Developing an Interactive and Adaptable Curated Collection for the Cape Town Museum of Childhood
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An Interactive Qualifying Project proposal submitted to the faculty of WORCESTER POLYTECHNIC INSTITUTE in partial fulfillment of the requirements for the degree of Bachelor of Science.

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ABSTRACT

To support the Centre for Early Childhood Development’s (CECD) creation of the Cape Town Museum of Childhood, this project makes recommendations for the museum’s *State of the World’s Children* curated collection. We followed a human centered design approach, involving continued committee and stakeholder input, to identify themes in UNICEF’s *State of the World’s Children* reports that are relevant to childhood welfare in South Africa. Selected themes included: child protection, nutrition, access to early childhood development provisions, and the percent of children below the poverty line. We developed a guide for the CECD that compiled information related to thematic choices and display suggestions, informed by our own field research and interviews with museum curators.
EXECUTIVE SUMMARY

In 1924, the League of Nations adopted the Geneva Declaration of the Rights of the Child, for the first time defining a set of basic human rights to which every child is entitled. In 1959, the United Nations General Assembly expanded upon this declaration and outlined social security, love, understanding, education, protection, and relief as critical to a child’s welfare. Further evident of the global commitment to upholding children’s rights, the 1989 Convention on the Rights of the Child was the most universally ratified human rights treaty in history (as cited by Weissbrodt, Hansen & Nesbitt, 2011). Although efforts are being made around the world to promote childhood welfare and uphold the principles set forth by the Declaration of the Rights of the Child, access to equitable healthcare, education, proper sanitation, and safety is still not realized for many children in South Africa. As a result of the widespread prevalence of poverty, access to programs and resources that aid in affording children their basic rights is not universal. Several organizations and government departments work to alleviate the issues facing children and address these lingering inequities established under the colonial and apartheid history of the country.

One such organization working to improve childhood welfare in South Africa is the Centre for Early Childhood Development (CECD), which offers programs for physical and cognitive development, nutrition, and emotional wellbeing. To advance its mission, the CECD has begun development of the Cape Town Museum of Childhood (CECD, Cape Town Museum of Childhood, 2018). The first of its kind in Africa, the museum is designed to incorporate interactive, engaging exhibits that represent the “heritage, documentation, memory, oral history, research, and interpretation of childhood” (CECD, Cape Town Museum of Childhood, 2018, p. 1). The purpose of this project was to assist in the development of a curated collection for the Cape Town Museum of Childhood based on the themes and attributes of UNICEF’s annually published State of the World’s Children report.

To accomplish this, we used a human centered design approach, involving routine input from a stakeholder group at all steps in the research and design processes. We consulted with a committee of parents, teachers and CECD employees, who served as our experts on the issues facing children in South Africa and critiqued our content and design suggestions. Our first step in the design process was to identify primary themes to display and develop learning goals for the curated collection. We met with our committee to discuss which themes and measures of social progress highlighted in the State of the World’s Children report were the most relevant to and pressing in South Africa. In addition, we administered a survey that both assessed public awareness of the State of the World’s Children report and asked for opinions on key issues facing children in South Africa that the publication addresses. To further supplement this, we collaborated with fellow IQP students working with theMAAK, a social architecture firm and conducted a community engagement event at Mountain Road Primary
School to better understand what parents and non-experts thought were the most immediate issues facing children in South Africa.

From our background and field research, we identified themes in childhood welfare that were the most concerning in South Africa. These included child protection, access to education and early childhood development provision, nutrition, and the percent of children below the poverty line. Most parents that we engaged with at Mountain Road Primary School explained how many children in South Africa experience violence in their communities. Responses we received included, “Stop killing our children” and “I wish children had safe spaces to play.” Even more important than the issues themselves was the sentiment that many people are unaware that these issues are not mutually exclusive and cannot be addressed individually.

