techniques to reach out to and impact a broader audience. In the modern museums, traditional forms of communication from the museum to the visitors and vice versa have since been replaced by new forms of interactions and engagements between the museum and the visitors, and among the visitors themselves. There is therefore need for museums to find new

connections, language, techniques and new attitudes so as to broaden relevance and scope by placing the users at the core of its functions. It is through use of co-design strategies in developing exhibitions that museum users and stakeholders can develop successful museums that are relevant and long lasting. This can be made possible through designing service system and methods as shown in *Figure 2.1.*
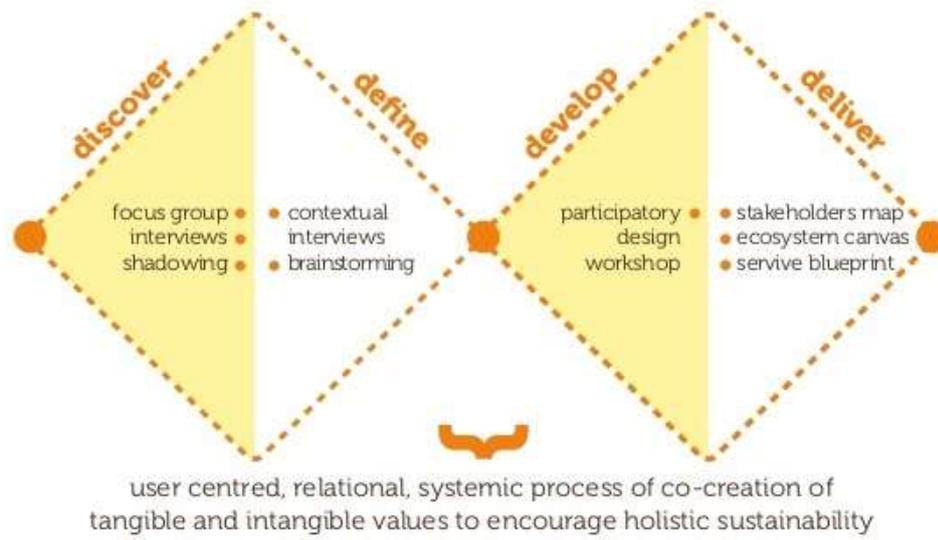
Figure 2.1: Service Design Methods Diagram

2.5.1 Co-design and Museum Exhibition Development Process

"From the point of view of historical development user-centred design is recognized to be the first methodological tool developed with the aim to guide the design process towards the development of cognitive artefacts usable because designed starting from the characteristics and needs of their end users. It is a method originally developed in the field of computer science in the 1970s and 1980s and more applied to industrial design. Since the 1990s have becoming apparent that the user-centred design approach could not address the complexity of the challenges the design discipline was facing. Consequently, novel approaches (e.g. interaction design) for the design of not only usable products, but for the design of the user experience have grown. This has resulted in the need for the design discipline to go beyond the involvement of users in the design process only as information sources, and instead involving them actively and iteratively. In order to study the user experience since late 1990s have been developed diverse methods. The ISO

standard *9241-210:2010*[2] provide requirements and recommendations for human-centred design principles and activities, describing six key principles that will ensure that designs are user-centred:

- The design is based upon an explicit understanding of users, tasks and environments;
- Users are involved throughout design and development.
- The design is driven and refined by user-centred evaluation.
- The process is iterative.
- The design addresses the whole user experience.
- The design team includes multidisciplinary skills and perspectives".

One of the foundational works about experience design is the model "say-do-make" by Sanders and Dandavate (1999), according to which, "in order to effectively understand the user experience it is needed to explore simultaneously what people do, what they say, and what they make. Traditional user-centred design research methods were focused primarily on observational research (i.e., looking at what people do); traditional market research methods, on the other hand, have been focused more on what people say and think (through for example focus groups, interviews, and questionnaires)".

Within this landscape, in the area of participatory approaches to design, the notion of co-design has growing. According to Sanders and Stapper (2008), "co-design indicates collective creativity as it is applied across the whole span of a design process. It is a specific instance of co-creation and refers to the creativity of designers and people not trained in design working together in the design development process". "Co-design is the last development of a trend started with user-centred design aimed at involving end users in the design process. It incorporates many principles and tools developed within user-centred design and experience design with the aim to use experimentally the design discipline. Co-design is completely transparent activity in which all participants are acknowledged about the design methodologies and its goals" (Rizzo, 2009).

"The move from user-centred design and participatory design to co-design is having an impact on the roles of the players in the design process because in co-designing any stakeholder a priori is more important than any other. In a classical user-centred design

process the researcher served as a translator between the users and the designer: the user is a passive object of study, and the researcher brings knowledge from theories and develops more knowledge through observation and interviews. The designer then receives this knowledge in the form of a report and adds an understanding of technology and the creative thinking needed to concepts. In a co-design process, the researcher/designer takes on the role of a facilitator, by providing tools for ideation and expression, leading, guiding, and providing scaffolds to encourage people at all levels of creativity" (Sanders & Stapper, 2008).

Several studies have shown that user involvement leads to innovative ideas (Kristensson et al., 2002). In particular, user involvement is reported to be useful for capturing the latent needs of consumers. The key strategies presented here as propositions indicate that user involvement can facilitate the identification of latent needs because users identify their own needs as and when they occur. Empirical studies suggest that a user involvement project during development of a product or service should consider a number of key strategies; that the users should;

- Be provided with analytical tools
- Identify needs in their own setting of use.
- Identify needs in their various roles
- Not have too much knowledge of technology.
- Be non-reliant on brainstorming only when generating ideas.
- Be motivated via the apparent benefit to be gained from their involvement.
- Be of heterogeneous group to ensure that a diversity of ideas is provided for future services.

Co-designing requires participation as opposed to individualistic approach in developing museum exhibitions. The collaborative process enables participants to creatively and critically think about museum exhibitions by exploring, investigating, experimenting, creating, questioning and more so debating. Active participation and co-creation approaches ensure that the needs and wishes of users are accommodated in the development process as shown in *(Figure 2.2)*. This can be made possible through both parties developing programs together and their involvement spanning from the concept development stage until the actualization of the project and evaluation of the same thereafter. Collaborations have resulted in greater impacts as observed by various

museums including Bath Museum. According to Bamberger and Tal (2007), Bath Museums realised a greater impact working in collaborations that resulted in 63% increase in the number of museums visited per trip. It provided deeper insights into the behaviour of the visitors and their habits too (Bamberger & Tal, 2007).
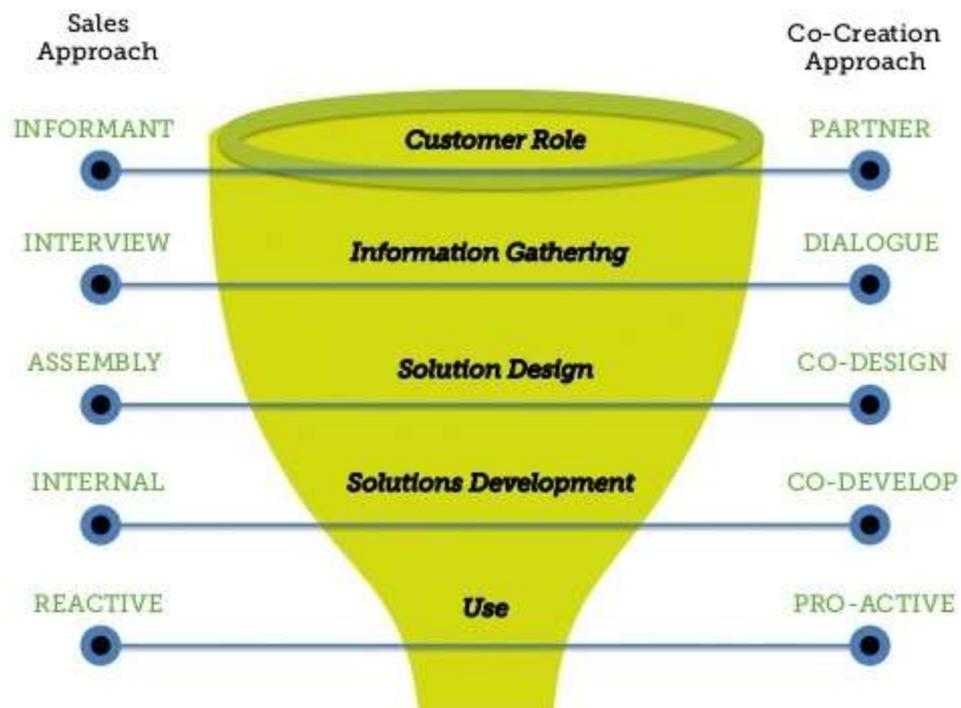
Figure 2.2: Co-Creation process for users (Source, Hogeschool Gent)

Co-design and co-creative projects are designed to ensure that more power is conferred to the participants who work and engage closely and actively to ensure that their shared goals are achieved at the end of the process. The eventual results are thus truly co-owned by the participants. By allowing museum users to participate in idea generation and creation for new exhibitions or existing ones, (Kristensson et al., 2003, 2004; Matthing et al., 2006), it becomes possible to move beyond the users' expressed needs and wishes to a comprehension of their latent needs.

2.5.3 Glasgow Open Museum in Scotland

Glasgow Open Museum in Scotland is a social institution which was envisioned to deliver what people wanted rather than what the museum thought they ought to want or what the museum thought they wanted. The museum is focused on taking its collections to people (Erickson, 2015). According to Erickson (2015), the museum was co-designed and created with the users in mind by developing exhibitions with and for the local

communities and local groups. The community members were provided with access to artefacts for use in visitors' individual exhibits and programmes. This move opened up the museum collections for use by the visitors, an approach that made it easy to co-design its programmes around the city.

Glasgow open museum has a model which puts the community groups at the centre of the exhibition development process (Erickson, 2015). The community groups who are the main users decide what the display is about, what will be displayed and how the story will be told. The museum on the other hand gives support and guidance throughout the design and development process. Through this model that Rachel Erickson uses at Glasgow Open Museum, various expertise and diverse perspectives are blended to enhance the outcomes of the exhibition process. This approach often generates new insights that shape and influenced the way people look at museums and its functions.

Approaches to Co-Designing exhibitions are varied. Museum users like community groups can actively participate in developing museum exhibitions by approaching the museum seeking their assistance for mutual benefits. The museum can as well invite participants from outside to help in the design and development of museum exhibitions. Both approaches are geared towards developing all-inclusive museum exhibitions that are mutually benefitting.

2.6 Co-design framework for effective development of museums

From the literature reviewed, the framework for measuring effective museums requires adopting or adapting methodologies that have been used by science museums or projects that measure outcomes associated with participation of users' experiences in museums (Stone, 2001). As Stone suggests, it may be difficult to prove that a causal relationship exists between museums and the social impact they generate. What is more achievable is to show how museums make or contribute to an impact but do not necessarily cause an impact to happen.

Museums are social institutions where visitors meet, interact and connect with each other for the purpose of education, entertainment and inspiration. In the early stage of museology, research often tracked visitors' behaviours to describe how visitors learn in

museums (Diamond, 1986; Hilke, 1989). This is however not experienced in every museum as different visitors have different expectations when visiting museums. Conversations are part of learning and are critical in museum galleries and environment at large and in most cases; they act like windows to look into how people learn in museums (Crowley et al., 2001). Museum experiences can be realised in three contexts namely; personal context, physical context and social-cultural context (Falk and Dierking, 2000) as shown in *Figure 2.3* below.

Figure 2.3: Contextual Model of Learning in Museum Environment. Source (Falk and Dierking, 2000)

According to Belcher, museum exhibitions should communicate by providing attractive and lasting visitor experience through observations and physical interactions resulting in pleasure, entertainment and acquisition knowledge (Belcher, 1991). Today, learning in modern museums is achieved through interactions between the museum visitors and installed exhibitions on display. At the National Museums of Kenya, learning is the key output for the exhibition. Unfortunately there is minimal learning as pupils and students pass through exhibitions in a hurry due to their busy schedule to visit as many social and educative centres in a tight scheduled trip (Mwanaima, 2017). What are critically missing are the inspirational and entertainment components which are also major output for museum exhibitions. The type of exhibition displayed appeals to different learners differently. Some audience especially the school going groups have various participation

levels, some which are passive and others active. Either way, any exhibition is supposed to promote learning.

2.6.1 Museum exhibitions and visitor experience

Within museums, the primary conduit for the visitor experience is the exhibition (Lord, 2001). This is a unique communication medium characterised by being a three-dimensional, interpreted space that creates a narrative through movement in time and in space (Wineman & Peponis, 2010). This three-dimensionality of exhibitions, along with the ability to interact with real objects, is particularly significant in a world that is becoming increasingly screen-based (two-dimensional) in the way that people interact with the world and gain new information and skills (Lord, 2007). While the display of collections has been a feature of the public museum since its inception, the role of exhibition design in orchestrating the content and narrative of an exhibition into a holistic experience has received greater recognition since the 1980s (MacLeod, Hanks, & Hale, 2012). There has been greater attention paid to creating experiences, not just displays. As a consequence, the role of the exhibition environment – including its scale, layout, organisation, lighting, and colour palette has become increasingly recognised as being more than just a passive backdrop or decoration for exhibition content. Indeed, the capacity for such factors to shape how exhibition content is perceived may have been underestimated (Roppola, 2012).

Exhibitions are the product of interdisciplinary teams, bringing together a range of specialists, each having distinct (and sometimes conflicting) theoretical traditions and conventions of practice (Lee, 2007). Analysis of the exhibition environment from a design perspective has generally taken the form of peer critique. However, this may not necessarily reflect the typical visitor experience: designers have been accused of conferring awards of excellence to exhibits that have performed poorly in evaluations (Shettel, 2008). On the other hand, it has been claimed that designers are often kept at arm's length from the exhibit evaluation process, with visitor research tending to neglect areas that could most usefully inform exhibition design (Macdonald, 2007).

In practice, design decisions frequently rest on intuition and assumptions made about visitor needs, rather than being grounded in research (Roberts, 2013). Similarly,

museology has tended to focus on sociocultural critiques of the museum as an institution, considering the visitor in abstract terms rather than researching visitor experiences directly (Kirchberg & Tröndle, 2012; Witcomb, 2013). Consequently, in much of the extant literature as well as in practice, visitor responses to the exhibition environment and its sensory cues have been inferred rather than tested empirically. From both an economic and academic perspective, therefore, further research into how visitors perceive and respond to different exhibition environments is warranted.

Although design, museology and visitor research represent distinct communities of practice that have sometimes struggled to speak to one another on mutually intelligible terms, the common feature that all share is a desire to connect with the visitor (Stenglin, 2009). Thus, development of theory that has its roots in empirical visitor research has the potential to bridge these diverse perspectives and encompass the exhibition experience more holistically (Roppola, 2012). With this goal in mind, the research also proposed co-design framework and strategies that can be used in developing effective regional museums in Kenya.

2.7 Theoretical Framework

The research was grounded on Social Constructivism Theory by Vygotsky (1978). It views each learner as a unique individual with unique needs and backgrounds. Emphasis is on the collaborative nature of learning and the importance of cultural and social context/ social interactions as well as integrating a knowledge community. For museums, the visitor is also a learner in doing something who needs hands-on involvement, in participatory exhibits and programs (Vygotsky, 1978).

Formalization of the theory of constructivism is generally attributed to Jean Paiget, who articulated mechanisms by which knowledge is internalized by learners. He suggested that through processes of accommodation and assimilation, individuals construct new knowledge from their experiences. The constructivist theory of education, which is employed to conceptualise learning in the "post-museum", recognises the spatial, embodied and contextual nature of meaning making. However, the relationship between learning and museum co-design strategies (user-centred approaches) still lacks attention (Cobb, & Yackel, 1996).

The essential core of constructivism is that learners actively construct their own knowledge and meaning from their experiences (Fosnot, 1996). Thus, constructivism acknowledges the learner's active role in the personal creation of knowledge, the importance of experience (both individual and social) in this knowledge creation process, and the realization that the knowledge created will vary in its degree of validity as an accurate representation of reality. According to Vygotsky (1978), constructivism posits that knowledge acquisition occurs amid four assumptions:

- Learning involves active cognitive processing.
- Learning is adaptive.
- Learning is subjective, not objective.
- Learning involves both social/cultural and individual processes

It is important to note that constructivism itself does not suggest one particular pedagogy. In fact, constructivism describes how learning should happen, regardless of whether learners are using their experiences to understand a lecture or attempting to design a model airplane. In both cases, the theory of constructivism suggests that learners construct knowledge. Constructivism as a description of human cognition is often associated with pedagogic approaches that promote active learning by doing (Prawat & Floden, 1994).

Vygotsky (1978) also highlighted the convergence of the social and practical elements in learning by saying that the most significant moment in the course of intellectual development occurs when speech and practical activity converge. According to Vygotsky (1978), social constructivism views each learner as a unique individual with unique needs and backgrounds. The learner is also seen as complex and multidimensional. Social constructivism not only acknowledges the uniqueness and complexity of the learner, but actually encourages, utilises and rewards it as an integral part of the learning process (Wertsch, 1997).

Social constructivism encourages the learner to arrive at his or her own version of the truth, influenced by his or her background, culture or embedded worldview. Historical developments and symbol systems, such as language, logic, and mathematical systems, are inherited by the learner as a member of a particular culture and these are learned

throughout the learner's life. This also stresses the importance of the nature of the learner's social interaction with knowledgeable members of the society. Without the social interaction with other more knowledgeable people, it is impossible to acquire social meaning of important symbol systems and learn how to utilize them. Furthermore, it is argued that the responsibility of learning should reside increasingly with the learner (Von Glasersfeld, 1989). Social constructivism thus emphasizes the importance of the learner being actively involved in the learning process, unlike previous educational viewpoints where the responsibility rested with the instructor to teach and where the learner played a passive, receptive role.

In relation to the current research, museum visitors develop their thinking abilities by interacting with others and the museum physical world. From the social constructivist viewpoint, it is thus important to take into account the background and culture of the visitor throughout the museum art/exhibition development process, as this background also helps to shape the knowledge and truth that the visitor creates, discovers and attains in the learning process.

Another crucial assumption regarding the nature of the learner, concerns the level and source of motivation for learning. According to Von Glasersfeld (1989), sustaining motivation to learn is strongly dependent on the learner's confidence in his or her potential for learning. According to the social constructivist approach, instructors have to adapt to the role of facilitators and not teachers (Bauersfeld, 1995). The emphasis thus turns away from the instructor and the content, and towards the learner (Gamoran, Secada, & Marrett, 1998). This dramatic change of role implies that a facilitator needs to display a totally different set of skills than a teacher (Brownstein 2001).

Ideally, the museum, as a learning centre, should foster an environment designed to support and challenge the visitor's thinking. The critical goal is to support the museum visitor in becoming an effective thinker. Since social constructivist scholars view learning as an active process where learners should learn to discover principles, concepts and facts for themselves, hence museum visitors, together as members of a society, are key to all activities within the museum.

Other constructivist scholars agree with this and emphasize that individuals make meanings through the interactions with each other and with the environment they live in.

Knowledge is thus a product of humans and is socially and culturally constructed (Adams, 2006). McMahon (1997) agrees that learning is a social process. He further states that learning is not a process that only takes place inside our minds, nor is it a passive development of our behaviours that is shaped by external forces and that meaningful learning occurs when individuals are engaged in social activities. Most social constructivist models, such as that proposed by Duffy and Jonassen (1992), also stress the need for collaboration among learners, in direct contradiction to traditional competitive approaches. Researchers, students and museum professionals need to collaborate with different skills and backgrounds in tasks and discussions in order to arrive at a shared understanding of the truth in what a museum should look like.

Regarding socio-cultural theoretical application, Falk and Dierking (2000) applied socio-cultural theory to museum learning research to highlight not only what happens during a museum visit, but also the *where* and *with whom*. This theoretical milestone centred on the development of the Contextual Model of Learning (CML) as a general framework for learning in museums (Falk and Storksdieck, 2005).

The CML identifies 11 factors that influence learning and sorts them into three main contexts: personal, physical and sociocultural. The personal context represents the history that an individual takes into the learning situation of a museum (i.e. individual's motivation and expectations, prior knowledge and experience, interests and beliefs, and choice and control). The physical context includes: advance organizers, orientation to the physical setting, architecture and physical space, design of the exhibit, and subsequent reinforcing events. On the other hand, the socio-cultural context (i.e. within-group social mediation and facilitated mediation by others) involves visitors as part of a social group (e.g. family, school) that form a community of learners.

Since the role of museum guide has become more geared towards interaction with visitors (Cheng, 2011); social constructivism the theory is thus relevant to this research in two folds. First, the principles of constructivism, increasingly influential in the organization of classrooms and curricula in schools, can be applied to learning in museums. The principles appeal to our modern views of learning and knowledge but conflict with traditional museum practices. We need to reflect on our practice in order to apply these ideas to our work.

Secondly, it points to museum educators to understand the idea that learners need to be active, that in order to participate in learning we need to engage the learner in doing something, in hands-on involvement, in participatory exhibits and programs. But the more important point, I believe, is the idea that the actions which we develop for our audience engage the mind as well as the hand. For example, there are exhibits which require visitors to feel and touch, yet not all visitors, are clear about the relationship between exhibitions and trends.

2.8 Conceptual Framework

The conceptual framework highlights the relationship between independent and dependent variables. The shift in the literature towards the importance of interaction in museum learning, notable by its presence in museums in the developed world contributed to the development of a framework of facilitating co-design strategies in the development of regional museums in Kenya. By emphasising the ways museums can serve the needs of their users, the scope of this research is extended beyond the formal and stylistic developments in architecture; to pro-active model on how visitors can be integrated in the implementation of activities. This framework reveals how co-design strategies can create physically and psychologically comfortable museum environment necessary for meaning making. Moreover, the museum user is understood as diverse and employing various modes of learning. Therefore, the input visitors have in generating a socially and culturally inclusive as well as physically and mentally accessible museum space is of major importance.

Museums should also reflect the local realities, because this proves to support learning as a part of identity construction. Furthermore, co-design strategies can create rich sensory experiences that affect visitors' emotional responses and thus support innovative ways to increase visitor base. According to Poria, Reichel and Brandt (2009), interactivity is increasingly seen as essential in learning experiences in a museum context. Since a museum is an educational place that offers rich historical information, with exciting things for individuals to explore and discover through touch and inquiry; the need for a conceptual change from museums as places of continuous learning is critical (Poria, Reichel, & Brandt, 2009). By responding to the needs and interests of visitors, the framework shows that museums can transform from being about something to being for somebody.

CO-DESIGN IN MUSEUMS

(Nairobi, Kisumu & Mombasa)

Independent Variables

Intervening Variables

Dependent Variables

Museum visitors' integration in design/exhibition process
- Inquiry/ local knowledge
- Indigenous knowledge
- Diversity /PWDs

Co-design strategies
- Use-Centred approach
- Motivation
- Media, NGOs, Civil society

Process of developing regional museums
- Research/ Bottom-up strategy
- Adaptability/ management
- Organizational culture
- Community ownership
- Capacity building

Propose co-design framework
- Multidisciplinary teams
- User interphase
- Continuous improvement

- State Policy/
- State Capability
- Museum policy

Effect

EFFECTIVE REGIONAL MUSEUMS IN KENYA

Improved:
- Visitor experience
- Interactive exhibitions
- Visitor numbers

Social Constructivism Theory **by Vygotsky (1978**
- Knowledge, collaboration
- Socio-cultural interactions

Figure 2.4: Conceptual Framework- Relationship between co-design and development of Effective regional museums in Kenya (Source: Author, 2017)

Ideally, the framework shows there are many knowledge gaps about current museums and their role in Kenya. For example, the importance of visitor's personal context (motivation and experience), social interaction and the museum context are highlighted as important factors in museum learning and meaning making. However, there is limited research and data available about learning processes and results from experiences in different museum types in Kenya, and how their functions and learning can be best guided. Moreover, there is a need to map the appropriate research approaches that would facilitate this goal.

Overall, the framework provides an overview of learning theories and methodologies for co-design strategies and learning in museums, which can be used by museum researchers and for other informal learning studies. Moreover, practical implications can offer a foundation for museum professionals in designing theoretically-grounded and effective exhibition/educational programs for different target group of visitors, and help museum educators, researchers and visitors to facilitate continuous improvement in various types of museums.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter presents the research design and methodology that facilitated gathering information for the purpose of the research. It includes research design, population, sampling methods and data collection methods and procedures alongside data analysis.

3.1 Research Design

The research relied on case study design strategy to sample three regional museums out of a total of 29 regional museums managed by NMK. The research took a multiple case research model form. Yin explains case study research as a form of qualitative descriptive research, which looks intensely at an individual or small participant pool, drawing conclusions only about that participant or group and only in that specific context, (Yin,1984). According to Yin, researchers do not focus on the discovery of a universal, generalizable truth, nor do they typically look for cause-effect relationships; instead, emphasis is placed on exploration and description, (Yin, 1984). The case study strategy is suitable for investigation of rich phenomenon which may be questioned using how and why questions and it focuses on contemporary rather than historic information, (Yin, 2003).

The research also used exploratory and participatory approach as research design tools to explore the variables and provide an opportunity to collect systematic information on participatory design strategies in the design and development of museums in Kenya. The exploratory research approach can be performed through literature review and more so by interviewing the user or visitor in regard to their experiences, (Ghauri & Gronhaug, 2005). The participatory approach was used as a research design tool to explore the variables and provide an opportunity to collect systematic information on participatory design strategies in the design and development of successful regional museums in Kenya. Descriptive research design tool allowed the researcher to gather all the information required, summarize, present and interpret the same for the purpose of clarification, (Orodho, 2005). The multiple case studies enabled the researcher to explore differences and similarities within and amongst the three cases since they are all regional museums with the same mandate but are located in different geographical locations.

3.2 Study area

The study was based on three key museums in Kenya namely, Nairobi National Museum (NNM) in Nairobi, Fort Jesus museums in Mombasa and Kisumu Museum.

3.2.1 Nairobi National Museum

National Museums of Kenya (NMK) was established in 1910 initially as the East Africa and Uganda Natural History Society. NMK was established by an Act of Parliament; Museums and Heritage Act 2006 to provide for the establishment control, management and development of national museums and the identification, protection, conservation and transmission of the cultural and natural heritage of Kenya, (National Museums and Heritage Act, 2006). According to the act, the functions of NMK is to collect, preserve, research, document and present Kenya's past and present cultural and natural heritage for the purposes of enhancing knowledge, appreciation, respect and sustainable utilization of these resources for posterity.

Currently, National Museums of Kenya manages 52 Museums, Sites and Monuments across the country of which 29 are regional museums. According to Dennis (2017), NMK has gazetted 29 regional museums and still is in the process of gazetting more. From the twenty nine regional museums distributed across the country, the researcher carried out case studies of three regional museums namely; Nairobi National Museum, Fort Jesus Museum and Kisumu Museum.

Nairobi National Museum (NNM) is the largest museum that is managed by the National Museums of Kenya. The museum was built in 1929 and houses rich and priceless collections of Kenya's History, Nature, Culture and Contemporary. The main aim of Nairobi National Museum is to interpret Kenya's rich heritage through various displays within its galleries. The exhibitions are installed within various galleries under four main themes namely; nature, culture, history and contemporary art. Apart from the exhibition within galleries, the museum has various attractions which include; botanical gardens, snake park, nature trails, curio shops, outdoor exhibits, amphitheatre, conference halls, hired grounds for functions, dining facilities among others.

Figure 3.1: Main entrance of Nairobi National Museum (Source: Author, 2017)

According to Galgallo (2017), NNM receives the largest and diverse category of visitors *(Table 1)* both locally and internationally due to its priceless collections and nature of exhibitions. As per the accounts records, the Nairobi National Museum recorded a total of over 250,000 visitors in 2017 financial year (NNM Accounts Office, 2017).

NATIONAL MUSEUMS OF KENYA VISITOR'S STATISTICS FOR 2017

Na	TIONAL MUSEUMS OF KENYA FC	Adult Citizen	Adult Res	Adult Non-Re	Child Citizens	Child Res	Child Non-Res	Student Citizens	Total Paying
	National Museum(Main Gate)	20,026	3,163	12,987	20,818	1,612	3,416	102,895	**164,917**
1	National Museum(Snake Park)	10,018	1,083	9,597	14,112	3,123	2,489	46,312	**86,734**
2	Fort Jesus	61,295	4,198	8,435	16,004	682	614	39,232	**130,460**
3	Kisumu Museum	15,993	29	626	5,914	9	137	105,426	**128,134**
4	Kitale Museum	14,002	9	184	6,409	~	34	42,144	**62,782**
5	Gedi	4,863	2,411	7,518	15,563	5	106	32,103	**62,569**
6	Meru Museum	1,941	2	34	1,247	~	~	13,668	**16,892**
7	Lamu	1,060	401	1,126	226	42	16	~	**2,871**
8	Jumba la Mtwana	1,708	216	1,716	284	26	51	3,305	**7,306**
9	Olorgessaile	349	51	175	102	15	5	1,288	**1,985**
10	Kariandusi	1,708	206	216	284	46	36	9,355	**11,851**
11	Hyrax Hill	1,101	150	372	2,156	21	23	16,841	**20,664**
12	Karen Blixen	2,033	2,385	32,956	366	318	2,211	2,132	**42,401**
13	Malindi Museum	2,199	716	2,815	3,055	5	89	13,196	**22,075**
14	Kilifi Mnarani	437	106	213	209	10	20	937	**1,932**
15	Kabarnet	535	2	10	404	1	~	1,120	**2,072**
16	Kapenguria	2,166	~	13	518	~	~	8,807	**11,504**
17	Pete Sites	~	~	~	~	~	~	~	**~**
18	Swahili House	57	25	78	7	2	6	~	**175**
19	Narok Museum	80	17	10	32	~	~	153	**292**
20	German Post	8	2	14	~	~	~	~	**24**
21	Lamu Port	101	31	113	12	10	8	260	**535**
22	Takwa Ruins	78	74	128	21	~	2	40	**343**
23	**Total**	**141,758**	**15,277**	**79,336**	**87,743**	**5,927**	**5,847**	**439,214**	**778,518**

Table 3.1: Visitor Statistics for National Museums of Kenya (Source: NNM Accounts Office, 2017)

3.2.2 Fort Jesus Museum

Fort Jesus is one of the regional museums located on the Mombasa Island and managed by NMK. It was built between 1593 and 1596 by the Portuguese to guard the Old Port of Mombasa. It is one of the most unique and well preserved historical sites and an example of the 16th century Portuguese military fortification. The fort was declared a national park in 1958, and in 2011, it was declared a World Heritage Site by United Nation Educational, Scientific and Cultural Organizations (UNESCO). The design of Fort Jesus is of imposing walls with five bastions that reflect the military architecture. Fort Jesus is a popular historical destination for foreign and local tourists. The fort hosts numerous research programs and it is Mombasa's most visited tourist attraction by virtue of its architectural stature. The museum attracts the highest number of tourists at the coast as per the statistics shown in *Table 3.1* above.

Figure 3.2: Fort Jesus Museum in Mombasa, Kenya (Source: Author, 2017)

3.2.3 Kisumu Museum

Kisumu Museum is one of the regional museums in Kenya that was opened in 1980 and located in Kisumu County. The museum has been used and is still being used as a learning facility by school going groups and a research facility by a wide range of scientists. It has various types of exhibitions both permanent and temporary on display. It features a wide collection of local flora and fauna within the county. The museum has the largest exhibition sponsored by UNESCO titled *Ber-gi-dala* or a Luo traditional homestead as shown in *Figure 10 below*. The exhibition is a full scale recreation of the Luo homestead. The home set-up consists of home, granaries and livestock kraals of the original Luo man and the typical homes of his three wives and his eldest son. Apart from the Luo homestead set-up, *Ber-gi-dala* exhibition also showcases the origin of the Luo people, their migration patterns to western Kenya and the processes followed when establishing a typical Luo homestead.

Figure 3.3: One of the exhibition Gallery at Kisumu Museum. **(Source: Author, 2017)**

There exist a major disconnect between Kisumu museum and the local community which has led to lack of interest and minimal visitation by the locals. There is a proposal to devolve the museum to Kisumu County Government and it is an opportunity for the museum management and other county stakeholder to revive the museum for it to remain relevant to the users. Kisumu Museum attracts both local and international visitors as shown in the table below.

CATEGORY	JULY 2017	AUGUST 2017	SEPTEMBER(1ST -15TH 2017)	TOTAL
RESIDENT ADULTS	3,769	575	424	4,768
RESIDENT CHILDREN	409	370	105	884
NON-RESIDENT ADULTS (O.E.A)	114	26	19	159
NON-RESIDENT CHILDREN (O.E.A)	25	39	-	64
NON-RESIDENT ADULTS (E.A)	7	4	-	11
NON-RESIDENT CHILDREN (E.A)	7	1	-	8
SCHOOL PARTIES (NURSERY/PRIMARY/SECONDARY)	40,476	798	2,528	43,802
UNIVERSITY/COLLEGES/ORGANISED ADULT GROUPS	1691	124	122	1,937
TOTAL	**46,498**	**1,937**	**3,198**	**51,633**

KEY: E.A- EAST AFRICA

Table 3.2: Visitor Statistics for Kisumu Museum (Source: Kisumu Museum Accounts Office, 2017)

3.3 Population and Sampling

Population is the entire group of people the researcher wishes to gather vital information from. A number of these individuals are taken from the population and is referred to as sample, (Gerrish and Lacey, 2006). The sample provides the information and the relevant data for the research. The sample is then used to make generalizations about the population from which it is drawn, (Touliatos and Compton, 2009). In order to gather pertinent information regarding the research, participation of various museum users and stakeholders is vital. The stakeholders included; education officers, school groups, teachers, researchers, exhibition designers, curators, museum education officers, community leaders among other stakeholders.

Of the 29 regional museums in Kenya, the researcher carried out case studies of only three museums namely Kisumu, Nairobi and Fort Jesus which were selected using purposive sampling. The three museums were selected based on the characteristics of the museums in terms of visitation and more so the objective of the research. The choice of the sample is supported by Creswell (2005) which indicates that the inquirer purposefully selects samples that can provide the vital information required for the research. This research being case study oriented, Creswell (2002) recommends that 3-5 entities to be

explored and thus based on this recommendation, and the researcher carried out cases studies of 3 museums.

Several museum professionals were sampled through stratified sampling technique to obtain a representative sample of the various disciplines. The population was sub-divided into four main sub-populations (stratum) namely; exhibition designers, museum education officers, researchers and curators with the aim of co-designing and co-producing relevant knowledge that can inform sustainable solutions in the museum field (Lang et al., 2012). A sample size of 180 participants was considered, drawing response from educators, researchers, exhibition designers and developers, curators, guides, teachers, community leaders, and the museum visitors.

The primary unit of analysis was the school groups (comprising teachers and students/pupils) and the general public which comprised of the local and the non-local.

	Participants Category	TOTAL
SCHOOL GROUPS		
1	School Groups (Pupils & Students)	10
TEACHERS		
1	Primary and Secondary	10
MUSEUM PROFESSIONALS (Key Informants)		
1	Researchers	7
2	Exhibition Designers	10
3	Education Officers	5
4	Curators	5
5	Administrators	3
	OTHERS	
1	General Public (Foreigners)	20
2	General Public (Locals)	90
3	Museum Guides	5
4	Community Leaders	15
	TOTAL	**180**

Table 3.3: Summary of Sample selection (Source: Malaki, 2018).

3.4 Data Collection Methods and Procedures

The researcher used both qualitative and quantitative data collection methods to collect data. Some of the methods used in the research include; baseline research/survey, interviews (formal and informal), focus group discussions, observations and non–participant observations, document review and case studies.

Primarily, the researcher used interview schedules, photographs and carried out focus group discussions with the aim of gathering information from the participants. In addition, the research relied on secondary data from journals, books and websites. All these tools were instrumental in providing structure and scholarly information about the research. Multiple data collection methods were used to generate detailed, holistic descriptions of each case, including the following:

- Questionnaires
- Interviews (Structured and unstructured)
- Focus group discussions
- Observations
- Document analysis- Collection of documents and artefacts

3.4.1 Baseline Research/Survey

Without a baseline, it is not possible to know the impact of a project. The researcher carried out a baseline survey in the areas of research which include Nairobi National Museum, Fort Jesus Museum and Kisumu Museum. The purpose of baseline research was to find out what information is already available within the mentioned museums in line with the research topic.

3.4.2 Key Informant Interviews

An interview is an oral administration of a questionnaire to the targeted persons the researcher intends to use in the research (Mugenda, 2003). The researcher carried out in-depth interviews with various key informants whose objective was to obtain precise information. During the interviews, interview guides and schedules were used. Key informants who were interviewed include; curators, education officers, researchers, exhibition designers and some community leaders within the area of research. Both structured and semi-structured interviews were carried out to collect data.

3.4.3 Focus Group Discussions

Focus group discussions mainly consisted of museum professionals who were asked about their opinions, beliefs and attitudes in relation to the problem statement. A wide range of questions were asked in an interactive group setting where participants were free to talk to other group members. Members of the discussion groups were carefully selected for effective, objective and authoritative responses.

One focus group discussion drawing participation from different museum professionals was held which ensured a good respondent mix of perspectives and ideas. The researcher used a sample group of 7 members per group as recommended by (Krueger, 2000) that participants in a single group should be between 6-9 members. The focus group participants included; exhibition designers, museum educators, researchers and museum curators. Through purposive sampling, the researcher selected members of the FGD. The participants were selected based on their familiarity with museum exhibition development process. The questions asked in the group discussions were mainly drawn from the objective of the research.

3.4.4 Observation

Through observation in a physical and natural setting, a number of actions and reactions are noted. The researcher used this method in collecting data by taking descriptive notes of the physically happening especially in the museum galleries. The purpose of using this method was to give an insight into the bigger picture and offer a flavour of what is happening. The researcher employed various techniques of data collection through observation. These included; photography and written descriptions through taking notes and documentation. Non-participant observation was also used especially in the galleries to observe without interfering with the on-going activities in the museum galleries.

3.4.5 Document Review

The researcher used this method to collect data by reviewing existing documents within the museum on exhibition development process. The documents were obtained from the museum library and museum accounts offices. Some of the documents that were used include; exhibition manuals, museum visitor survey, accounts records and evaluation reports.

3.4.6 Case Studies

The researcher carried out case studies of three regional museums in Kenya namely;

- Kisumu Museum (Kisumu County)
- Fort Jesus Museum (Mombasa County)
- Nairobi National Museum (Nairobi County)

A visit was made to all the three museums at different times during the course of the research work. A lot of data was collected including carrying out interviews both structured and non-structured, through administration of questionnaires, observations and review of existing documents in relation to the area of research.
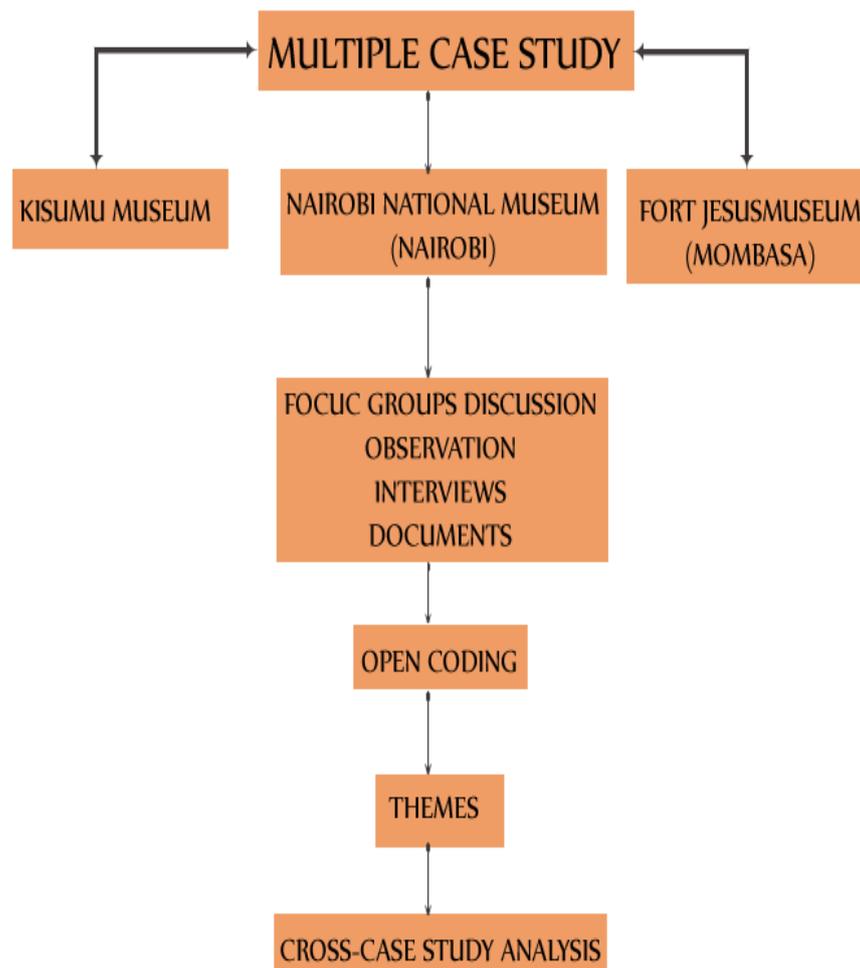
Figure 3.4: Summary of Case Study approach to data collection (Source, Malaki, 2018)

Data Collection Methods	Research Tools	Data Needs	Data Sources
1). Baseline research	Note pad	-Information on the 3 regional museums under research.	-Primary data -Exhibition manuals
2). Interviews	Interview guide	-Challenges faced by museum professionals during development of museums. -Importance of co-design in the development of museums.	-Museum professionals
3). Focus Group discussion.	Focus group discussion guide	-Importance of applying Co-design strategies in the development of museums -Challenges faced by museum professionals during development of museums. -Role of various museum stakeholders/users in the development of museums.	-Museum professionals -Community leaders
4). Observations	Note pad, digital camera	-Visitor behaviour within various galleries within the museum	-Primary data -Recorded information
5). Documents Review	Note pad	-Exhibition development process in the museums under research	-Primary data -Exhibition manuals
6). Instrument Administration	Questionnaires	-Role of museums. -How to improve visitor experience in museum galleries.	-Museum visitors -Museum community

Table 3.4: Summary of Research Methodology (Source, Malaki, 2018)

3.5 Data Analysis

Data analysis was first undertaken by checking the gathered raw data for completeness, usefulness and accuracy. Both qualitative and quantitative analysis was used in the research. Analysis was done based on descriptive statistics. Quantitative data from the questionnaires was verified, standardized and entered into SPSS for analysis. The package was used because it accommodates a large number of variables at the same time and reduces detailed laborious calculations by hand. Generalization was drawn in line with the research objectives. Under descriptive statistics, frequencies and percentages were used to describe the data sets and results were presented in tables and charts. Qualitative data from the interviews, observations and FGDs were examined so as to identify errors for accuracy purposes.

CHAPTER FOUR

FINDINGS AND DATA ANALYSIS

4.0 Introduction

This chapter presents the analysis of results, discussion and interpretation of the findings of the research. This research derived data from two main sources, namely; primary and secondary data. The primary data comprised field research, using questionnaires, face-to-face interviews, focus group discussions and observations. The research was also strengthened by comprehensive review of related literature, document analysis from articles and reports from the three case studies namely Nairobi, Mombasa and Kisumu museums. The data from the field were analysed and presented in cross tabulation, frequency distributions and percentage.

4.1 Response rate

The total number of targeted respondents was 180. In the field research, the questionnaires were given to the entire 180 respondents. Out of this number, 156 responded. With respect to research, the response achieved was 86.6% of the target. Although the field research did not meet the 100% response, the data collected was still within the descriptive research and therefore attained the necessary validity.
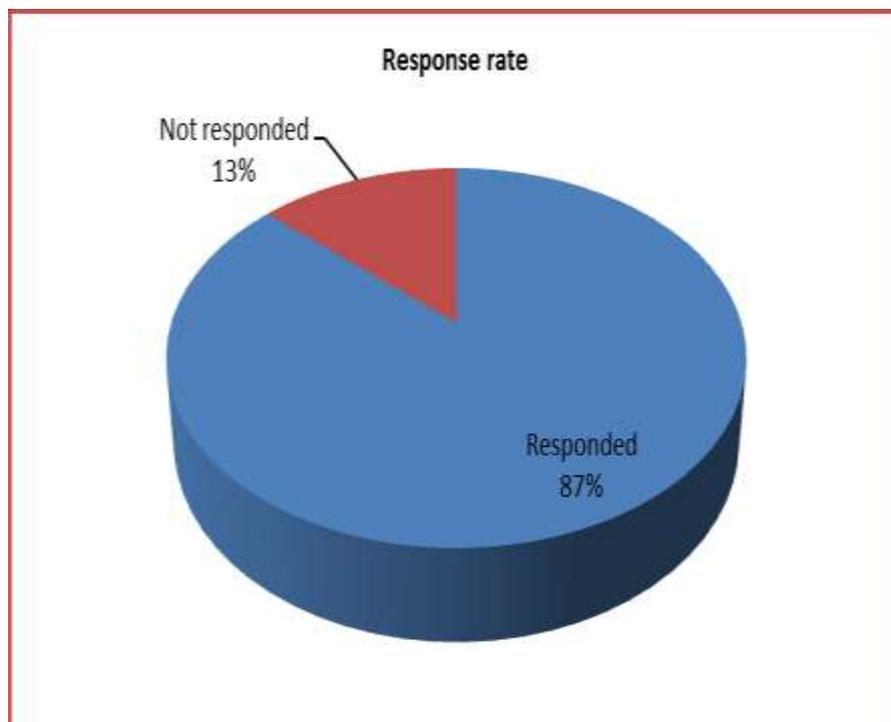

Figure 4.1: Response rate (Source: Malaki, 2018)

4.2 Profile of the respondents

The general information of interest in the research focused on; gender, age bracket, and citizenship. The findings are discussed in the sub-sections below:

4.2.1 Gender of respondents

The research sought to establish the gender of respondents. Respondents were thus asked to indicate their gender. Data were collected, analysed and the findings summarized and results presented in *Figure 4.2.*
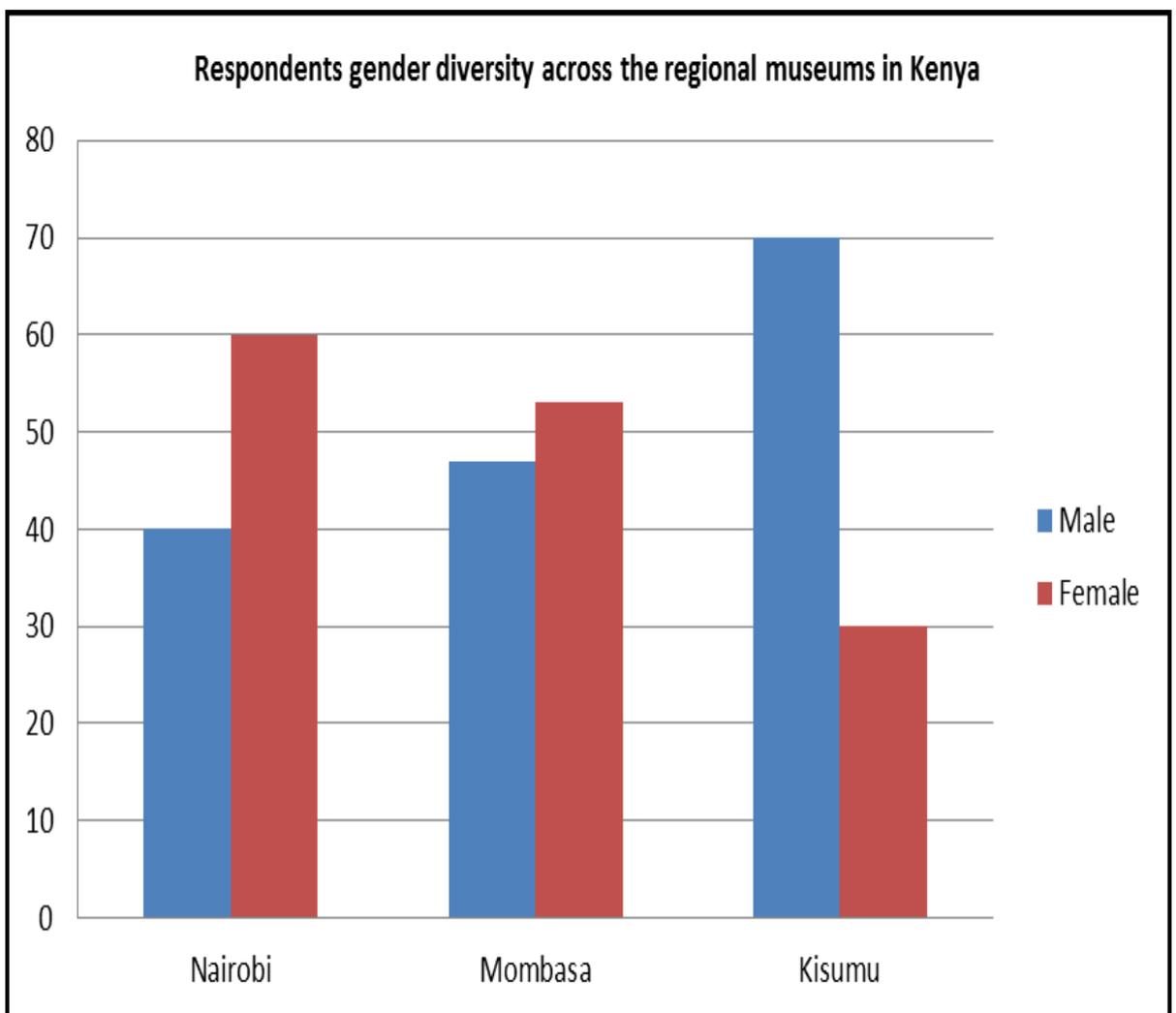

Figure 4.2: Gender diversity respondents across the three regional museums (Source: Malaki, 2018)
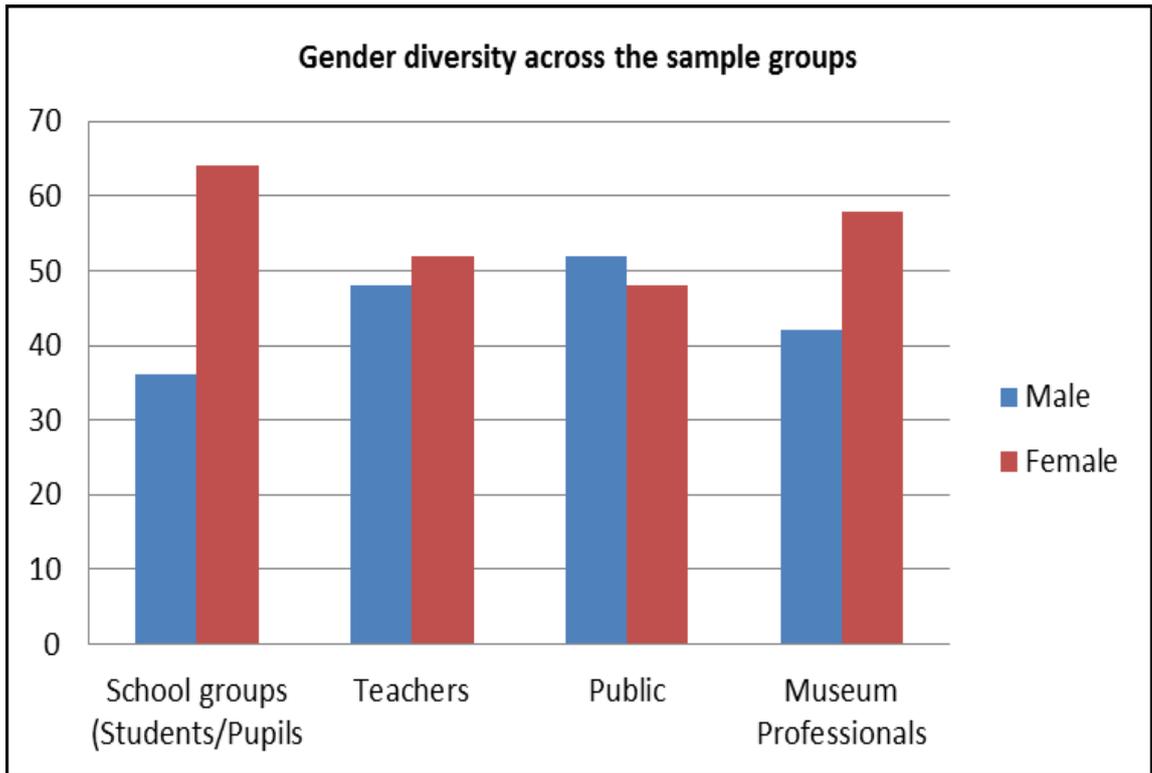
Figure 4.3: Gender diversity respondents across the groups (Source: Malaki, 2018)

4.2.2 Age bracket of respondents

The research sought to find out the respondents' age. Museum visitors are diverse and they visit the museums in huge numbers based on different age groups ranging from the primary scrolls groups to university level. Data on the same were collected, analysed and the findings presented in *Table 4.1*.

Age Bracket	Nairobi	Mombasa	Kisumu
20-30 Years	44.7	21.5	43.6
31-40 Years	39.5	35.4	48.7
41-50 Years	13.2	29.1	2.6
Above 50 Years	2.6	13.9	5.1

Table 4.1: Distribution of respondents by age, the public (Source: Malaki, 2018)
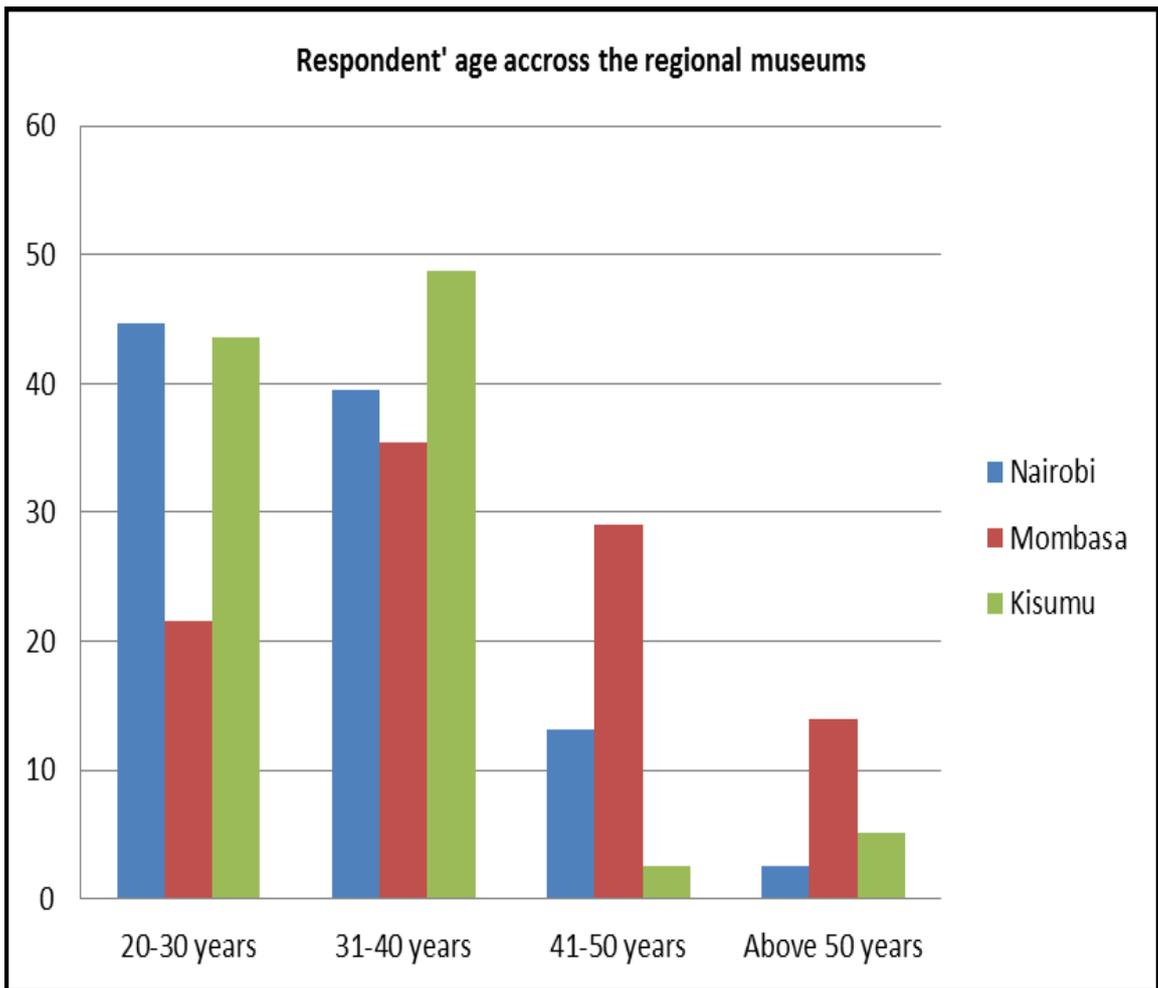
*Figure 4.4: Distribution of respondents by age (Source: Malaki, 2018)*
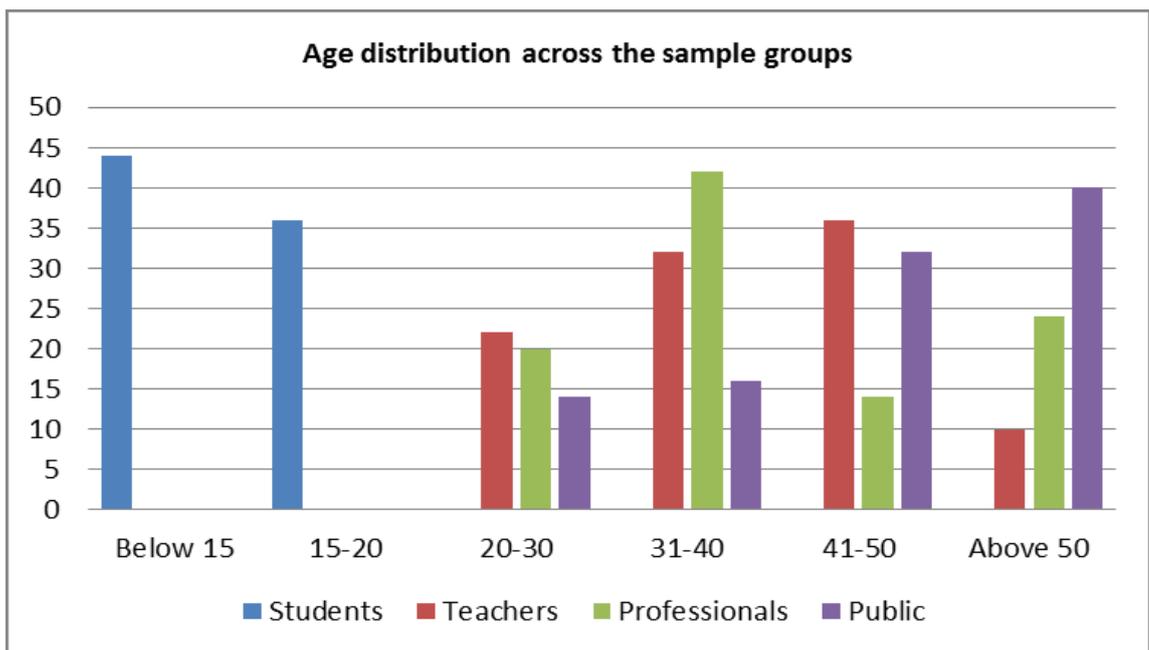
Figure 4.5: Distribution of respondents by age across groups (Source: Malaki 2018)

Age Bracket	Students	Teachers	Professionals	Public
Below 15 Years	44			
15-20 Years	36			
21-30 Years		22	20	14
31-40 Years		32	42	16
41-50 Years		36	14	32
Above 50 Years		10	24	40

Table 4.2: Distribution of respondents by age across groups (Source: Malaki, 2018)

4.2.3 Education level of respondents

The research sought to establish the education level of the respondents. The respondents were of various education backgrounds ranging from primary schools to higher level of education. Data on this question were collected, analysed and presented in *Figure 4.6* as findings.
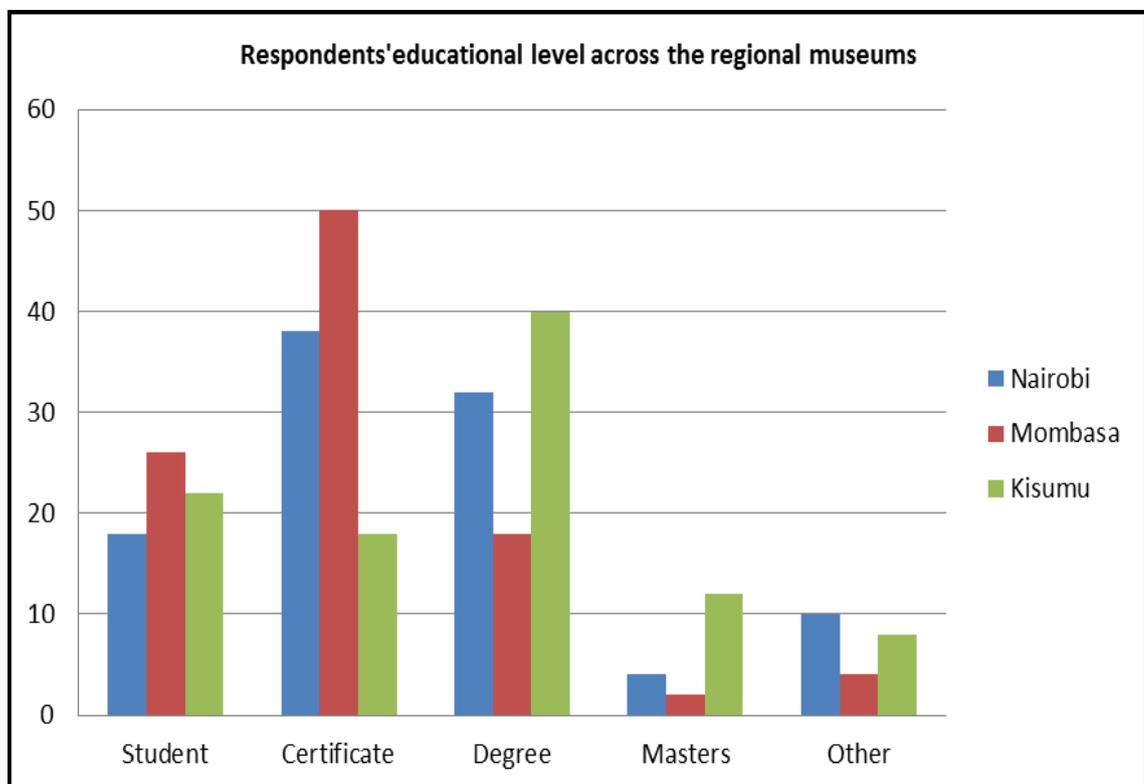
Figure 4.6 Distribution of respondents by Education Level (Source: Malaki, 2018)

Educational Level	Nairobi	Mombasa	Kisumu
Students	18	26	22
Certificate	38	50	18
Degree	32	18	40
Masters	4	2	12
Others	10	4	8

Table 4.3 Respondents Education Level (Source: Malaki, 2018)

4.2.4 Nationality of Respondents

The research focused on those visitors both local and international who visited the museum during the time of the research. Both structured and unstructured interviews were carried out to ascertain their nationality and the response is as shown in the *Figure 4.7* below.
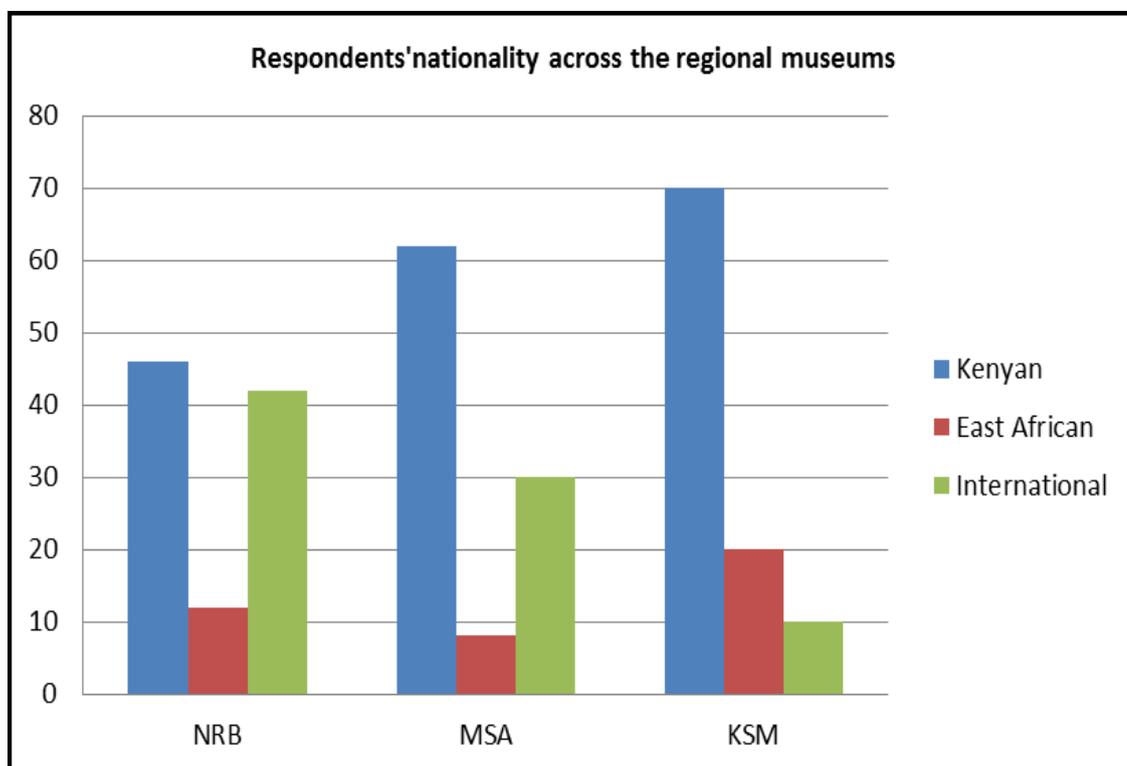
Figure 4.7: Distribution by Nationality of the respondents (Source: Malaki, 2018)

Nationality	Nairobi	Mombasa	Kisumu
Kenyan	46	62	70
East African	12	8	20
International	42	30	10

Table 4.4 Respondents by Country of Origin (Source: Malaki, 2018)

4.2.5 Respondents prior visits to the Museum

This exercise was carried out during the research to show the frequency of visitation by museum visitors. Visitors were asked how many times they had visited the museum and for most of them, it was their first time. For some of them it was either their second or third time they were visiting the museum. From this research, the researcher found out that in the three regional museums, repeat visitors are very few.
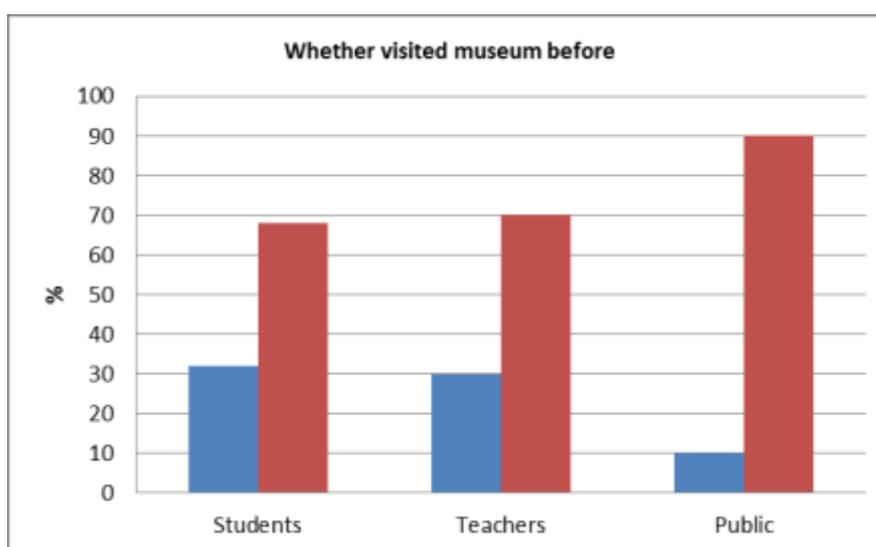
Figure 4.8: Respondents' frequency to visit museum (Source: Malaki, 2018)

Prior visit to Museum	Students	Teachers	Public
YES	32	30	10
NO	68	70	90

Table 4.5: Respondents based of prior visit to the museum (Source: Malaki, 2018)

4.2.6 Duration of time spent in museum galleries

Duration of visitor stay at the museum is dependent of several factors. The research sought to find out how long different visitors spend touring the museum galleries. Majority of the visitors across the three regional museums spend approximately one to two hours in the galleries. They took longer time in galleries that had 3-Dimensional (3-D) objects as compared to those galleries that had 2-Dimensional (2-D) collections like photographs and paintings.
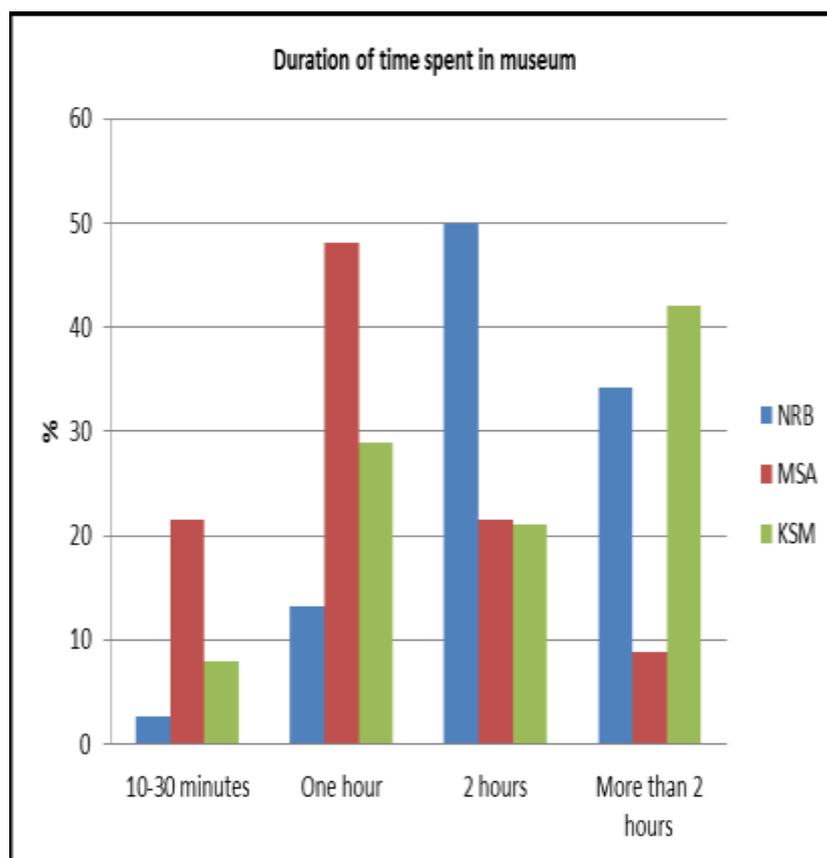
Figure 4.9 Duration of time spent in the Museum Galleries (Source: Malaki, 2018)

Time spent in Museum Galleries	Nairobi	Mombasa	Kisumu
10-30 Minutes	2.6	21.5	7.9
One Hour	13.2	48.1	28.9
Two Hours	50	21.5	21.1
More than Two Hours	34.2	8.9	42.1

Table 4.6: Respondents' time spent in museum galleries (Source: Malaki, 2018)

4.2.7 Satisfaction levels of museum visitors

Whenever museum visitors visit the museum, their expectations are always high. The research sought to find out which components of the exhibition they were satisfied with after the tour of the museum. From the findings, most of the visitors were satisfied with most of the components of the museum though none of the exhibition components was excellent. This implies that there is need for all the regional museums to improve on all the aspects of the exhibitions to enhance visitor experience.
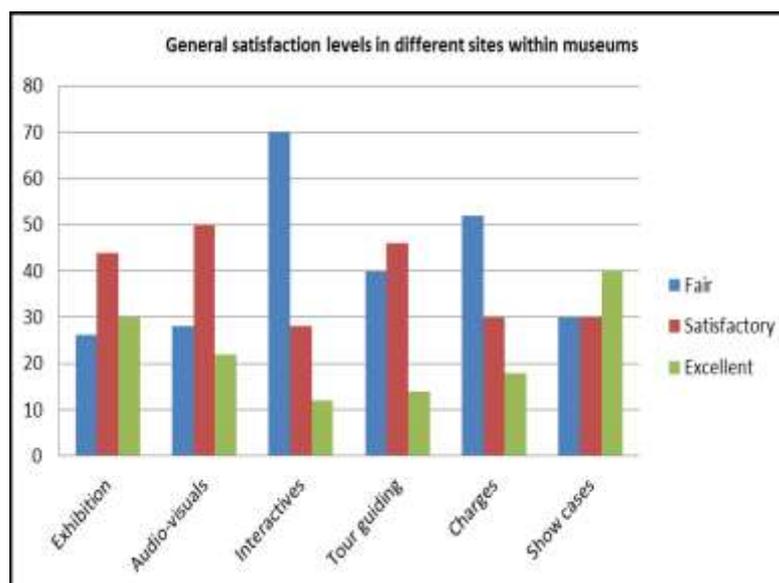
Figure 4.10 General satisfaction levels of different components within the museum (Source: Malaki, 2018)

Satisfaction Levels	Fair	Satisfactory	Excellent
Exhibitions	26.3	44	30
Audio-Visuals	28	50	22
Interactives	70	28	12
Tour Guiding	40	46	14
Entry Charges	52	30	18
Showcases	30	30	40

Table 4.7: Satisfaction levels of museum visitors (Source: Malaki, 2018)

4.2.8 Type of Museum Tour

Some museum visitors preferred guided tour while other preferred taking their own time to tour the museum. The research was carried out to find out, which tour museum visitor would prefer during the museum visit. The findings indicate that in Nairobi and Kisumu, most of the visitors preferred having their own tour of the museum. In Fort Jesus Museum where most of the visitors are international tourist, most of the visitors prefer guided museum tour. This is mainly attributed to the fact that Fort Jesus is a site museum and a Gazzeted site and visitors wanted to understand its history much better and deeper.
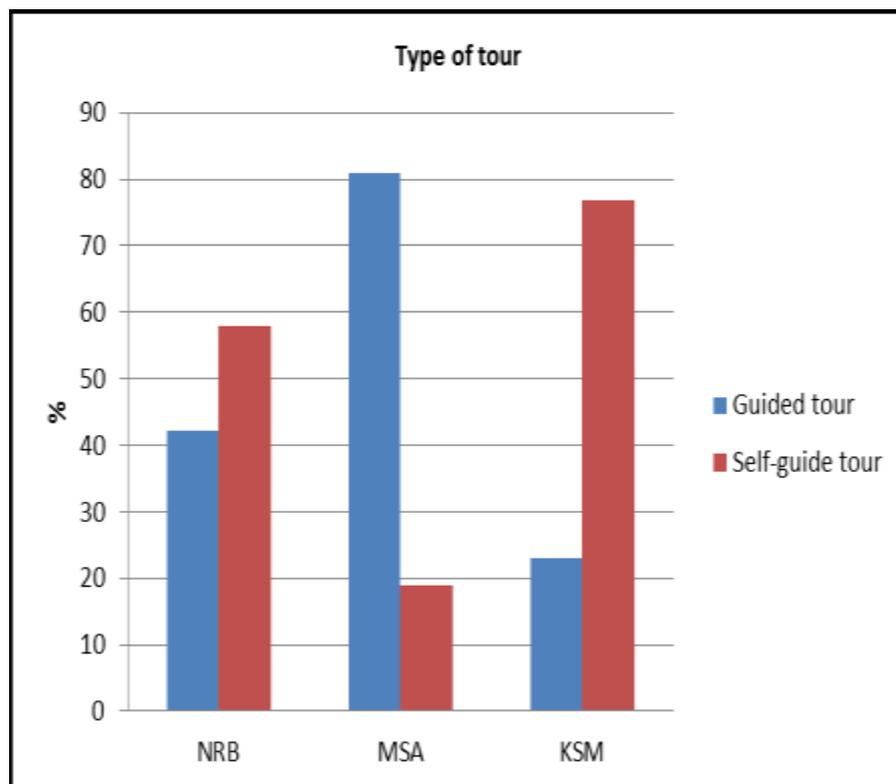
Figure 4.11 Respondents type of Tour of the museum (Source: Malaki, 2018)

From the research work within the three selected museums, the researcher established that there are two sets of guides namely;

- **Museum Guides**- These were mainly students on attachment from tourism institutions who were trained and were taking the visitors around the galleries.
- **Tour Guides** from Tour Guide Associations- These were guides who are registered with the tour guide association and they rely on visitor token of appreciation from the visitors especially foreign tourists. This group of guides were mainly found at Fort Jesus Museum in Mombasa.

4.2.9 General experiences after museum tour

Every visitor wants to get something at the end of a museum tour. Depending on a number of factors like, age group, nationality, gender, like and dislike, visitors get different experiences. The research sought to find out from the respondents how their experience was during and after the museum tour.

The findings indicate that in Nairobi, Kisumu and Fort Jesus Museums, the experience was mainly educative. A greater percentage of the visitors were also inspired at Nairobi National Museum while in Kisumu and Fort Jesus, most of them had an exciting experience as shown in *Figure 4.12* below.
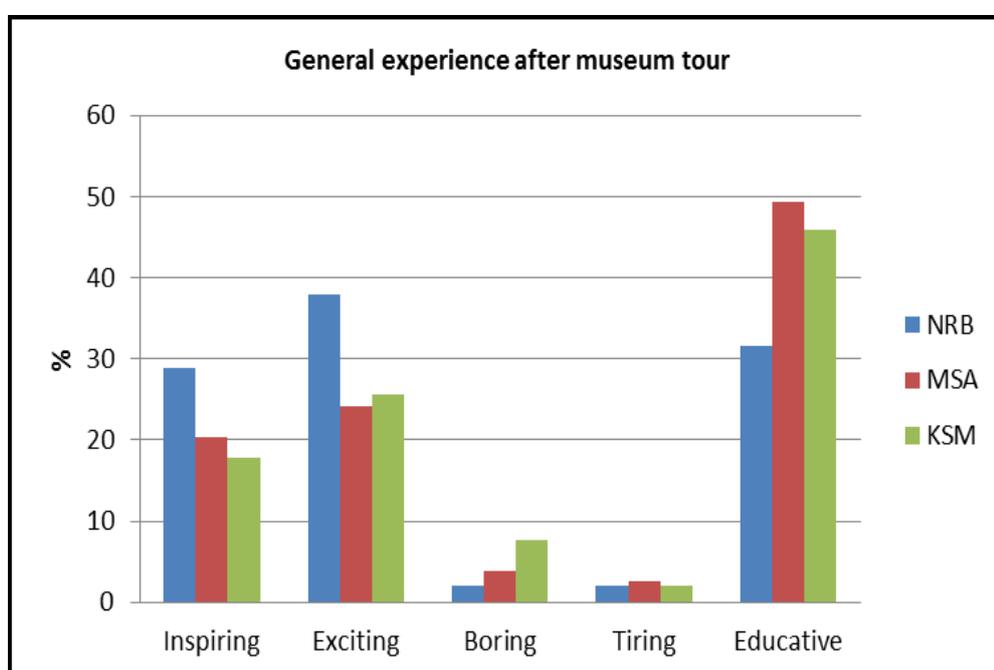
Figure 4.12 Respondents experience after Museum tour (Source: Malaki, 2018)

Experience after Museum Tour	Nairobi	Mombasa	Kisumu
Inspiring	28.9	20.3	17.9
Exciting	38	24.1	25.6
Boring	2	3.8	7.7
Tiring	2	2.5	2
Educative	31.6	49.4	46

Table 4.8 Respondents experience after Museum tour (Source: Malaki, 2018)

4.2.10 Visitors expectations

Most of the visitors in the three museums under research were satisfied with what they saw in the museum and the experience. This however does not mean that everything they saw in the museum was perfect. Most of the people who said yes were first time visitors as opposed to repeat visitors who didn't see a major difference from the first time they visited the museum. 97% of the visitors who toured Fort Jesus Museum at the time of the research and were interviewed, they said they were satisfied with the museum visit given the amazing architectural features of the Fort and the rich history behind it.

90% of visitors who visited Kisumu museum were satisfied especially after visiting the *Ber-gi-dala* exhibition, the snake park, crocodile pit and the tortoise pit.
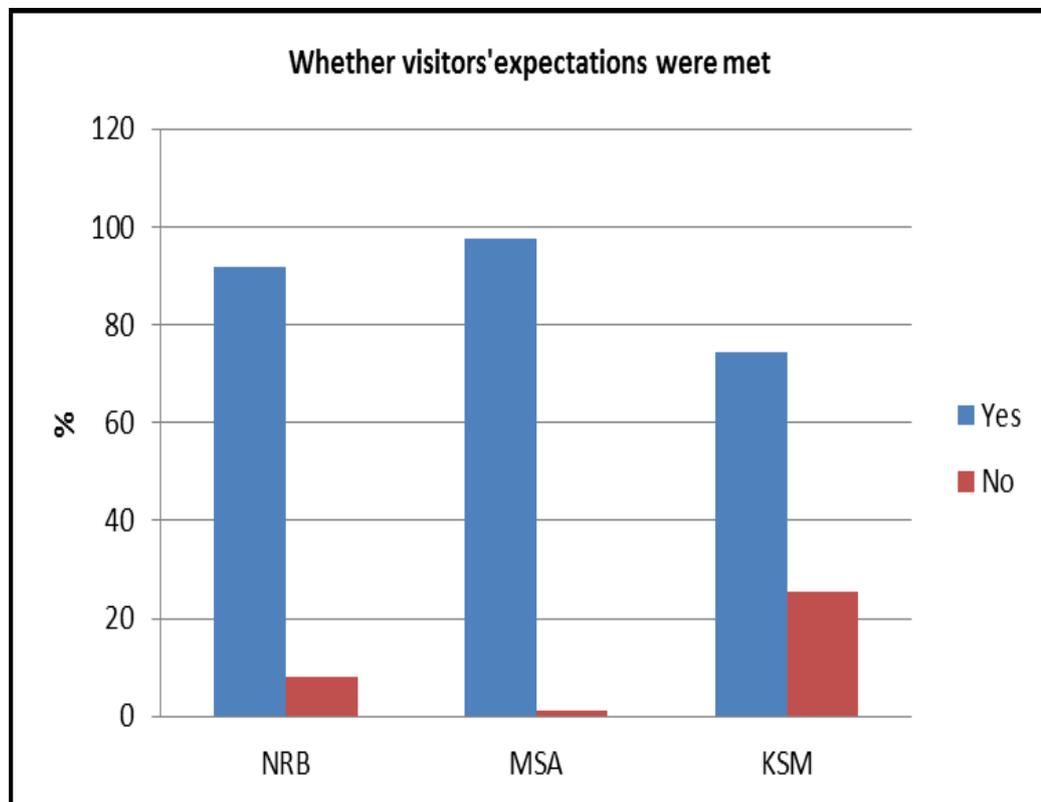
Figure 4.13 Respondents reaction to whether their expectations were met (Source: Malaki, 2018)

70% of the repeat museum visitors were not happy with the museums exhibitions across the three museums. They cited lack of new exhibits on display as the major cause of their disillusionment. They pointed out that most of the exhibits have been on display for ages.

4.2.11 Involvement of stakeholders/users in Museum Exhibitions Development Process

The research sought to find out the extent by which stakeholders/users participate in the development of museum exhibitions especially in the regional museums. The question posed was: to what extent are museum stakeholders/users involved in the development process of museum exhibitions? The figure below shows how the various respondents addressed the question.
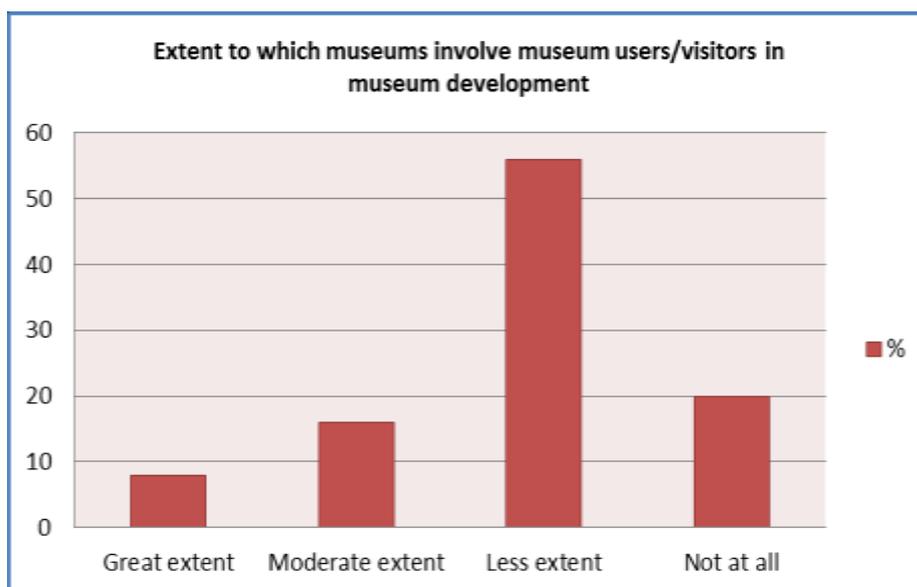
Figure 4.14: Respondents reaction to whether museum users are involved in development of museum exhibitions (Source: Malaki, 2018)

Majority (56%) cited less extent, 20% said not at all, 16% noted moderate extent while only 8% said great extent. From the result above, it is evident that museum users and stakeholders are involved to a smaller extend when developing museum exhibitions in Kenya. A majority of respondents from the three museums under study noted that they were not consulted to give views during the exhibition development of most of the exhibitions on display.

The researcher interviewed a couple of museum staff including curators, researchers and exhibition designers who develop museum exhibitions and they confirmed that they only involve museum stakeholders at the start of the process (Through stakeholder's workshop) and towards the end of the exhibition process (Evaluation stage). The involvement of stakeholders is quite minimal despite the expanse of some museum exhibitions in terms of content and space.

4.2.12 Recommended areas of improvement

The researcher sought to find out from the museum visitors which components of the exhibitions needed improvement. Various suggestions were given based on what the visitors saw and experienced. The main area that needed improvement was the type and nature of the exhibitions currently on display. This was a major concern across the three museums under study. Some of the exhibitions were old; others had outdated information while others were just purely photographic which a majority of the visitors said that they were boring. The table below shows what areas museums in Kenya need to improve on as observed by the respondents.
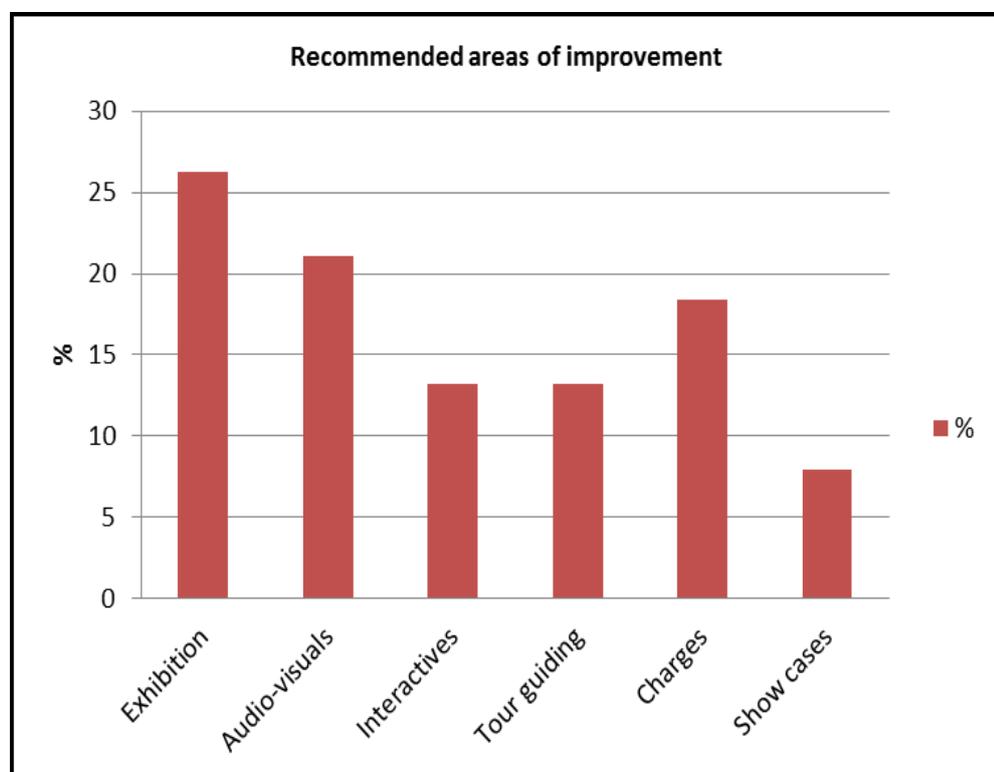
Figure 4.15: Recommended areas for improvement (Source: Malaki, 2018)

Museums across the world are known for and defined by the nature or type of exhibitions on display. There is no museum without exhibitions and thus exhibitions play a critical role in museums. How exhibitions are conceptualised, developed, designed and install affects the visitor experience. In Kenya, apart from the three museums under study, other regional museums in Kenya suffer the same fate, outdated/ old exhibitions on display. The suggested areas of improvement according to the visitors include; exhibitions, audio-visuals, interactives, tour guiding and showcase designs.

4.3. Case Study Analysis

The research made considerations to three case studies which were drawn from three regional museums namely; Fort Jesus Museum in Mombasa, Kisumu Museum and Nairobi National Museum. The researcher visited all the museums at different times and gathered relevant information in regard to the area of research.

4.3.1 Kisumu Museum

Kisumu museum plays a critical role in dissemination of knowledge through research and exhibition within the galleries and without. The museum has various types of exhibitions both permanent and temporary on display. It features a wide collection of local flora and fauna within the county and from the neighbouring counties. The Museum sits on a large parcel of land measuring 12 acres and has several facilities as shown in the *Figure 4.16* below.

Figure 4.16: Site layout plan of Kisumu Museum showing existing physical features (Source, Malaki, 2018)

Kisumu Museum receives an average of 160,000 visitors annually with school groups consisting of 79% of the visitors as shown in *Table 4.9* below.

KISUMU MUSEUM VISITOR RETURN STATISTICS (2012- 2016)									
YEAR	NON-RESIDENT		NON-RESIDENT		RESIDENTS		SCHOOL	UNIVERSITY/	PAYING	TOTAL
			(EAST AFRICA)				PARTIES	COLLEGES	GUESTS	
	ADULT	CHILD	ADULT	CHILD	ADULT	CHILD				
2012	890	234	16	7	17920	5139	95,201	2616	220	122,243
2013	823	189	11	4	19018	5936	109,184	3237	301	138,703
2014	705	213	22	12	22059	5806	140,720	3958	176	173,671
2015	678	197	15	24	23828	6684	133,388	3568		168,382
2016	755	166	34	17	24865	9,257	128,709	5596		169,399
TOTAL	3,851	999	98	64	107,690	32,822	637,202	18,975	697	772,398

Table 4.9: Visitor statistics for Kisumu Museum from 2012-2016 (Source: Kisumu Museum Accounts records, 2017)

From the table above, the population of visitors has been slightly decreasing over the last three years. Having interviewed the Kisumu Museum Curator, she confirmed the decrease and attributed it to the nature of exhibitions they have in place which are not dynamic; some are very old and mostly not interactive.

CATEGORY	JULY 2017	AUGUST 2017	SEPTEMBER(1ST -15TH 2017)	TOTAL
RESIDENT ADULTS	3,769	575	424	4,768
RESIDENT CHILDREN	409	370	105	884
NON-RESIDENT ADULTS (O.E.A)	114	26	19	159
NON-RESIDENT CHILDREN (O.E.A)	25	39	-	64
NON-RESIDENT ADULTS (E.A)	7	4	-	11
NON-RESIDENT CHILDREN (E.A)	7	1	-	8
SCHOOL PARTIES (NURSERY/PRIMARY/SECONDARY)	40,476	798	2,528	43,802
UNIVERSITY/COLLEGES/ORGANISED ADULT GROUPS	1691	124	122	1,937
TOTAL	46,498	1,937	3,198	51,633
KEY: E.A- EAST AFRICA				

Table 4.10: Visitor statistics for Kisumu Museum between July-September 2017 (Source: Kisumu Museum Accounts Office, 2017)

4.3.1.1 Exhibitions at Kisumu Museum

Kisumu Museum has a vast collection on display both internal displays in the galleries and external displays within the museum premises. The museum features a wide collection of local flora and fauna within the county. The three galleries houses different exhibitions both permanent and temporary as indicated in *Figure 4.17* below.

- **Gallery 1:** Houses the main permanent exhibition which is dominated by traditional Luo artefacts, casts and staffed reptile and amphibian exhibits as shown in *Figure 4.18* below.

- **Gallery 2:** Houses an upcoming permanent exhibition titled Music and Legend exhibition.

- **Gallery 3:** The gallery is used for Education activities and also houses changing temporary exhibitions. At the time of the research, a temporary exhibition on *Abasuba* History was on display.

Figure 4.17: The three existing galleries at Kisumu Museum (Source, Malaki, 2018)

Figure 4.18: The interior part of the Main exhibition gallery at Kisumu Museum showing exhibits on display. (Source, Malaki, 2018)

In addition to exhibits housed within the galleries, Kisumu Museums has external exhibits spread within the premises namely; Aquarium, snake pit, snake house, crocodile pool, tortoise pen, murals and Luo *shambas* as shown in *Figure 4.19.*

Figure 4.19 .External exhibitions at Kisumu Museum (Source: Malaki, 2018)

Luo traditional homestead exhibition- *Ber-gi-dala*

Kisumu museum has the largest exhibition sponsored by UNESCO titled, *Ber-gi-dala* or a Luo traditional homestead as shown in *Figure 4.20*. The exhibition is a full scale recreation of the Luo homestead and the most interesting and unique exhibition at Kisumu Museum. The home set-up consists of home, granaries and livestock kraals of the original Luo man and the typical homes of his three wives and his eldest son. Apart from the Luo homestead set-up, *Ber-gi-dala* exhibition also showcases the origin of the Luo people, their migration patterns to western Kenya and the processes followed when establishing a typical Luo homestead.

From the interviews carried out, visitors spend most of their time walking through the exhibition as opposed to other exhibitions at the museum. The exhibition attracts the highest number of visitors due its natural set-up, the exhibits within individual huts and the message the exhibition brings out (Phoebe, 2018). The exhibition development, design and installation were a consultative process where the community was largely involved. This led to ownership by the community amongst other stakeholders and users and it is the reason why *Ber-gi-dala* exhibition is highly visited.
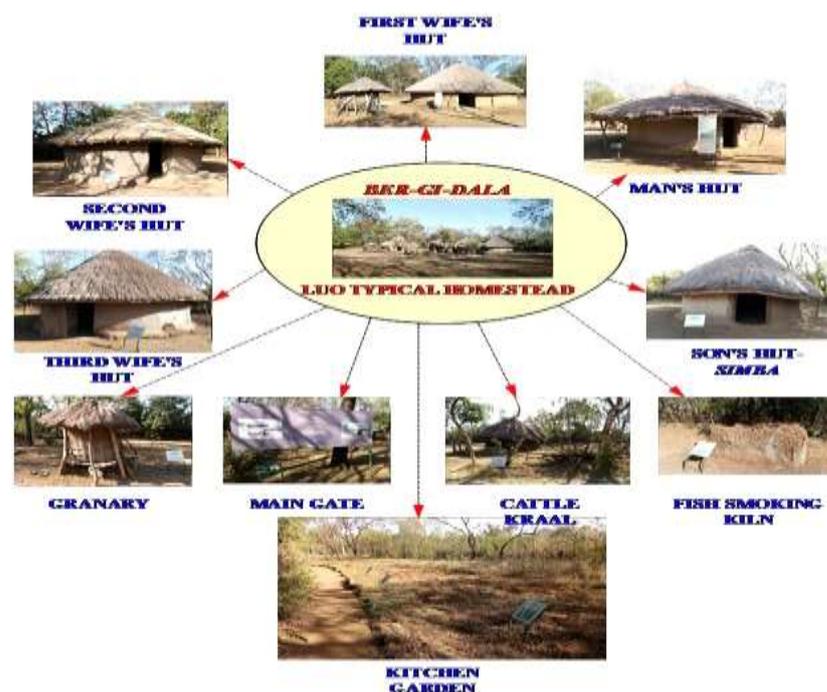
Figure 4.20: Typical Luo homestead showing all the features within the compound (Source: Malaki, 2018)

4.3.1.2 Exhibition development at Kisumu Museum

Development of exhibitions within galleries in Kisumu museum didn't follow any structured way of developing exhibitions as they were done in the 1980's. Based on the interviews carried out, though observations and written comments from the comments book, the researcher pointed out a couple of aspects in regard to the exhibitions at the museum. These include but not limited to;

- The main permanent exhibition doesn't have a clear storyline
- The development, design and installation of the main exhibition were entirely done by museum staff with limited consultations from museum stakeholders.
- The exhibitions on display are old as they have been on display for a long time.
- There is no interactivity or limited interactivity within the galleries. Most of the collections are behind glass with limited provisions for touch.
- Most of the objects don't have individual labels but generalised labels. This makes it difficult for visitors to learn especially those who want more details.
- Most of the visitors enjoy live exhibits on display (reptiles and amphibians) as opposed to exhibits within galleries which are behind glass.
- Education programmes are only designed for school groups and not for the entire general public.
- Public engagement in developing exhibitions is limited due to lack of funds to facilitate the exercise. This has led to the museum relying entirely on the staff to do everything.
- Exhibitions on display are more of educational. Many visitors mentioned that the exhibitions lack the inspirational and fun element and thus the aspect of boring experience.

Generally, Kisumu museum has a lot of potential to enhance visitor experience. Lack of funding was the main reason why some of the proposals geared towards improving the museum cannot be adopted as pointed out by the museum curator. It is partly due to the above factors that the potential museum visitors especially repeat visitors have identified other interesting social places to go to instead. These places include; Lake Victoria beaches, Kisumu International Airport and most commonly, the Kisumu Impala Sanctuary which are the main competitors to Kisumu Museum.

4.3.2 Fort Jesus Museum

Fort Jesus is a site museum that covers an area of 2.36 hectares. It is one of the most visited tourist attraction in Mombasa. The Fort receives approximately 130,000 visitors per year. In most cases, the visitors spend most of time touring the buildings than the galleries due to the rich history and fascinating physical features of the buildings as shown in *Figure 4.21.*

Figure 4.21: Fort Jesus Museum (Source: Malaki, 2018)

4.3.2.1 Exhibitions at Fort Jesus Museum

From the interactions with the curator for Fort Jesus Museum, the exhibition on display within the main gallery has been there for many years and it was developed by museum staff then with minimal engagement of the local community and other museum stakeholders. The museum was developed and designed for the users and not with the users. The main exhibits on display include;. Exhibitions at Fort Jesus are mainly displayed in three galleries namely;

- **Main Gallery:** This gallery houses the main exhibition at the museum. Displays within the gallery include; ship wreck excavation materials, ceramics of Chinese, Persian, Arab and Portuguese origin. There are also cultural materials collects of East African earth ware, instruments and more so weaponry as shown in *Figures 4.22, 4.23 and 4.24.*

- **Omani House:** This house was renovated in 2017 with the help of The Embassy of Sultanate of Oman who supervised the renovation works and in collaboration with the Ministry of Sports, Culture and Arts. The newly installed exhibition provides historic information and displays on Omani activities including trade from 1631 to 1870's, Omani jewellery, weaponry and other artefacts. *Figures 4.25, 4.26, 4.27 and 4.28.*

- **Mazrui House:** This is one of the galleries at the Museum which houses a new exhibition on the early merchants at the coast that was opened in 2017. *Figures 4.29 and 4.30.*

Figure 4.22: Ship wreck material and other exhibits at Fort Jesus Museum (Source: Malaki, 2018)

Figure 4.23 :(Left) - Some of the exhibits at Fort Jesus Museum with a label of "Don't touch. (Right) - Visitors being taken round the gallery at Fort Jesus Museum (Source: Malaki, 2018)

Figure 4.24: Visitors viewing exhibits at Fort Jesus Museum. Less or no interactivity with the exhibits. (Source: Malaki, 2018)

Figure 4.25: External look of the refurbished Omani House (Source: Malaki, 2018)

Figure 4.26: The plaque on the Omani House which shows when the exhibition was officially opened to the public (Source: Malaki, 2018)
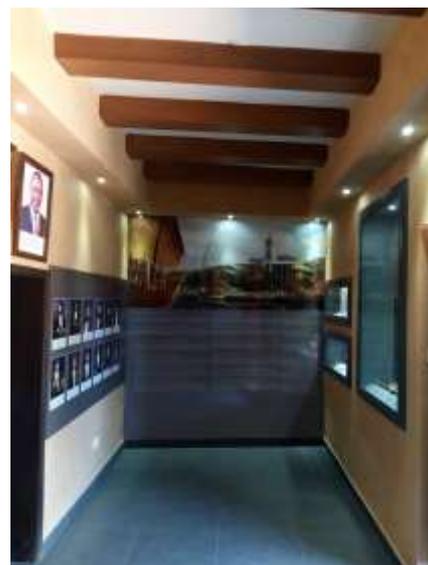
Figure 4.27 (Left): Photographic exhibits inside the Omani House (Source, Malaki, 2018)

Figure 4.28 (Right): Clothed Mannequins in showcases inside the Omani House (Source, Malaki, 2018)

Figure 4.29 & Figure 4.30: Visitors being guided in the newly opened Mazrui House exhibition (Source, Malaki, 2018)

Figure 4.31: Visitors being taken round the Fort by a guide (Source: Malaki, 2018)

4.3.2.2 Exhibition development at Fort Jesus Museum

Exhibition development at Fort Jesus Museum has not been a fully consultative. Previously, the exhibitions were done mainly by museum staff especially the curator, researcher and the education officer. In developing the exhibitions, the curator was everything; the decision maker, education officer, researcher, administrator among other activities.

Approach towards exhibition development process has since changed especially with the development of new house exhibitions at the museum. There has been effort to try and diversify the visitor experience at Fort Jesus Museum. The new exhibitions have brought new visitor experience at the Museum as they were designed and developed in various consultative meetings in which the researcher was privileged to be part of.

In 2017, Omani House and Mazrui House exhibitions were developed and installed at Fort Jesus Museum. This was made possible through collaborations between Fort Jesus Museum, Ministry of Sports, Culture and the Arts and mainly the Embassy of Omani. Various consultative meetings were held between in-house museum professionals and professionals from the Omani Republic. According to Fort Jesus curator, the two new house exhibitions were co-designed and have since attracted huge visitation (Fatma, 2018).

Through observations and more so based on interviews carried out with some museum professionals and other museum stakeholders, the researcher pointed out a couple of aspects in regard to the exhibitions at Fort Jesus museum. These include but not limited to;

- Most of the exhibitions on display are old and static. The exhibits have been on display since the main gallery was built and opened.

- The development, design and installation of the main exhibition were entirely done by museum staff with limited consultations from museum stakeholders.

- There is minimal interactivity within the main galleries and the newly installed exhibitions within the Mazrui Hall and Oman House. Most of the collections are behind glass with limited provisions for touch.

- The main existing permanent exhibition doesn't have a clear storyline but assortment of collections especially ceramic and ship wreck materials.

- Public engagement in developing exhibitions is limited due to lack of funds to facilitate the exercise. This has led to the museum relying entirely on the staff to do everything.
- Insufficient Lighting within the galleries.

- Most of the visitors interviewed indicated that they enjoyed the architecture of the museum as opposed to the content within the main gallery of the museum.
- Education programmes are only designed for school groups and not for the entire general public. To an extent, this pushes the other general public from museum activities.

Lack of funding was the main reason why some of the proposals geared towards improving exhibitions at Fort Jesus Museum cannot be adopted (Fatma, 2018). The museum is currently facing competitions from other social establishments in Mombasa namely; Haler Park, Mamba Village, Wild Waters, Kenyatta beach among other places. It is partly due to the above factors that some potential museum visitors especially repeat visitors prefer visiting other places for entertainment, inspiration and education as opposed to Fort Jesus Museum.

4.3.3 Nairobi National Museum

Nairobi National Museum is the flagship museum of the National Museums of Kenya that houses rich collections of Kenya's heritage. It has both permanent and temporary exhibitions displayed in various galleries. In 2005, the museum closed its doors to the public with an aim of modernising and expanding the museum. The facelift took three years and the new-look museum was reopened to the public in June 2008 which has since then put NNM in competition with other museums across the world. During the refurbishment and remodelling of the museum, various stakeholders were involved both locally and internationally who worked closely to realize the new-look museum. Exhibitions were designed and developed in line with the four pillars of Kenya's national heritage i.e. nature, culture, history and contemporary art.

The museum currently offers a one stop experience for visitors to sample its unique and diverse rich heritage for the purpose of inspiration, leisure and majorly education. Some of the facilities at NNM include, exhibition galleries, auditoriums, nature walks, open amphitheatre, restaurants, shopping outlets, botanical gardens, court yards, and snake park. The museum also provide venues for public and private events which include; conferences, workshops, seminars, cocktail parties, weddings amongst other functions.

The Museum sits on a large parcel of land of 12 acres and has several facilities as shown in the *Figure 4.32* below.
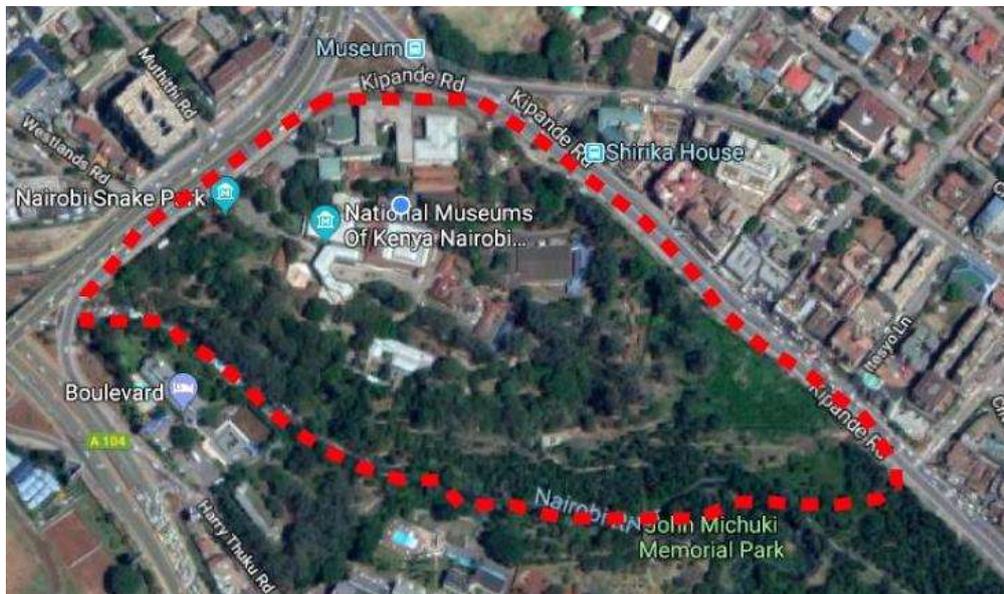

Figure 4.32: Aerial view of Nairobi National Museum in Nairobi (Source, Malaki, 2018)

4.3.3.1 Permanent Exhibitions at Nairobi National Museum

Nairobi National Museum has several permanent exhibitions installed in various galleries of the museum. The permanent exhibitions include; Hall of Kenya, Mammal Hall, Cycles of Life, Human Origins and History of Kenya exhibitions. These exhibitions were developed, designed, installed in 2007 when the museum was undergoing change. All the permanent exhibitions on display 10 years old apart from History of Kenya exhibition which is 8 years old. Permanent exhibitions are supposed to take between 5 to 10 years if well maintained (Galgallo, 2018).

Figure 4.33: Hall of Kenya Exhibition.   Figure 4.34: Human Origin Exhibition (Source, Malaki, 2018)

Figure 4.35: Cycles of Life Exhibition. Figure 4.36: Mammalian Radiation Exhibition (Source, Malaki, 2018)

Figure 4.37: History of Kenya Exhibition at NNM that was opened in 2009 (Source, Malaki, 2018)

Figure 4.38: Hall of Kenya Exhibition-Space serves as orientation space to all galleries and is also used for corporate functions. (Source, Malaki, 2018)

4.3.3.2 Temporary Exhibitions at Nairobi National Museum

Temporary exhibition refer to those types of exhibitions that don not last long on display. They usually last for a period of between three months to one year. Others are shorter than three months while other can still stretch over one year. At NNM, there are several types of exhibitions on display. At the time the researcher was carrying out data collection, the following temporary exhibitions as shown below were on display; Birds exhibition, Joy Adamson exhibition, Numismatic, Osteology exhibitions, *Urembo* and *Hekima* exhibitions amongst others.

Figure 4.39: Numismatic Exhibition.   Figure 4.40: Osteology Exhibition (Source, Malaki, 2018)

Figure 4.41: Urembo Exhibition   Figure 4.42: Joy Adamson Exhibition (Source, Malaki, 2018)
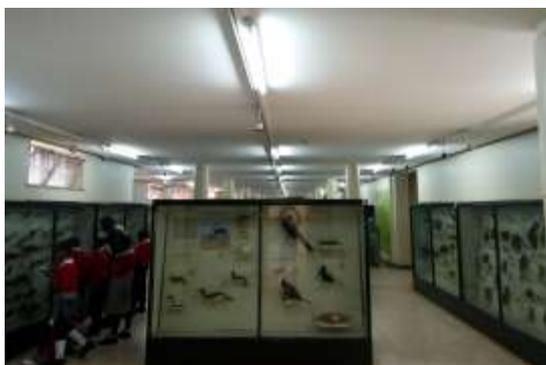
Figure 4.43: Birds Exhibition.   Figure 4.44: Osteology Exhibition (Source, Malaki, 2018)

Trust for Indigenous Culture and Health (TICAH) partnered with NNM to design, develop and install two temporary exhibitions at which were on display for two months. TICAH is an institution that aims to promote health with main focus on good relationships, healthy households, and community action.

Figure 4.45: TICAH Exhibition Curator Agan Odero having a discussion with community elders during the TICAH exhibition (Source, Malaki, 2018)

Figure 4.46:Participants listening keenly to drum bits during the TICAH exhibition (Source, Malaki, 2018)

Figure 4.47: Members of the public participating in a dance during TICAH Exhibition (Source, Malaki, 2018)

Figure 4.48: Children participating in a dance in the TICAH Exhibition Hall (Source, Malaki, 2018)

The duration of temporary exhibition is determined by a number of factors some of which include; funding, type and nature of exhibition, availability of the exhibition gallery and season of the year. Some exhibitions take one month, others two to three months while others take more than one year. Internally developed temporary exhibitions at NNM can take longer duration to avoid having galleries being empty. Most of the galleries that were supposed to house permanent galleries are now housing temporary exhibitions due to lack of funding to establish the permanent exhibitions. *Table 4.11* shows the galleries that are currently housing temporary exhibitions.

GALLERY	PERMANENT EXHIBITION (Initially planned permanent exhibitions)	TEMPORARY EXHIBITION (Current temporary exhibitions on display)
1	Natural Diversity Exhibition	Birds Exhibition (3 Years)
2	Geology Exhibition	Numismatic Exhibition (2 Years)
3	Ecology Exhibition	Osteology Exhibition (6 months)
4	History of Art Exhibition	Joy Adamson Exhibition (4 years)
5	Cultural Dynamism	Changing Exhibitions (Assorted)
6	Permanent Art Exhibition	Changing Art Exhibitions (Assorted)

Table 4.11: Temporary exhibitions at NNM (Source: Malaki, 2018)

Temporary museum exhibitions are very essential and significant activities and outputs for the museum which play a key role in engaging diverse museum audience. By virtue of their duration and numbers, they bring life to museum spaces especially museums exhibitions that have been on display for many years. At NNM, most of the temporary exhibitions on display are usually changing and last between one to six months. Art oriented temporary exhibitions lasts a maximum of one month.

Nairobi National Museum receives few return visitors and from the study the researcher did, it was noted that the main reason why there are return visitors is due to old exhibition that have not changed for since 2007. Some visitors indicated that most of the temporary exhibitions on display are mainly 2-dimensional and boring; some have little information and not well laid out. NNM has a committee that evaluate exhibitions before being installed in the museum galleries. The committee vets the exhibition concept, story line and nature of exhibits before being installed especially those from without NNM.

CHAPTER FIVE

INTERPRETATION OF THE FINDINGS

5.1 Introduction

This chapter presents an interpretation of the findings presented in the previous chapter. In presenting the interpretation, the results of the questionnaire are presented first, followed by interviews and focus group discussions. The interpretation and discussion of findings was based on the research objectives. The chapter is discussed first exploring the general information, followed by respective research objectives including; process of developing museums in Kenya; the extent to which museums users are involved in the development of museums; the effect of co-design on the development of museums in Kenya; and co-design framework to develop effective museums in Kenya.

5.2 Demographic Information

In collecting data for the research work, the researcher focused on key areas which include; gender, age bracket, level of education and nationality.

5.2.1 Gender of respondents

The research sought to establish the gender of respondents. Respondents were thus asked to indicate their gender. Findings as summarized in *Figure 4.2* indicated that gender across the three museums varied considerably; under the public category, results from Nairobi showed female were majority (60%) as compared to male (40%) under the public category. In Mombasa, female accounted for 56% while male at 44%. In Kisumu, majority were male (70%) as compared to female (30%).

Under other categories, school groups category showed female at 64% while male at 36% (students and pupils combined); teachers at 52% female and 48% male; the overall public within the three museums showed 54% female and 46% male; while museums professionals indicated 42% male and 58% female. The findings demonstrate more female visit museums as opposed to men across the museums apart from Kisumu Museum which records high number of male visitation. The importance of visitor surveys is to capture demographic characteristics of visitors which help in making informed decisions on museum activities and programmes. More the demographic also help to

efficiently react to changes in behavioural patterns among the genders. From the study in regard to gender, the museum can thus devise way of targeting men to visit museums by designing exhibition that target men or incorporate more men in developing exhibitions.

5.2.2 Age Bracket of respondents

Under the school category (students and pupils), 44% were below 15 years, 36% were between 15-20 years. Among the teachers sampled, 22% were aged between 20-30 years, 32% between ages 31-40 years, and 36% between 41-50 years while 10% were above 50 years of age.

Under the professionals category (museum professionals); 20% were aged between 20-30 years, 42% were aged 31-40 years, 14% were between ages 41-50 while 24% were above age 50 years.

Under the public (both local and non-citizen category, findings showed 14% were aged between 20-30 years, 16% were of ages 31-40 years, 32% between ages 41-50 while 40% were aged above 50 years.

Age differences across the three museums revealed interesting gaps; Kisumu Museum scored highest (48%) of those aged between 30-40 years, but the same museum (Kisumu) scored low (6%) of low on those aged between 4-50 years. Nairobi scored high (45%) on ages between 20-30 years.

From the finding, it's clear across the three museums that many adults don't visit museums. Museums have been left to the children and teachers who accompany the children. From the statistics above, many adults especially parents don't visit museums. This can be attributes to lack of exhibitions that resonate with them.

The age distribution indicator highlights the essence of co-design and target groups for the connecting museum and users; and cold be useful in informing the current transformation of museums in Kenya to open up to the wider group of people who don't visit museums; epically the younger generation.

5.2.3 Education level of respondents

Under the professionals category (museum professionals); 44% had degrees, 16% had masters while 6% had doctorates; 34% had certificates across the three museums. Under the public (both local and non-citizen category), findings showed 52% had degrees, 10% masters while 38% were certificate holders.

In Nairobi, 38% had certificates, 32% degrees and 4% masters while 19% stated other. In Mombasa, 50% had certificates, 18% degree, 2% masters and 4% cited other. In Kisumu, 18% were certificate holders, 40% degree, 12% masters and 8% cited other.

From the study findings, clear demographic divides were observed among specific groups (School groups and public). Whatever these statistics seem to suggest, one cannot definitely conclude that the current statistics represent an increase in the quantity of women working as museum professionals in Kenya. There is a lack of historic studies of the gendered makeup of museum staff, though conclusions can be drawn from these findings.

Similarly, it would be easy to advocate for an increased focus on gendered aspects of exhibits by simply looking at demographics of museum visitors. However, when one looks at gender, the lack of research on this issue does not correlate to the visitation trends of men and women. This trend is matched by studies performed in other cities and nationally in the United States (Farrell, et. al, 2010).

5.2.4 Nationality of respondents

Results showed majority of visitors were locals from Nairobi (46%), Mombasa (62%) and Kisumu (70%). Those from East Africa varied considerably across the three museums; 12% for Nairobi, 8% from Mombasa and 10% for Kisumu. However, results established 46% international visitors for Nairobi, 30% for Mombasa and 20% Kisumu.

The local visitor's representation could be attributed to the emerging emphasis on arts and cultural activity in Kenya; with a more focus on local issues and this could be contributing to a wide variety of activity across the museums. In addition, the opening up of Kenya economic activities has opened up the region and more visitors from East Africa are now able to visit the country. The international visitors are vital to national tourism

development; and while results vary across all the museums, it points to the role of integration in museums. Overall, the opening up of museums to local, regional and international visitors provides a platform to participate in the arts and to build a clear sense of shared values, aspirations and common ground, which is vital in co-design strategies.

5.3 General aspects regarding museum users

The study further sought to establish general aspects regarding museum users including: prior visit to the museum, satisfaction levels, type of museum tour, museum experience and visitor expectations. The results are discussed in the sub-sections below.

5.3.1 Respondents prior visits to the Museum

In respect to the number of times respondents had visited the museum, results showed among the school categories (students and pupils) only 30% reported visiting the second time while 70%, it was the first time. Among teachers, 40% had visited the museum before while 60% had not. However, the public category results revealed majority (90%) were first-time visitors as compared to only 10% who indicated they had visited he museum before.

Results from the general public reveal majority (90%) were first-time visitors and could be attributed to emerging settings that consolidate a large pool of visitors apart away from museums.

Although school groups represent a large population of groups that visit museums, results indicate those visiting for the first time were majority across the categories. Without any other drivers, the lack of widening exhibition and new areas of interest could explain why there were few visitors coming back.

From interview responses, the exhibition in Mombasa attracted such a wide audience; and great number of factors contributed to its success, for instance the public's interest in the history; and perhaps this contributed to second-time visitors. Moreover, the archaeological findings in history demand the public's attention.

The large gap between entertainment sites and museums appears to be one of the main reasons why visitors in museums don't go back; or actually avoiding museums. The current economic climate is also encouraging museums to focus more internally on their

permanent collections; to devise creative ways of exhibiting their own holdings both permanently and temporarily, which decreases the possibility for major artist retrospectives or exhaustive exhibitions hence visitors might find it hard coming back to the same museum.

5.3.2 Respondents satisfaction levels

Regarding satisfaction levels after museum tour, exhibitions scored high (40%); while audio visuals and interactives were at (22%) and 12% respectively. Satisfaction levels varied considerably showcases (40%) and exhibitions (30%) were cited to be most satisfying across the three museums. However, interactives and audio-visual were fairly cited to be interesting. This could be attributed to the emphasis on exhibitions and showcases within the museums, and a lack of emphasis on interactive pieces. Moreover, another relevant point could be the possibility for visitors to take on practices only as guided by museum staff; and less participation in museums on audio and interactives.

Ideally, visitors involve themselves with the interactive piece through the content they create in different ways. Therefore, it can be meaningful for interaction designers to understand how, in order to plan from the beginning to include different voices, for example or even application of technologies that would make museums more exciting and interesting. On the other hand, the Museums & Mobile Survey (Tallon 2013) demonstrates that encouraging usage of the mobile experience by visitors, keeping the experience up-to-date and maintaining the resources required to sustain the mobile experience are becoming increasingly more challenging. It means that promotions and maintenances after application development are becoming more difficult. If there is a platform-like application that offers mobile experience for all the cultural institutions, this application is more accessible for visitor compared to different individual application (lower promotion cost), and the maintenance cost is also lower for individual participant institutions.

5.3.3 Type of museum tour

On the aspect of type of tour, Mombasa scored high on guided tour at 80%, Nairobi at 56% while Kisumu at 24%. The results for Mombasa could be attributed to the historical nature of the archaeological sites; and guided tours provide visitors a personal and creative aspect. On the other hand, museums are investing in education tours as part of the participation in interactive systems through guided tours. Consequently, the

promotion of cultural products is an element of the marketing mix of cultural museums that requires guided tours and could explain the choice of guided museum tours.

5.3.4 Museum experience

Overall, when asked about their experience at the museum tour, results showed 26% said inspiring, 25% indicated exciting, 40% said educative while 2% said boring and tiring at the same time.

From the general information, visitors are likely to conceive all the art museums visited in a relative similar way. The idea that museums would become leisure places is more relevant, in so far as the entry of museums into the leisure market means that museums are expected to provide visitors with 'pleasure.' Given the varying exhibition from the three museums, the exhibition contents reflect different viewpoints and provide opportunity for visitors to question content. However depending on the type of tour given, information that is presented as true without alternative perspectives discourages the motivation to explore and learn more.

As results indicate (40% said educative) means that visitation remains a major part of museums' educational outreach. The statistics cited earlier only attest to the continued success museums enjoy. In addition to individuals traveling to museums independently, school groups also comprise a large constituency of museum visitors per year. These and regular gallery tours are also a fixture of many museums' educational programming, and many receive a large number of international audience members per year. Considerable efforts have been made by museums to engage the local community of their situation, too.

Results also agree with other researchers. For example Cameron (2004) proposes the museum as a place for inspiration, introspection and reflection. This might be because many museums are situated in historical buildings that have, over the years, acquired the social function of a temple. Therefore, the connection of the museum experience and co-design makes it an appropriate setting for an experience that goes beyond everyday life; making the visitor connect and to reflect. This is what makes the museum an interesting place to analyse interaction design that might produce and support co-design strategies.

5.4 Museum Exhibition Design Process

The first objective of the study sought to examine the process of developing museum exhibitions in Kenya. The researcher engaged various in-house museum professionals on the process. A successful exhibition is as good as the process that developed it. Museum Exhibition Design Process (MEDP) is a rigorous and lengthy process that museums undertake whenever they want to put up exhibitions especially permanent ones. National Museums of Kenya uses a well-structured process as shown in Figure 5.2 below.
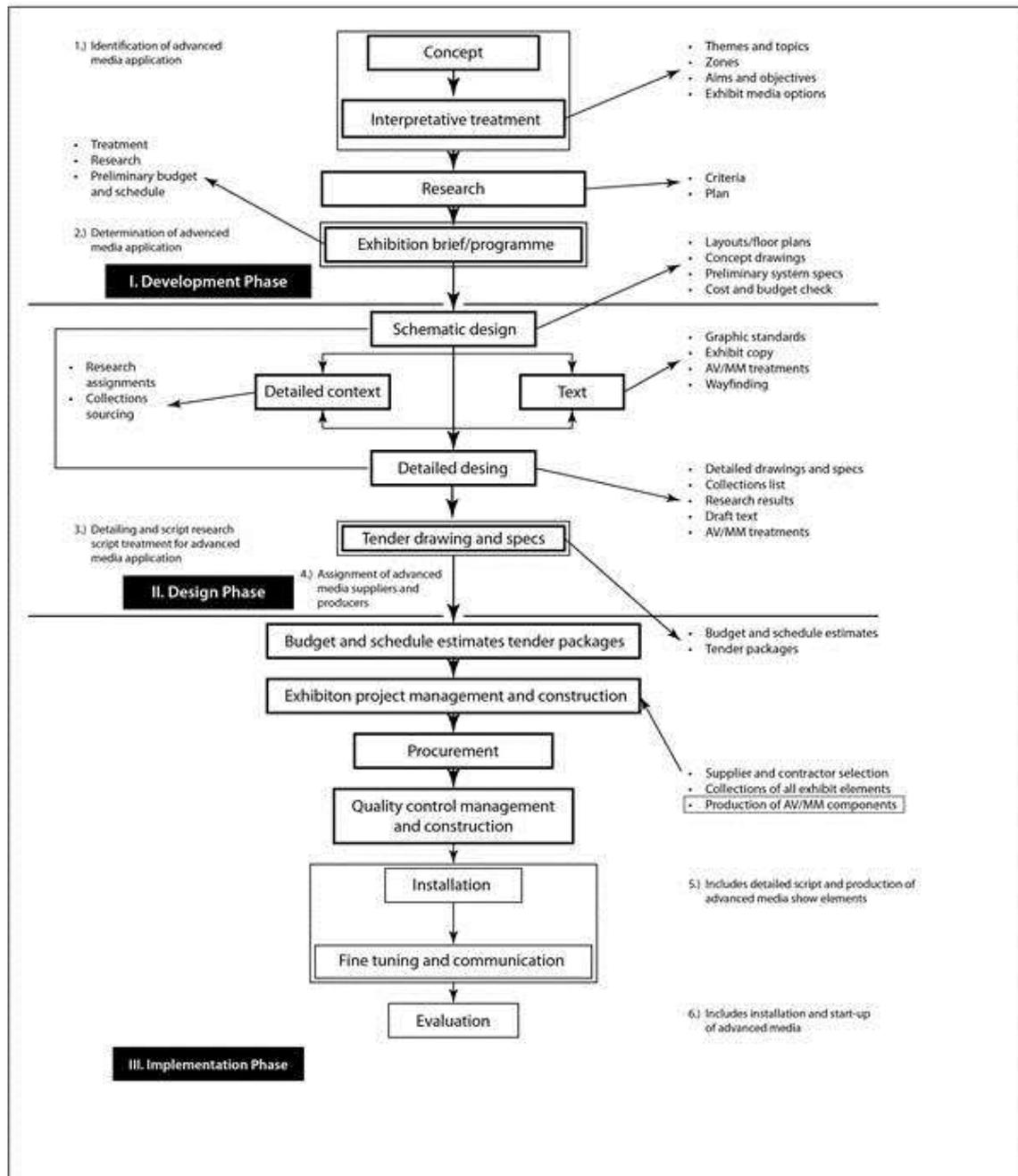
Figure 5.1: Planning Multimedia Applications for an Exhibition Development Process (Source: A. Kárpáti)

Procedures for the Design and Installation of Museum Exhibitions	Responsibilities
Start → Conceptualization Stage → Exhibition planning stage	Curatorial team which includes Designers and other stakeholders
Design Stage → Pre-Production Stage → Production Stage → Installation Stage → Monitoring and Evaluation → End	Design team and other relevant departments Curator and the Design team
Maintenance	

Figure 5.2 Museum Exhibition Development Process template used by the National Museums of Kenya (Source: NMK Exhibition Manual, 2017)

From Figure 5.1 above, the process of exhibition design starts before drawing and continues through to fabrication and eventual installation. However, a required element of the exhibition development process should be public programs and marketing, which are needed to attract the interest of the public. Public programs are a way of extending the scope of an exhibition. They can range from a press release through to lectures, workshops and a guided tour of the exhibits, and can be educational or more light hearted and entertaining. The purpose of exhibits is to get people through the door of the museum and a successful public programs campaign will give the exhibition a greater profile.

An evaluation of the exhibition is a useful way of reviewing the planning process and determining what worked and what did not. It is important to make notes of comments from staff and visitors regarding labels, access pathways, objects on display etc. It is vital to listen to the comments of others, as it is easy to miss a slip-up in an exhibit and a thorough evaluation will contribute to an improved exhibition next time. Adherence to these details in developing and planning exhibitions will acknowledge the museum as dynamic and contribute in maintaining community interest in the museum.

Figure 5.2 shows the process the National Museums of Kenya uses in development of museum exhibition. The process has various stages which are followed religiously to achieve the desired output. The stages include; concept development, exhibition planning, design stage, pre-production stage, production stage, installation stage, monitoring and evaluation stage. Maintenance comes after the museum has been opened to the public. This process has been in use at the NMK and is still being used. Figure 5.1 shows the process of developing museum exhibitions as used in the United Kingdom specifically the British Museum. The British Museum and NNM have various similarities in exhibition development process. The difference is that at British Museum (BM) the Concept development stage and Design stage are more detailed and comprehensive as compared to NNM. It is quite clear that from Figure 5.1 and 5.2, there is less involvement of other museum users/stakeholders other than museum in-house professionals.

Every exhibition design process starts with an idea and develops through a series of steps to reach completion. As exhibitions are the most visible expression of a museum's mission statement, they require sound planning from the early research through to the

design and evaluation. Research is essential to turn the initial idea into an exhibition. Early research not only provides background information that may justify proceeding with an exhibition, it also provides content for theme panels, object labels and the overall content for the exhibition.

The process of developing an exhibition usually begins with plotting out a few key points including: aims and objectives; target audience; themes and sub-themes (storylines); objects and documentary material; design elements and budget. A structured exhibition with a main theme allows visitors to increase their knowledge as they move through the displays. Permanent exhibitions usually have broad themes that align directly with the museum's interpretation and collections policies. Temporary exhibitions are more focused and contain more details as they usually cover a limited topic or scope.

5.4.1 Conceptualization Stage

This is the first stage of Museum Exhibition Development process. At this stage the concept of the exhibition is birthed, drafted, discussed and adopted. The curator who is the person in charge of museum exhibition is appointed and given a working title to the exhibition. The curator is thus mandated to develop the storyline, identify the exhibition space, prepare an interim budget and more so appoint the exhibition team. This is a typical scenario of how museums in Kenya start off the process of developing museum exhibitions.

In the last 20 years, development of exhibitions has undergone major changes in relation to the organizational structures and processes used to develop museum exhibitions (Kamien, 2002a). Some of the changes include emergence of new types of museums and societal changes according to Kamien. It is during the past years that museums developed their exhibitions using a 'linear" or 'curatorial approach'. This is where one individual, the curator had the sole responsibility for development, implementation and management of the exhibition. It is in this linear model approach where the curator takes total responsibility for the exhibition (Kamien, 2002).

The linear model approach started taking a shift in 1970 due to increased professionalization and specialization among museum professionals (Munley, 1986). Discoveries of complex exhibition techniques and new approaches within exhibitions and

deliberate efforts to incorporate education personnel in exhibition planning have greatly contributed to the shift. This has led to responsibility for exhibition development being shared among multiple players. In scientific based museums and children museums, the focus on audience other than collections plays a vital role. Exhibition development in these types of museums calls for particular and specialized skills in exhibition development process.

The Exploratorium's organizational structure, exhibition development process, and focus on exhibits that "work" for visitors embodied the characteristics of what has become known as the "team approach," in which several professionals interact and share creative responsibility throughout the process. The type of exhibition therefore determines how it will be developed and who will be involved and how they will be involved. Their involvement starts at this critical point of exhibition development. Stakeholders play a vital role at this stage and ought to be incorporated at this initial stage of exhibition development. Not all stakeholders are involved at this stage. Involvement of stakeholders is based on the nature of exhibition being developed.

5.4.2 Exhibition Planning Stage

This stage of exhibition development is mainly characterized by research work. The exhibition team engages in research work to develop a comprehensive storyline. The storyline is broken down into themes and subthemes. An Interpretation workshop is held to pick out possible media from the storyline which include; objects, photographs, maps, paintings, diorama objects, murals, sculptures, audio visual, among other media. This process leads to development of an exhibition interpretation script which is a critical tool in the exhibition development process.

It's at this stage where a budget is updated comprehensively to include construction of showcases; sourcing the objects, design and printing of text and graphics, sculptures, murals, lighting, interactives, audio-visual productions and equipment, mounts and raisers and installation materials. Specific designers are brought on board to start working on the patch plans which shows the exhibition layout. Other components of the exhibition are developed which include design and development of texts and graphic panels, lighting design, interactives and audio-visuals

5.4.3 Pre-Production Stage

Pre-Production stage involves development of all the detailed drawings of exhibition components depending on the nature of exhibition. Contractors for various component of the exhibition are identified to either provide specific services which include construction of showcases, display panels and renovations of the exhibition space. Other key persons out sources at this stage include artists who carry out paintings, develop casts, models dioramas and sculpture works. Three dimensional objects are also sourced at this stage either through purchases, donations and others through loans. This exercise mostly takes place when researchers go out in the field to carry out research work which is in line with the exhibition theme and storyline. A mock-up exercise is done with the objective of fitting the 2D and 3D objects and texts into cases and other display areas.

5.4.4 Production Stage

Production stage involves the physical construction of all the hard components or structures of the exhibition which include; showcases, display panels, mounts and raisers, sculptures, murals, interactives among others. Exhibition texts and graphic panels are also produced at this stage. It is a stage that brings together various service providers who include; various contractors and different designers. During the production stage, the museum exhibition designers alongside curators take the lead in the supervision to ensure that all the structures are produced as per the approved drawings

5.4.5 Installation stage

During this stage of exhibition development process, all the elements of the exhibition are put together in a cohesive exhibition that meets the laid down objectives. Some exhibitions are mounted on walls, others installed in showcases, some are suspended from the ceilings and more so others fixed on display panels. Depending on the nature of exhibitions, some exhibits are displayed on the floor surface in the open for interactivity purposes. Various players are involved in this exercise but in most cases the exhibition designers take the lead. After successfully installing an exhibition, it is eventually opened to the public in an opening ceremony where guests, stakeholders and the public are invited.

5.4.6 Evaluation Stage

Museum exhibition evaluation is a process that commences before exhibition design and continues throughout the life of an exhibition (Mark Walhilmer) .It is the last stage of the

exhibition development process and its purpose is to analyse the communication of an exhibition. Exhibitions are monitored and evaluated to find out the views of the visitors. Once the exhibition has been opened to the public, an evaluation exercise is carried out. Mark observes that evaluation of an exhibition is usually a balancing act where the curators have to balance between visitor comprehension and museum mission and revenue (Mark Walhilmer).

The evaluation process seeks to answer certain questions from the visitors and also the museum staff. Some of the aspects that are addressed during evaluation exercise entail what the visitors gained from the exhibition and what can be done to address the visitor concerns. Based on the comments made by the visitors, the curator alongside the other players can use the information to improve on the exhibition (Kariuki, 2017). Unfortunately, comments made by the museum visitors especially at NMK are usually not actualized and if actualized, it's only a fraction of it (Wanjaria, 2017). The evaluation exercise can be divided into four phase's namely front-end, remedial, and formative and summative evaluations. Whenever an evaluation research is carried out, specific needs of the exhibition and the institution at large are met. Results from evaluation studies can inform how the next exhibition can be designed and developed to avoid repeat mistakes (Wanjaria, 2017). Evaluation for museum exhibitions are of various types as outlined below.

5.4.6.1 Front-End Evaluation

This type of exhibition evaluation is mainly carried out to learn about museum visitors before an exhibition is designed so that there is an understanding of how visitors will be able to respond and react to an exhibition (Benjamin, Haden & Wilkerson, 2010)). The evaluation gives background information regarding the visitor's prior knowledge and gathers their expectations in relation to the exhibition being designed or proposed. The information received during this type of evaluation exercise can be helpful in assuring that the end product which is the exhibition will meet the goals, needs and desires of the visitor. From this evaluation the exhibition planners and developers gain more knowledge of the visitor and their interests in line with the concept of the exhibition. At National Museums of Kenya, front-end evaluation rarely takes place (Kariuki, 2018).

5.4.6.2 Formative Evaluation

Formative evaluation is carried out when the exhibition development process is underway. The exercise is usually a back and forth exercises that ensures that the exhibition developers are comfortable and satisfied with the components being tested. The purpose of this evaluation is to give feedback related to how well the exhibition under development communicates the message and more so to provide critical insights into the communication and learning processes (Martell, 2008).

The evaluation process provides critical information about how well the proposed exhibition will communicate its intended message to the users (Murriello & Knobel, 2008). Visitor responses are usually measured in regard to various components of the exhibition at various levels including the design and construction stages.

5.4.6.3 Remedial Evaluation

This type of evaluation exercise is carried out after an exhibition has officially been opened to the public for consumption. In many instances, once an exhibition is opened to the public, that marks the end of it and the museum developers and designers take a back seat and move on to design other exhibitions (Wachu, 2017). The purpose of remedial evaluation is to address issues that could not have been foreseen during the exhibition development process and determine what can be done in terms of maintenance (Burchenal & Grohe, 2007). The evaluation also helps in informing the museum exhibition team about what improvements can be put in place to ensure that visitors enjoy the museum experience. The museum team uses a number of methods to get the responses from visitors which include; suggestion box, feedback sheets, interviews, observations, comment book, survey amongst other methods (Burchenal & Grohe, 2007).

5.4.6.4 Summative Evaluation

Summative evaluation is carried out to determine the impact of an exhibition once it has been fully installed and opened to the public. More so this type of evaluation provides information on the general performance of a program, how the visitors use it, what they achieve and learn from the programme and how the program changed their lives (Benjamin, Haden, & Wilkerson, 2010).

Various checks are normally put in place in doing the evaluation like documenting the visitor turn outs and carrying out studies to determine what the visitors learned from the

exhibition. Summative evaluation is conducted by various museum users and professionals and is done on a finished product which is the exhibition. The external feedback during summative evaluation is generated from special interest groups and visitors at large. The results generated from a summative evaluation are used to improve future events or activities of exhibition development (Bamberger & Tal, 2007).

5.5 Challenges experienced by museum professionals in designing museum exhibitions

Exhibition designers rarely adopt a single strategy towards the development of museum exhibitions. The nature of exhibitions and exhibition designers play an important part in establishing the approach which guides MEDP. From the findings, one professional (curator) was quotes as follows:

> *The challenge is that we usually have a strong curatorial input that*
> *translates into messages and exhibition but there is no room left in*
> *the creative process to brainstorm on the exhibition's content and*
> *experience with external design teams.*

Hands-on design approach could be a vital in designing museum exhibitions. Consistently following design principles in the process of developing museum exhibitions leads to successful museums (Norman, 1988). Hands-on exhibits are education oriented which involve learners in the act of discovery. This participatory approach to exhibition design is mainly applied especially when designing children exhibitions, children museums and science centres because they are more attractive and inviting (Koran and Longing, 1986). According to Koran, children interact freely and more with interactive or hands on exhibits as compared to adults. This approach to design is also supported by Rosenfeld and Terkel (1982) who in their research found out that many children interacts more with animal and zoo games while adults spend more time reading information.

5.6 Museum development process and learning

Notably, the argument that education should be more interactive in the development of museums is vital. As one of the respondents pointed out;

> *Education plays a larger role in the construction of the image than entertainment. This educative aspect is even essential to museums if they want to compete with other leisure facilities. Museums would lose their distinctive identities if they were transformed into amusement parks (Designer-Mombasa.*

> *In the design process, education is important to help visitors and stakeholders understand the evolution of museums; the cultural values as well as the form of educative leisure (Curator-Nairobi).*

Thus, museum exhibition development as a process should re-thinking education in a more entertaining and experiential way so that it adds value for museums in the leisure market. This is also pointed out by Bitgood, who observes that museums exhibitions should be designed to have both recreational and educational components (Bitgood, 1994). This will ensure exhibitions meet their intended goals and objectives. Moreover, the design process should integrate the role of information, accessibility and atmosphere of an exhibition as shown in example below.

Figure 5.4: Life size mammals on the podium at NNM (Source, Malaki, 2018)

Figure 5.5: Image of a 'Mugumo' tree within the Judiciary museum gallery (Source, Malaki, 2018)

From the findings, it is clear that for any exhibition to be effective, the strategies guiding the museum development process must be consistent with the goals and objectives of the exhibition. Exhibition designers usually have several strategies in mind during the development process of museum exhibitions. Depending of the content and design of exhibitions, different outcomes are always realised.

5.7 Future Museums

The current museum goer is a proactive and smart person. A bigger percentage of museum visitors have digital devices including smart phones while in museum galleries that at times cause them to lose focus and concentrate on the phones especially if they deem that the exhibitions are not engaging (Burchenal & Grohe, 2007). Others are runners especially the children because every exhibit is behind glass which to them implies 'touch not'. For modern museums to lengthen their lifespan, they need to discover interactive ways to engage and hold visitor in the museum galleries for the purpose of learning, getting inspired and being entertained. This aspect is one of the many ways of ensuring that the modern museum remains relevant amidst competition for leisure activities among its visitors (Burchenal & Grohe, 2007).

Provision of different and many interactives within the museum environment are not just enough. The future museums should do more to its visitors in exhibitions by arousing,

fostering, engaging and rewarding the visitor and more the staff. Modern museums include children museums, hub museums, science museums, science centres, and virtual museums among others (Cheng, 2011).

Figure 5.6: Children's Museum in Indianapolis (Source: Children's Museum Indianapolis Site.

Figure 5.7: Children interacting with exhibits at Abu Dhabi Science Centre.

Figure 5.8: Smithsonian National Museum of Natural History Virtual Museum
(Source: Loren Ybarrondo)

Figure 5.9: Interactive Children's Science Museums in Arkansas (Source: Amanda Galiano)

Modern museums should be environments that are welcoming, participatory and interactive. The modern museum visitor wants a museum space that is actively engaging both mentally and physically. They want to participate in museum activities and programmes so that their experiences can be enhance and cause them to make repeat visits. Nairobi National Museum hosted and exhibition in collaboration with Trust for Indigenous Culture and Health (TICAH) which was an interactive exhibition that attracted huge crowds as shown in *Figure 5.10* below. The exhibition was very vibrant

and interactive due to various forms of experiences; visitors were able to have an all-round experience which include; see, touch, hear and smell as they took part in the exhibition activities. The development of the exhibition from the concept stage to its execution was participatory as all the relevant stakeholders including various community members were involved (Agan, 2018).

Figure 5.10: Visitors participating in an interactive exhibition at NNM (Source: Malaki, 2018).

The figure shows an interactive exhibition; which creates a unique opportunity to provide insight and understanding of the museum and its design and its process. In so doing it cultivates an understanding of the importance of design culture at every level of our society. However, in the context of other disciplines such as exhibition and learning, the development of the dedicated design exhibition has been surprisingly slow to realise the potential of a specialised environment with which to communicate to the general public in Kenya.

Thus, in understanding the museum development process in Kenya, the findings demonstrate the opportunity for continued research and refinement into the most effective way to communicate the importance of design heritage to the greater public; as well as investment in exhibition research.

5.8 Museums users' involvement in the development of museums

The second objective of the study was to assess the extent to which museums users are involved in the development of museums in Kenya.

5.8.1 Audience participation in the development museum exhibitions

The research sought to find out the extent to which stakeholders/users participate in the development of museum exhibitions. The question posed was: To what extend are museum stakeholders/users involved in the development process of museum exhibitions? Majority (56%) cited less extent, 20% said not at all, 16% noted moderate extent while only 8% said great extent. Findings demonstrate co-participation within the social context of museum communities is weak and disjointed. As pointed out by one interviewee:

> *Local museums are trying to come up with more effective strategies*
> *to engage with the public. But this is not a priority. Yet, local*
> *museums should also reassess the experiences they offer to visitors*
> *and make sure that they represent the culture and society*
> *(Designer- Kisumu)*

Analysing strategies for visitor involvement, should not only be connected to the notion of museum as a social practice, involving social interaction with other visitors and dialogue with exhibitions but also be considered a dimension of accessibility, firmly linked to the use of the museum as a public space.

The results were in agreement with interview responses as noted below:

> *Prior to the museum's official opening, museums should give the*
> *public special preview events that allow a certain amount of visitors to*
> *take a closer look at the museum's progress. One way is to use both*
> *online and offline platforms to reach the public and to find out what*
> *they might be interested in. But this is rarely done, and if any, it is*
> *done at the final stage and only involves key interest groups (Designer-*
> *Nairobi)*

The response above points to the need for museums in Kenya to re-think the exhibition development processes, and make some critical decisions about consistent involvement of

museums users going forward. Thus, social inclusion is important and makes curators look at the much wider world and then seek out the truth.

5.8.2 Involvement of museum stakeholders

The research sort to identify who museum stakeholders are and the extent by which museum they are involved in the development process of museum exhibitions.

From the research work, it was noted that the involvement of museum stakeholders is very minimal. In most cases they are only involved when validating exhibition content which is mainly done once during the entire exhibition development process.

From the FGD, involvement of different stakeholders was not overly employed. One respondent pointed out:

> *The museum has used researchers, teachers and community groups sparingly. They should engage all users in co-designing (Exhibition Designer-NMK). In most cases the public is called in at the validation of content stage (Exhibition Designer-Mombasa).*

Participatory involvement allows museums to create channels by which outside and inside ideas can be transmitted to and from during the museum design/innovation process. From the FDGs, museum staff and participants reported difficulty both scheduling and facilitating participatory engagement. The initial challenge of finding a time that was mutually convenient for participants to meet was compounded by the challenge of sparking live conversation between groups of 'strangers' from different regions. Barrett (2010) supports the participatory approach for museums and points to the shifts within the museum field on the "new museology" movement. The goals of "new museology" have been to increase community engagement and participation as a response to the institutional critiques of power and elitism in museums.

5.8.3 Challenges of developing museum exhibitions

From the FGDs, a number of challenges related to developing museum exhibitions included:

- Insufficient or lack of finances
- Information overload in some exhibitions
- Lengthy procurement processes that causes unnecessary delays
- Insufficient qualified personnel especially the Education Officers.
- Lack of frequent interactions and linkages with stakeholders during exhibition development process.

Institutional challenges cited included limited finances, flawed procurement process, vested interests from different quarters, limited skilled personnel, staff turnover and lack of equipment. One FGD member pointed out that:

> *Managing visitor expectation as well as institutional priorities to keeping up with global trends in museum design is a challenge. This also emanates from lack of training and exposure. Mapping and synchrony of museum layout is a challenge. In addition, the exhibits have not changed to embrace technology (Researcher-NMK).*

Ideally, training and exposure is vital to audience development strategy to strengthen the relationship with the public, to serve better the general public, and by that increase the museums social value. The process of developing audiences includes various studies and evaluations providing information on visitors and even non-visitors; both the existing and potential audiences, but also on their attitudes, expectations and sources of satisfaction and dissatisfaction.

5.8.4 Importance of Multidisciplinary approach in museum development

Reviews on the Focus Group Discussion (FGD) regarding the importance of multidisciplinary approach showed a number of benefits including;

- Increased revenues due to increased visitation
- Competitive edge
- Meet exhibition objectives
- Create a holistic experience for users
- Create a sense of ownership among stakeholders and in turn repeat visits
- Quality assurance due to using diverse experts in the process

- Experience value for time and money spent.

From the FGDs, participants recognised the changing roles of museums in the 21st century and suggested various approaches to making regional museums in Kenya relevant. A number of suggestions included;
- Opening up museum spaces for dialogue and discussion
- Actively engage target audiences during the development process
- Create awareness for museum exhibitions
- Museum spaces should celebrate culture and identity
- Empower communities and create sustainable livelihoods
- Museums in Kenya should align to the Millennium Development Goals (MDG's) and Vision 2030.
- Use of modern technology in museum exhibitions like QR codes.

5.9 The effect of co-design on the development of museums

The third objective of the study analysed the effect of co-design on museum development in Kenya. Co-design approach projects originate in partnership with participants rather than based solely on institutional goals. A community group may approach the museum seeking assistance to make a project possible, or the institution may invite outside participants to propose and work with staff on a project of mutual benefit. One curator pointed out that:

> *The museum should not work on the "come and help us make it happen"*
> *approach for the public, but rather ask the public for ideas for an exhibit*
> *they would like to make with the museum.*

Ideally, while co-design and collaborative processes are often quite similar, co-design projects should start with community as well as museum needs.

Mombasa: The main operational issues for Mombasa economy enterprise is tourism. As a museum, Fort Jesus exhibits a culture for all generation to experience. This mixture of culture and tourism contribute to accomplishment in attracting significant number of visitors (local and international tourists) as compared to other museums in Kenya.

However, depending heavily on the government financial aids, the museum has limited budget and income to make significant changes that involve advanced technology. As a result, Fort Jesus museum remains solely to educate and inform on history. The need to be more imaginative in attracting visitors to their museums, and by using ICT applications and fresh ideas can help it to become competitive with other tourism attractions in Mombasa like Haler Park, Mamba Village, Wild Waters among other social places.

> *Most of the time, the tour follows an already established script, validated by the museum's education department. As a guide myself, factors like logistical issues in the galleries (space and time are usually scarce), but also economic aspects at stake for the guide and the museum (Curator-Mombasa).*

Kisumu: Kisumu museum exhibits culture and history as well as organised activities, program and workshop for public to take part. Some of the programs are organised to encourage more people to get involved in tourism industry by having their own businesses so that they can generate their own financial resource. As a cultural institution, major focus is still on their traditional roles to preserve and safe guard the regions' valuable cultural artefacts, and collections. However, with the rapid changes in Information and Communication Technology (ICT) globally, change is necessary to make their existence competitive and viable in the market particularly in competing with other tourism attractions.

One respondent pointed out that;

> *The space has an impact on those who attend the space. We have to create the right environment that would facilitate the kinds of participatory discussions that visitors also wish to have. If you really want to be talking to people go to where they are and therefore we have to reach out to the public even through social media (Curator-Kisumu).*

5.9.1 Application of co-design in museum development /exhibition process

The third objective of the study ought to determine the effect of co-design on the development of museums. On whether co-design strategies were used, results showed 14% said-Yes while 86% said-No. One respondent was quotes as follows:

Co-design can be effective if exhibitions are systematic and focus on usage of latest technological strategies. The process should be approached as a business model where the visitor is the king. Focus should also be on contemporary exhibitions. In most cases, resource persons like university professors and museum end-users are neglected (Researcher-NMK).

In most cases, the public is not engaged in co-design strategies on what kind of information should be provided in the exhibition or not. The public is seen as a visitor and not a contributor (Researcher-Kisumu).

Co-design is key but we museums have not effectively utilized it because the public are left only to e spectators; Museum have not aligned the design process of confirming that all stakeholders (staff, students, volunteers, and visitors) share a similar vision of developing making museums of the future (Researcher-Mombasa).

These findings also had some interesting implications for questions of museums and role of the public/visitor; that is, the extent to which audiences perceive what they are being told as 'true' or 'trustworthy', and to the linked matters of which museums command most attention.

As various researches has shown museums in general are generally and widely perceived as authoritative institution.

Despite the emphasis on audience participation and accessibility, results show the public is rarely engaged in this planning and implementation phase. Despite the crucial roles that museums take on in societies, results demonstrate that participation is still an on-going issue within the local museum scene in Kenya. There also appears to be a growing disconnect between the museums value in Kenyan society and its people. The information gathered from the interviews indicates museums across Kenya are often seen as ancient temples that work to document historical artefacts. One key informant was quoted as follows:

While preservation is indeed an important role associated with museums not many Kenyans necessarily treat them as meaningful assets that can actually bring a lasting societal impact. The lack of appreciation for visiting in museums limits people from understanding the extensive role art plays in today's society (Curator- NMK).

I think we are at a point where we have to rethink those processes, and make some decisions about what we want to do and what we want to collect for the future. On the whole, museums have remarkably lost their nerve about collecting, and lost the purpose of collecting; it's ceased to become the main purpose. They have become much more concerned with trying to communicate, trying to provide access, trying to reach new audiences, trying to educate, and they are much less concerned about actually acquiring and actually adding to those collections (Curator-Mombasa).

Exhibition design has evolved and it needs collective efforts and effects. Co-design can makes exhibition design an intensified and inclusive but it has often been left to professionals alone (Curator-Kisumu).

One conclusion of this review is that any exhibition offers an exciting potential to explore the interconnections of design and visiting. Thus, co-design solutions as well as facing some difficult challenges provides excellent opportunity to engage with some of these strategies to make museums effective in their future developments.

From the focus group discussions, participants acknowledged that in many instances financial considerations often linked to government targets, influenced the choices museums made in terms of prioritizing their collecting, research and interpreting activities. However, there was healthy debate in regard to the need to keep collecting with a view to contemporary relevance and the future, and on the other hand, a need to manage collections sustainably by considering alternative conservation and research strategies. And finally, though there was general agreement that museums should excite, thrill, fascinate and inspire audiences with real objects, there was a particular resolve for

museums to maintain both a rigorous and scholarly knowledge of their own collections, and a continually questioning approach to their own mission.

5.9.2 Exhibition content and their importance to museum users

On whether the exhibition content developed is relevant for the wide range of museum audiences, the interview results from curators and museum researchers revealed conflicting responses. While curators expressed growing trends for new ways to enhance visitors' experience, researchers interviewed argued that new plans to motivate visiting and influence perception about museum are still weak and disjointed.

One museum researcher noted:

> *Museums should consider the certain aspects of perspectives of a visitor in relation to objects on displays, spaces of museum to make museum more attractive for visitors (Designer-NMK).*

> *The challenge to meet public's expectations and be a place for ambitious study and conservation of cultural treasures;-I think we have missed a point to offer a reflection of the socio-cultural image; and remain both innovative and respectful of traditions (Designer-Mombasa).*

> *Museum plays a pivotal role in our society because they shelter and safeguard our heritage and contribute to the re-telling of our history. But today the internet means we have to re-define museums as a social space and a space for experience and exchange-this is lacking since youth are not visiting museum (Designer-Kisumu).*

This explains the ideal role of exhibition and co-design. Similar studies have demonstrated the interaction between the visitors and its surrounding environment in museums to evaluate precisely effects of design on the visitors' perception during the time he/she is discovering the built environment of museums.

Museums, like other public institutions are getting more concerned about interior space in order to develop their strength in learning fields and also to give a better feeling to their

visitors. It should be noted that museums are not common public places. They carry a huge cultural heritage of the world behind themselves which should be applied to promote human culture. They are knowledge centres to inform visitors as well as to serve them comfortably. So, the museum curators and designers should plan to increase the number of audiences.

More broadly the exhibition goal is thought to include such disparate activities as arousing curiosity, stimulating imagination and creativity, affirming identity, developing interpretive skills, raising levels of taste, inculcating ideas about culture, teaching history, expanding horizons, providing informal learning opportunities, evoking personal epiphanies, arousing aesthetic and emotional responses, etc.

> *The museum communicates very powerfully and so museum professionals should translate people's response into something that is going to inspire the imagination of people who have the opportunity to actually see the objects (Education Officers-NMK).*

> *There is progress towards development of museums; but they are often criticised for furthering personal agendas instead of being institutions ostensibly created for the good of society, although this increasing degree of privatisation is giving rise to audacity and to new ideas on how future museums could function (Education Officers-Kisumu).*

> *The gap lies in the understanding of visitor expectations, and experiences, of visiting a museum. However, for the most part, public museums have concentrated their research efforts into obtaining statistical data which measure through-put and provide demographic profiles, ignoring in the process the nature of the experience itself Education Officers-Mombasa).*

In the concept of co-design in museum, the three fundamental functions of collection, research, and public program are intimately bound up with one another, and the museum's management, usually its director, strives to create and maintain an appropriate balance among them. That balance usually determines the style and character of the

museum and can vary widely. From the results of this research, it seems that these three dimensions are, on average, not well balanced in the three case studies museums.

Visitors can be part of the design process by collaborating from the very beginning of the exhibition and its concept (Friess, 2008) or by providing the objects that make up the exhibition. On many occasions, museums have invited communities to contribute before opening the exhibition to the general public. For example, the Victoria & Albert Museum in England held an exhibition named *People's Show* (Bath & North East Somerset, 2003) in which a group of visually impaired individuals chose objects from within the museum's collection to be exhibited and brought some of their own. In Finland, the Helina Rautavaara Museum invited teenagers to contribute their own objects, music, and ideas to the exhibition *Live Your Life* (Helinä Rautavaara Museo, 2008). At the London Science Museum, visitors were invited to bring their own toys in the museum spaces (Simon, 2007)

Another way for visitors to participate is by making content that is later used to make the exhibition. An example of this type of participation was the case in which The Portrait Gallery of Canada invited people to make a portrait and made a collection out of the visitors' contributions (Libraries and Archives Canada, 2008). In the same line, Void Gallery organised the event "today you are an artist" in which an artist and the public made the content material for an exhibition, (Derry Journal, 2009). In the specific cases analysed in this thesis, museum staff, visitors and external collaborators commented on an exhibition's content both online and at the museum during the time that the exhibition was on show. The museum community created content has the role of being the interpretative material that helps to connect the visitors with the exhibition content.

5.9.3 Challenges of integrating co-design in museum development

A number of challenges were cited that limit museums in applying co-design in development of museums. The research further sought to establish challenges museum professionals (researchers, designers, curators, education officers) experience when developing museum exhibitions.

The difficulty curators' encounter is the challenge to collect for the future, unaware of the values and interests of forthcoming generations. The connection with issues in terms of society's understanding of the meaning of events is lacking (Administrator-NMK).

Management gaps play a major role in enhancing marketing promotions for exhibitions in our museums; we need change toward more inclusive practices and modern learning processes to be able to influence the kinds of change that people need (Administrator-Mombasa).

Museums in Kenya are still serving the visitors in a traditional style. Visitors' needs, such as young generation have a different taste; yet, the museums do not update the methods in which they present objects in displays. For example, although there might be some objects of great significance, they could be completely neglected because of bad design in presenting them (Administrator-Kisumu).

The responses above imply that the museum designers should try to attract visitors, which are not easy to achieve, and they cannot be successful otherwise they employ creative methods to give the visitors a good experience. It is clear that changing the way the museums are designed could result in an increased number of visitors. One curator noted:

Some people never come back to visit museums again because there are no new experiences to be explored, interior spaces of museums are not attractive for them and or it doesn't connect to current issues.

Museums have changed through the time. Visitors have different expectations about museums. The roles of museums as educational institutions have been changed. Today, visitors would not go to museums only for purpose of learning; they also go for spending time and entertainment. Interior spaces of museums should facilitate the establishing of a pleasant environment to satisfy visitors. One of important way in attracting visitors in museums today is design of interior spaces of museums. This process follows by a crucial

need to define optimized design principles which allow for further changes in either internal or external architecture of museums. It is worth noting that the visitors' perception of a museum visit should be understood by the designers. One museum exhibition designers noted:

> *Museums in particular are challenged by the way they design and transform themselves into inclusive and inviting spaces for all visitors including persons with disabilities. Being inclusive as a society necessitates that museums take into consideration the needs of the minority, provide access and awareness for all.*

In line with the above response, co-design strategies should empower all users to take the lead and seek their inputs in creating environments that are accessible as per their needs. Visitors of all abilities should be able to access, interact and engage with cultural spaces with the least number of barriers. Technology can play a significant role in reducing this gap between ability and accessibility, and thus a priority area for research in implementing co-design strategies.

Ideally, the importance of contemporary museums to offer space adaptable to the country's modern art collections is important in strengthening the local systems of museology.

> *Most of our museums lack adequate infrastructure with international standards that can foster dialogue, collaborations and connections with collections and artists from different countries. This gap makes it hard for museums in Kenya to stand out as internationally recognized institutions. They should offer alternative ways of seeing the world around them.*

Indeed, the argument above demonstrates the task facing regional museums in Kenya: Their role to earn and retain the public's trust as a place of intellectual and moral integrity committed to broadening and exploring new forms of social engagement is challenged by limited infrastructure. Museums are working in an environment where the generations that are now potential visitors don't necessarily approach history in the same ways as older generation. Ideally, museums need to be aware of this, and adopt new techniques.

The culture of museum-going is not yet embedded in Kenya. Despite the crucial roles that museums take on in societies, it is no secret that participation is still an on-going issue within the regional museum scene. There also appears to be a growing disconnect between the museums' value in Kenyan society and its people. As one respondent noted:

Museums across Kenya are often seen as ancient temples that work to document historical artefacts. This idea limits people from understanding the extensive role museums plays in today's society.

From the foregoing, it is evident that museums in Kenya should also reassess the experiences they offer to visitors and make sure that they represent the culture and society. The museum landscape is inherently determined by how well organizers explore the intersections between space, art and audience. Given that the concept of the museum is in constant evolution, museums in are indeed constantly confronted by the challenges of creating spaces that cater to the artists and how they wish to work, and also the audience and how they wish to actively engage with art.

From the FGDs, time constraints, limited finances, the know-it-all attitude of museum employees, ignorance and neglecting audiences when designing and creating programs were cited as major challenges to development of regional museums in Kenya.

Museums offer public cultural aspects but they have not been under constant development. The public dimension and accessibility to the cultural heritage is disjointed and visitors are strangers to museum development plan.

5.9.4 Implementing Co-design in development of successful museum exhibitions

A number of suggestions were given from Focus Group Discussion on how to implement Co-design in development of successful regional or county museum exhibitions. As follows:

- Institutions have to adopt a co designing model for implementing its exhibition development
- Bringing on the various co-designers at various stages of the exhibition development.
- Creating awareness on co-designing as an opportunity for the general public
- Capacity building of various staff e.g. Curators, researchers, education officers and exhibition designers on the benefits and process of co-designing.
- Working with communities to create ownership of museum exhibition development
- Working with school groups; children, students and teachers in the process of developing museum exhibitions.

There is need for museums to change exhibition development strategies by opening up museum spaces and developing interactive exhibitions for all. This can be made possible by actively engaging the users actively. Little documentation is available on the ways in which museum users can be actively engaged in developing exhibitions. There is need therefore for museums to develop a culture of inclusivity in developing museum exhibitions to enhance experiences that are lasting to their varied audiences and users.

5.10 Conclusion

These findings provide insight into the current status of the role of museum and co-design in development of effective museum exhibitions in Kenya. While the process of developing museums show stakeholder engagement, co-design strategies have not overly succeeded in utilizing focused collaboration and implementing successful user/visitor experiences. There is thus need to creatively engage visitors and the public during the process of developing museum exhibitions. However what needs to be addressed is who comes when in the entire design process.

CHAPTER SIX

SUMMARY OF FINDING AND RECOMMENDATION

This chapter presents a summary of findings, conclusions, recommendations and suggestions for further research based on the results of the research. The findings were thematically based on the objectives of the research.

6.1 Proposed Co-Design Framework for Development of Museums in Kenya

6.1.1 Concept Development

For effective development of museum exhibitions, the exhibition development process should be spear headed by a multi-disciplinary Exhibition Development Committee (EDC) which should be made up of; researchers, curators, exhibition designers, education officers and museum administrators. It is at this stage of exhibition where the concept is developed before sharing out with other museum stakeholders for their input. This process begins with an exhibition proposal model. An exhibition proposal is made and reviewed based on the topic, significance and relevance to the museum's mission and vision. In the new proposal, the consumers of the exhibition should be engaged at this point of development process for their input and validation.

6.1.2 Exhibition planning Phase

Once the overall concept is defined, the Exhibition Development Committee (EDC) recruits other museum users to contribute artefacts or stories, perform research, and provide outreach programming for the exhibition. Meanwhile, the museum staff provides support in design, research, and community facilitation. As observed earlier from the findings, involvement of the public is mainly done at the final stage for validation purposes. In the proposed framework, mostly the in-house museum professionals should be involved at this stage. This is mainly in regard to planning the exhibition especially if it is a permanent exhibition.

6.1.3 Research

Research in exhibition development process ensures that the relevant information about the exhibition is gathered and exhibited. Researchers are the persons responsible to

research into a certain concept of the exhibition and develop content material. It is from research, that the scope of the exhibition is determined. Exhibition research is a process and goes beyond the research phase. Research can be handled in different ways including; desktop research, field research, interviews, benchmarking trips, workshops among many other ways of collecting data. In the proposed co-design model, involvement of museum users like the local communities is vital as it may lead to;

- Increase in return visitation.
- The users may become members and friends of the museum that's creating ownership.
- Increase in participation in museum programs.
- Visitors see something of themselves in the exhibition.
- Visitor participation in contribution of artefacts and stories to the exhibition.
- Co-design and community partnership becoming a way of life, from conception of an idea to exhibition installation.
- Skill and relationship building for future museum and community projects.
- Increased dialogue and community participation

6.1.4 Schematic design phase:

The schematic design phase commences while the design team shares several personalized contents, co-produced with visitors. At this phase, users are invited to enrich the schematic design prior to fabrication of exhibition structures. At the design, pre-production stage and production stages, stakeholder design workshops play a vital role in generating the desired information.

6.1.5 Installation stage

This is the final stage of exhibition development where all the exhibits are installed in an orderly manner as per the mock-up plans. It is thus critical to engage the content developers especially the curators and researchers to validate the exhibition materials prior to installation. Engaging the concerned parties at this stage ensures that the work is done satisfactorily and eliminates chances or redoing the work which can lead to wastage of time and resources. It is therefore after the exhibition content has been validated that the exhibition materials are finally installed. Initially only designers were the once

installing the exhibitions. It is therefore proposed that all parties that took part in developing the exhibition participate during installation.

6.1.6 Evaluation stage

Evaluation of installed exhibition is usually carried out to determine the success of the exhibition. From the findings, this stage of the process is often forgotten yet it is very critical. It is thus proposed that every new exhibition should be evaluated three months after opening so as to ascertain if the initial intensions and objectives of the exhibitions were met. This can be done through various ways including; holding stakeholder's workshop, suggestion box, using visitor comment books and more so interviewing the visitors after the museum tour. All the approaches mentioned above are attributed to museum users who give the feedback. The feedback can be used to improve the exhibition in terms of content, layout design, showcase design, graphic design among other attributes of exhibitions.

6.2 Conclusion

The design process does not offer space adaptable to the visitors' expected experience. Lack of innovativeness and limited stakeholder engagement makes it hard for regional museums in Kenya to stand out as recognized institutions. Co-participation within the social context of museum communities is weak and disjointed. Despite the emphasis on audience participation and accessibility, results show the public is rarely engaged in the planning and implementation phases of exhibition development process. This limited participatory involvement has meant that museums in Kenya have lacked effective channels by which outside and inside ideas can be transmitted to and from during the museum exhibition design process. Creating awareness on co-designing is an opportunity for the general public to participate which eventually leads to ownership. Capacity building of various staff including; curators, designers, researchers on the benefits and the process of co-designing is vital.

The present research highlights the role of co-design and existing gaps regarding the relevancy of museums and community/public engagement in Kenya. The experiences of the three museums under study specifically point out the need to view change toward inclusion not as a one-time endeavour, but rather, as an on-going process that is embedded within the work of a broad range of organizational areas.

A strategic and interactive people-centred process of seeking the active involvement of relevant museum stakeholders in the framework is reviewed. School going groups mainly consume museum exhibitions and are critical stakeholders who should be incorporated at various stages of exhibition development process. Other stakeholders include the community, friends of the museum, local and foreign tourists, museum guides, and teachers among others. A summary of the proposed co-design framework is provided in Figure 6.1.
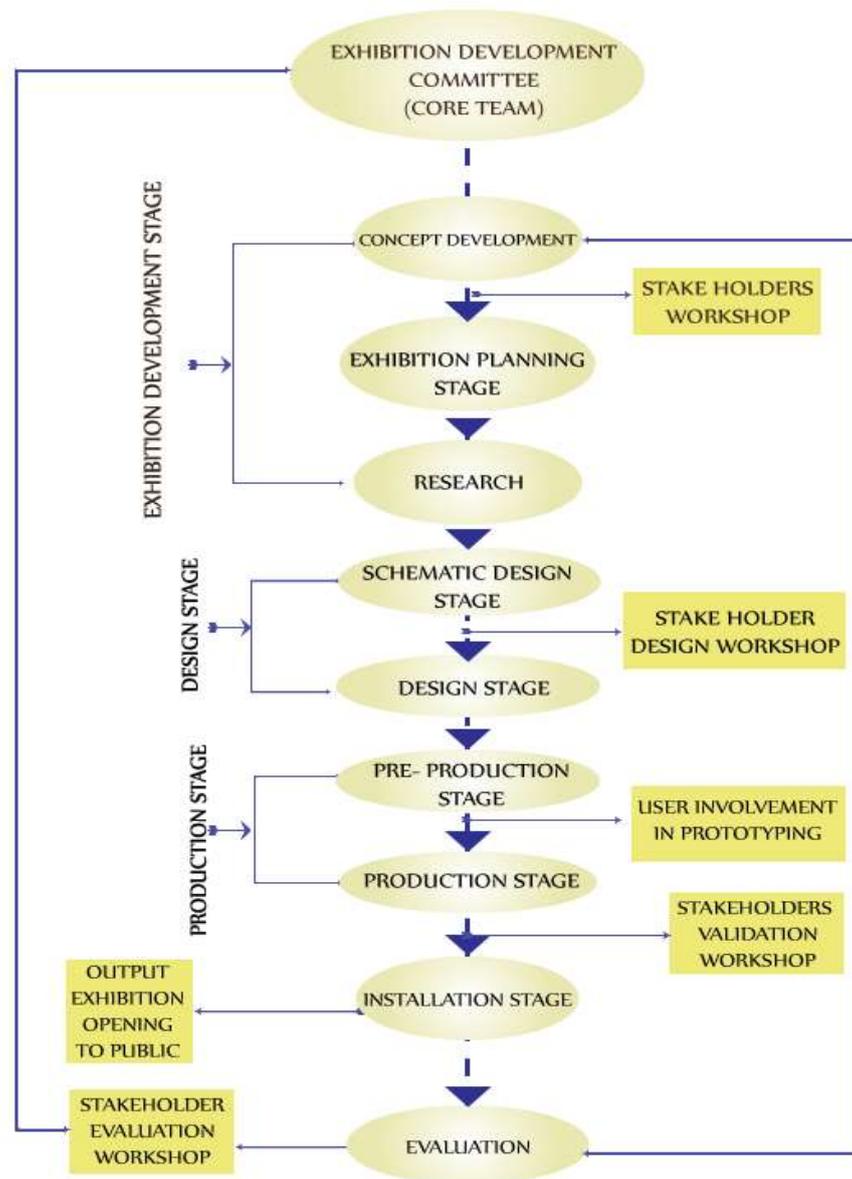
Figure 6.1 Proposed Co-Design Framework for development of Museum Exhibitions in Kenya (Source: Malaki, 2018)

6.3 Recommendations

Recommendations made in this section were derived from the conclusions about the research findings as presented in the previous section and focus on the direct interventions.

i.   **Implementation of Co-Design strategies**

The significance of co-design in the planning process of developing museums exhibitions can be achieved through appropriate institutional measures that ensure museums facilitate change toward inclusion of museum users in the development of museum exhibitions. This will create a sense of ownership and open up museums spaces for dialogue. This idea should be mainstreamed to all regional museums in Kenya.

ii. **Advocacy and Partnership:**

There is need for museums in Kenya to forge an effective relationship with local media to develop its audiences as its exhibition and events programmes. Recognition of this role of the popular media is a core requirement of the modern museum. Enhancing partnerships with scores of agencies, including youth services, health services, community services, disability agencies, libraries, associations, environmental agencies, enterprise boards, and learning institutions can help museum in areas where it may well be short in expertise. Thus museums should descend from their Olympian intellectual heights where objects speak for themselves, and engage with people who have different kinds of knowledge, insight and wisdom, to the benefit of all.

Museum branding is critical to strengthen identity and adopt appropriate strategies aimed at highlighting the unique characteristics of the artefacts and their stories. A combined approach is required, integrating museum experts with a wide range of design experts, from the fields of design, researchers, multi-media, artists, communities and stakeholders, as well as design for innovative models of interaction between visitors, the environment and artefacts.

iii. **Funding:**

The research established existing gaps relating to resources allocation influencing successful implementation of museum activities in the regional museums. Therefore, political action and adequate engagement of the private sector are now vital especially with the devolved system of government. While Government increase in funding is warranted, the research recommends the need for policy makers in government ministries involved to accelerate the learning and discovery process of capacity issues, requirements, and constraints, and reduce hidden risks inherent in long-term strategies that lead to resource wastage. A new approach to generate stimulus and momentum for museums in Kenya is timely for implementation.

iv. **Museums as Innovation Platforms:**

There is need to foster innovation and training, specifically, technology, digital engagement, the web, social media, and games to be seen both as subject matter and as the new means for widening access and enriching learning experiences in museums. The management within museums in Kenya need to create contexts through which visitors and learners are able to explore what this means. This can be enhance through creating opportunities for exploring the potential of technology for re-interpreting contents and creating meaning that can be shared with the world. At the same time, it means that museums should insist on talking about cutting-edge scientific developments, upcoming research questions, and the nature of science, however difficult, controversial or upsetting the discussion of all this might be - because they are among those institutions able to bridge the gap between contemporary science practice and the history of science.

6.4 Suggestions for Further Research

The results of this research have shown that lack of integrating co-design strategies in the design and development of regional museums can be a barrier to build ground for museums' role in society. In doing so, this research has stressed the importance of further research into the topic of co-design and the changing roles of museums in Kenya.

i. A research on the multi-cultural composition of society and museum development is needed. A research that focuses on the specific cultural, strategic and operational realities and challenges faced by museums in Kenya and Africa is required for comparison purposes.

ii. A research to establish the effect of technology and innovation on museum user-experience is necessary and needed.

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APPENDICES:

Appendix I: Interview Question Guide for the General Public

UNIVERSITY OF NAIROBI

School of the Arts and Design: MA. DESIGN

Registration No: B51/88819/2016   **Serial No………………..**

I am **Malaki Samson**, a student at the University of Nairobi pursuing a Masters of Arts Degree in Design. I am carrying out a research titled **"Co-Design in the development of effective regional museums in Kenya".**

Kindly complete this questionnaire as accurately as possible to help me collect the necessary data for my research work.

All the information given here in will be used for research purposes only and will be treated with uttermost confidentiality.

Demographic Information (Section- 1)

Name………………………………………………………………………………………

Gender: Female [   ]   Male [   ]

Age: (20-30) [   ]   (31-40) [   ]   (41-50) [   ]   Above 50 [   ]

Nationality: Kenyan [   ]   Non-Kenyan [   ]

If Kenyan, please state your County of origin………………………………………......

If Non-Kenyan, please state your Country…………………………………………………

Gallery Information (Section- 2)

1). Have you visited this museum before?   Yes [   ]   No [   ]

If yes, how many times? Once [   ]   Twice [   ]   Thrice [   ]   More than 3 times [   ]

2) What motivated you to visit the museum today?

Leisure & Fun [   ]   Educational [   ]   Inspirational [   ]   Personal interest [   ]

3) Approximately how long have you spent in the museum?

10 to 30 minutes 〔 〕   1hour 〔 〕   2hours 〔 〕   More than 2 Hours 〔 〕

4) Which gallery(s) did you visit during the tour of the museum? (Tick the ones visited).

Hall of Kenya	〔 〕
Great Hall of Mammals	〔 〕
Cycles of Life	〔 〕
History of Kenya	〔 〕
Birds Gallery	〔 〕
Cradle of mankind	〔 〕
Currency Gallery	〔 〕
Joy Adamson Gallery	〔 〕
Temporal Art Gallery	〔 〕

5) How was the experience after touring different galleries? (Tick the boxes shown).

Galleries	Most Interesting	Least Interesting
Hall of Kenya	〔 〕	〔 〕
Great Hall of Mammals	〔 〕	〔 〕
Cycles of Life	〔 〕	〔 〕
History of Kenya	〔 〕	〔 〕
Birds Gallery	〔 〕	〔 〕
Cradle of mankind	〔 〕	〔 〕
Currency Gallery	〔 〕	〔 〕
Joy Adamson Gallery	〔 〕	〔 〕

Temporal Art Gallery　　　　　( )　　　　　　　( )

6).Was your expectation (s) met after the museum tour?

Yes ( )　　　　　No ( )

7).What would you want to see improved the next time you visit the museum?

Exhibits ( )　　Lighting ( )　　Colour ( )　　Display techniques ( )

Charges ( )　　Interactives ( )　　Texts ( )　　Tour guiding ( )

Showcases ( )　　Audi-Visual ( )　　Signage ( )　　New Exhibits ( )

8).What type of tour did you have?

Guided tour ( )　　　　Self- guided tour ( )

If self-guided, why did you choose that option?

………………………………………………………………………………………

9). How was your general experience after the museum tour?

Inspiring ( )　　　Exiting ( )　　Boring ( )　　Tiring ( )　　Educative ( )

10). Do you think museum visitors should be involved in developing museum exhibitions?

Yes ( )　　　　　No ( )

If yes, how can they be involved?

....

....

Additional comments

....

Appendix II: Interview Question Guide for Museum Researchers

UNIVERSITY OF NAIROBI

School of the Arts and Design: MA. DESIGN

Registration No: B51/88819/2016   **Serial No………………..**

Name………………………………………………………………………

1. What is your main role in the museum?

2. Why is it importance to carry out research during the process of developing museum exhibitions?

3. At what stage(s) are researchers involved in the process of developing an exhibition?

4. How do you carry out research for museum exhibitions and who do you involve?

5. What should be done to museum exhibitions to enhance learning?

6. Do you think it's important to have museum exhibitions developed and designed on the principle of user centeredness? If yes, why?

7. With the rapid increase in alternative social places, what do you think the museums should do to remain relevant?

8. How can museum users be involved in the development process of museum exhibitions?

9. What should researchers do to ensure that the exhibition content developed is relevant for the wide range of museum audiences?

10. What challenges do you experience when conducting research for museum exhibitions?

11. What conflicts if any have you experienced when working with other museum professional in developing museum exhibitions?

Additional Comments:.………………………………………………………

Appendix III: Interview Question Guide for Museum Exhibition Designers

UNIVERSITY OF NAIROBI: School of the Arts and Design: MA. DESIGN

Registration No: B51/88819/2016   Serial No………………..

Name…………………………………………………………

1. What is your main role in the museum?

2. How long have you been developing and designing museum exhibitions?

3. At what stage(s) are exhibition designers involved in the process of developing an exhibition?

4. Who are the museum users and have they been involved in the development process of museum exhibitions?

5. According to your assessment, what type of experience do pupils and students get from the museum exhibitions at the National Museum of Kenya?

6. What challenges do you experience when designing museum exhibition?

7. What should be done to museum exhibitions to enhance learning?

8. Have you ever designed an exhibition where all key stakeholders/ users were involved from the start to the end? If yes, how did you involve them?

9. Do you think it is important to have stakeholders/users participate in the development of museum exhibitions? If yes/ no, why?

10. What is the level of interactivity if any in museum exhibitions you have developed?

11. With the rapid increase in alternative social places, what do you think the museums should do to remain relevant?

12. Do you think is important to co-design museum exhibitions? How best can this design approach be carried out?

Additional Comments…………………………………………………………

Appendix IV: Interview Question Guide for Museum Education Officers

UNIVERSITY OF NAIROBI: School of the Arts and Design: MA. DESIGN

Registration No: B51/88819/2016   **Serial No………………..**

Name………………………………………………………………………………………

1. What is your main role in the museum?

2. How long have you worked for the museum?

3. Why is it importance to have an education department in the museum?

4. At what stage(s) are education officers involved in the process of developing an exhibition?

5. How do school groups learn from museum exhibitions?

6. What should be done to museum exhibitions to enhance learning among school groups?

7. Do you work alongside teachers in developing museum exhibitions? How are they involved and what is their importance?

8. How can museum users be involved in the development process of museum exhibitions?

9. What challenges if any do you experience when developing museum education programs?

10. What educational programs should the museum put in place to remain relevant in the 21st century?

11. What conflicts if any have you experienced when working with other museum professional in developing museum exhibitions?

12. What is your opinion in regard to museums adopting user-centred approach in developing museum exhibitions?

13. What is your take in developing and designing children exhibitions and more so children museums in Kenya?

APPENDIX V: Interview Question Guide for Museum Curators

UNIVERSITY OF NAIROBI: School of the Arts and Design: MA. DESIGN

Registration No: B51/88819/2016   **Serial No………………..**

Interview Question Guide for Museum Curators

Name…………………………………………………………………………………

1. What is your main role in the museum?

2. How many museum exhibitions have you curated?

3. At what stage(s) are museum curators involved in the process of developing an exhibition?

4. Do you conduct visitor survey at the museum? If yes, how? If no, why?

5. What are the factors that contribute to decline in the number of museum visitors?

6. What role should curators do to encourage new visitors and repeat visitors in the museum?

7. Do you evaluate museum exhibitions? If yes, what is the purpose?

8. What is the level of interactivity if any in museum exhibitions you have curated?

9. With the rapid increase in alternative social places, what do you think the museums should do to remain relevant?

10. Do you think is important to co-design museum exhibitions? How best can this design approach be carried out?

11. How can museum users be involved in the development process of museum exhibitions?

12. What challenges do you experience when curating museum exhibitions?

Additional Comments:

………………………………………………………………………………………

Appendix VI: Focus Group Guide

UNIVERSITY OF NAIROBI

School of the Arts and Design: MA. DESIGN

Registration No: B51/88819/2016   **Serial No………………..**

Target: Museum Professionals

No. of Participants: 7 Museum Officers

(2 Exhibition Designers, 2 Researchers, 1 Education Officers and 2 Curators)

Focus Group Goals:

1. Evaluation of existing exhibitions at Kisumu, Fort Jesus and Nairobi National Museums.

2. Examine the level of participation of museum users in developing museum exhibitions.

3. Examine the importance of multi-disciplinary approach toward developing museum exhibitions.

4. Examine the challenges of developing museum exhibitions?

5. Discussions on the changing roles of museums in the 21st century and making them relevant.

6. Recommendations on the importance of Co-design in development of successful regional or county museums.

Appendix VII: Focus Group Guide for Museum Professionals and Teachers

UNIVERSITY OF NAIROBI: School of the Arts and Design: MA. DESIGN

<u>**Registration No: B51/88819/2016**</u>   **Serial No………………..**

Target: Museum Professionals and School Teachers

No. of Participants: 7 Museum Officers

(3 Teachers, 1 Exhibition Designer, 1 Researcher, 1 Education Officer, 1 Curator)

Focus Group Goals:

1. Evaluation of existing exhibitions Nairobi National Museum.

2. Evaluate the level of museum interactivity and its impact on learning among pupils and students and how to improve the same.

3. Examine the challenges pupils, students and teachers get in interpreting museum exhibitions.

4. Discuss how teachers and students can participate in developing museum exhibitions to enhance learning.

5. Discussions on the changing roles of museums in the 21st century and making them relevant.

Structure of Focus Group Sessions

1). Preliminary

- Introduction of participants

- Overview of focus group sessions

2). Individual Assessment

- Gallery tour, Evaluation and findings

3). Group work

4). Analysis.

Appendix VIII: Participants Consent Form

UNIVERSITY OF NAIROBI

School of the Arts and Design: MA. DESIGN

I am **Malaki Samson**, a student at the University of Nairobi pursuing a Masters of Arts Degree in Design. I am carrying out a research titled **"Co-Design in the development of effective regional museums in Kenya".**

Kindly complete this questionnaire as accurately as possible to help me collect the necessary data for my research work. All the information given here in will be used for research purposes only and will be treated with uttermost confidentiality.

Thank you.

Participants Name:

………………………………………………………………………………………

Signature:

………………………………………………………………………………………

Date:

………………………………………………………………………………………

Appendix IX: Map of Kenya showing distribution of Regional Museums and Site Museums
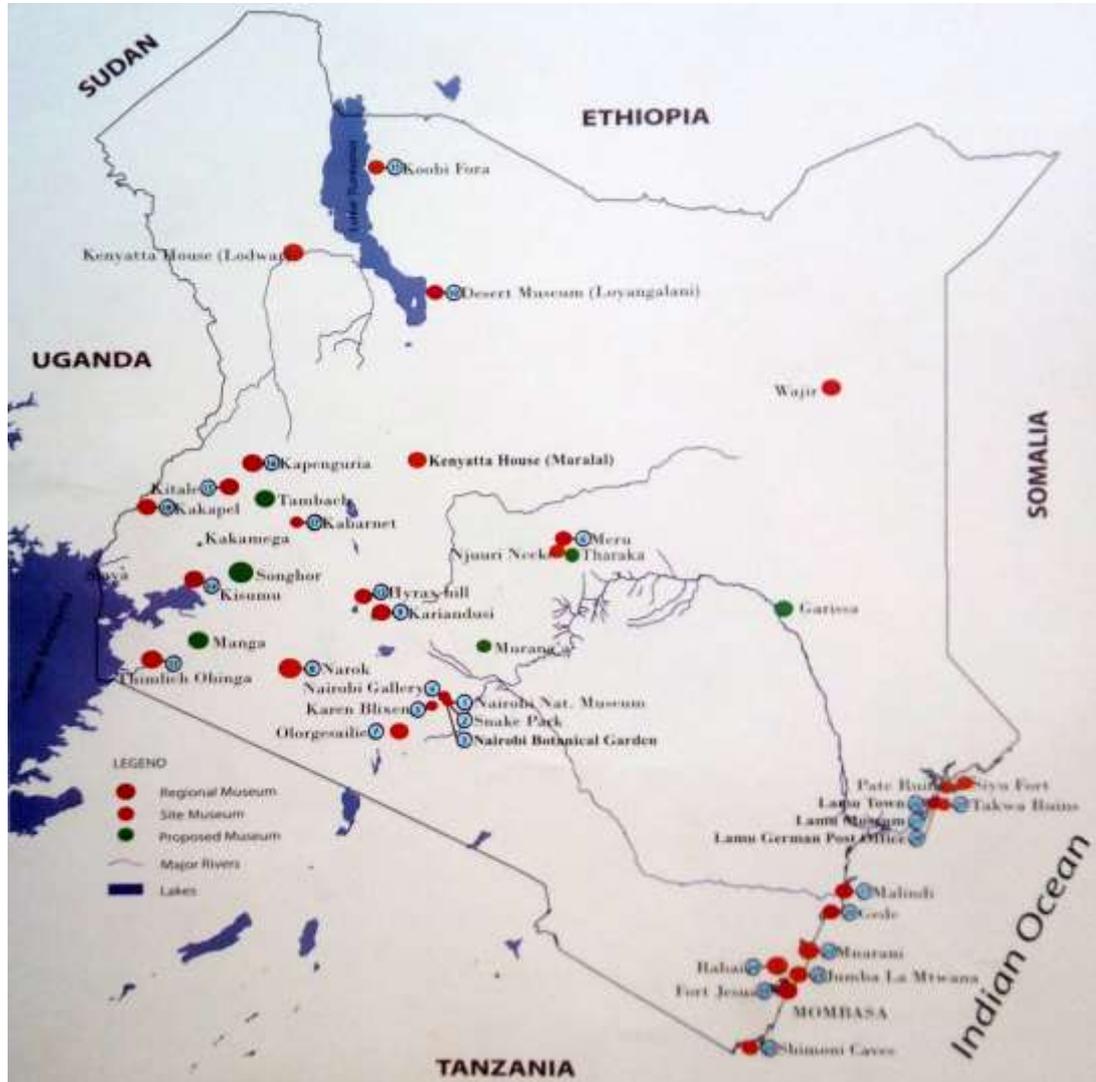
Distribution of Regional Museums and Site Museums in Kenya (Source: NMK Archives, 2018)

Appendix X: Physical Location of Fort Jesus Museum in Kenya

Aerial view of Fort Jesus Museum (Google Maps, 04/04/2018)

Appendix XI: Physical Location of Nairobi National Museum in Kenya

Aerial view of Nairobi National Museum (Google Maps, 04/04/2018)

Appendix XII: Physical Location of Kisumu Museum in Kenya

Aerial view of Kisumu Museum (Google Maps, 04/04/2018)

Appendix XIII: Focus Group Discussion
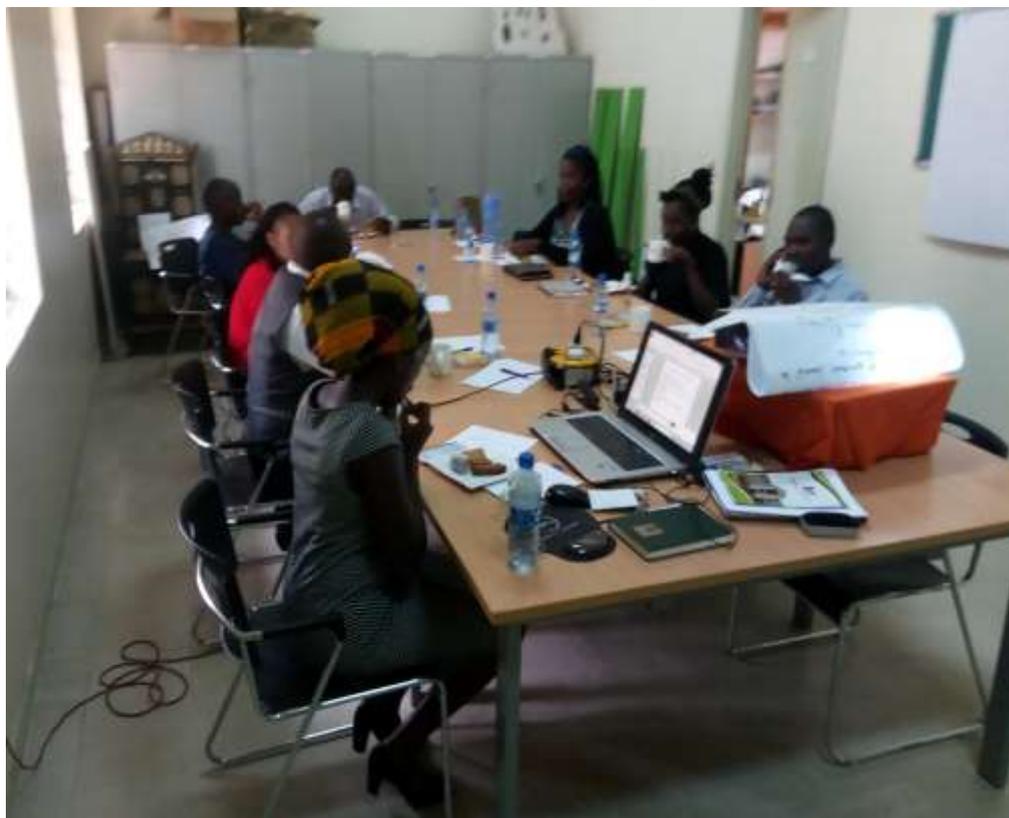
Focus Group Discussion held at Nairobi National Museum (Source: Malaki, 2017)

Appendix XIV: Filling in of Questionnaires by visitors

Visitors filling in questionnaires at Fort Jesus Museum in Mombasa (Source: Malaki, 2017)

Visitors with questionnaires at Kisumu Museum touring the gallery (Source: Malaki, 2017)

Teachers filling questionnaires at NNM with the researcher on the extreme left (Source: Malaki, 2017)

Appendix XV: Excerpts from visitor comment book.

Excerpts from the Visitor comment book at Kisumu Museum (Source: Malaki, 2017)

Appendix XVI: Haller Park, Mombasa

Haller Park is one of the competitors of Fort Jesus Museum by virtue of having diverse and unique live exhibits that is attracting huge tourists turn out. Haller Park is a man – made wildlife sanctuary in Mombasa that receives huge number of tourists both local and international. Formerly known as Bamburi Nature Trail, Haller Park was named after the founder Dr. Haller Rene who transformed it from a quarry to a sanctuary which is one of the best wildlife parks in Kenya. From what was once a limestone quarry, the park is now a thriving ecosystem of grasslands, ponds, forest and nature trails. It has a wide range of endangered wildlife species and tropical plant species. The main attractions in the park include; giant tortoises, hippos, waterbucks, giraffes, zebras, antelopes, buffalos, elands, reptile park, snake park, fish ponds, game sanctuary and a wide variety of birds among other small animals. The visitor experience at Haller Park is unique as visitors mingle and interact with some animals and more so feed them.

A visitor being entertained at Haller Park as the guide feeds the crocodiles (Source: Malaki, 2018)

Visitors interacting with the Giant crocodile at Haller Park (Source: Malaki, 2018)