Having identified recommended themes to be displayed, we then developed a suggested room purpose and series of curation goals to aid the CECD in moving forward with the collection. The room purpose we recommended is as follows: to raise awareness of issues facing children in South Africa and around the world, to promote accountability, and to advocate for the improvement of childhood welfare. With this purpose in mind, the three curation goals that we outlined are:

1. To introduce UNICEF and the *State of the World’s Children* reports and to emphasize that children’s voices should be heard in matters that affect them by forming the narrative around their testimony.
2. To promote awareness, a visitor should leave the room with knowledge of the scope of issues affecting children in South Africa and understand that they are interconnected. While advocacy organizations address interconnected challenges and offer solutions for social change in publications such as *State of the World’s Children*, many people are still unaware and might be quick to judge parents and caregivers.
3. To make visitors aware that there are programs and initiatives in place addressing issues in childhood welfare, and to create a sense of hope for the future. Knowing what is already being done, visitors can assess what they can to do help, and leave the room feeling inspired to do their part in combating issues facing children in South Africa and around the world.

Furthermore, we recommended that the information be portrayed in a way that prompts the museum visitor to consider how the struggles of parents and caregivers could be made easier if policy and social circumstances better supported them.

Once we had identified the thematic information to be portrayed in the collection, our next step was to become better informed of fundamental design strategies and considerations that go into museum curation. To do this, we first visited local exhibitions in Cape Town and made qualitative observations on exhibit memorability, simplicity, and emotional impact. Informed by our experiences going through these museums, we then conducted semi-
structured interviews with museum curators and developers. From the curators we learned the importance of effective use of text, lighting, and spacing to create a cohesive experience that properly conveys and supports the purpose of the exhibition.

Using the strategies we learned, we began to design exhibits that would represent the identified themes in global and local childhood welfare. As part of the human centered design process, we held three meetings in which committee members critiqued these designs. We then used committee feedback to refine the designs, such that they best portray the purpose and goals of the room. We also developed a floor plan of the room specifying suggested placement of these exhibits in order to create the most engaging experience. At the conclusion of the design process, we compiled a list of these designs as suggestions for the Cape Town Museum of Childhood, which can be found in the Recommendations for the State of the World’s Children Curated Collection document.

Bibliography


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We particularly want to thank our committee of CECD employees and parents for dedicating time to sit down with us each week to offer insight and feedback. We are so grateful to have learned from you and it has been an absolute pleasure getting to know and work with all of you.

Thank you to the curators and developers of the District 6 Museum, Cape Town Holocaust Centre and Cape Town Science Centre for taking time out of their busy schedules to teach us the ins and outs of how to bring ideas to life in a museum.

Thank you to our fellow IQP students working with theMAAK for sharing their public space and collaborating with us on the “Wishes for Childhood” event. We additionally want to thank all of the parents and caregivers in Woodstock who took time to make a wish and stop to talk to us.

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AUTHORSHIP

All members contributed equally to writing, editing, and formatting this final report and draft versions. Smaller pieces of the report were written by individual group members, and then we came together to edit as a collective for grammar, content, and clarity.
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INTRODUCTION

In 1924, the League of Nations adopted the Geneva Declaration of the Rights of the Child. Originally drafted by British social reformer Eglantyne Jebb, the resolution defined a set of basic human rights to which every child is entitled. Then in 1959, the United Nations General Assembly expanded upon this declaration and outlined social security, love, understanding, education, protection, and relief as critical to a child’s welfare. Further evident of the global commitment to improving childhood welfare, the 1989 Convention of the Rights of the Child is today the most universally ratified human rights treaty in history, with just one member state of the United Nations, the United States of America, having not ratified it (as cited by Weissbrodt, Hansen & Nesbitt, 2011). On a global level, these childhood rights are primarily upheld by the United Nations Children’s Fund (UNICEF), an intergovernmental advocacy organization with offices in nearly 200 countries around the world. UNICEF focuses on reducing child mortality, improving early childhood education and development and promoting gender equality and childhood activism.

Although efforts are being made around the world to promote childhood welfare and uphold the principles set forth by the Declaration of the Rights of the Child, access to equitable healthcare, education, proper sanitation, and safety is still not realized for many children in South Africa. As a result of the widespread prevalence of poverty in South Africa, access to programs and resources that aid in affording children their basic rights is not universal. In 2017, it was estimated that only 73% of children under age 1 in the rural Eastern Cape Province have received all recommended vaccines (Le Roux et al, 2017). Even though access has generally improved, 2017 reports revealed that still less than 60% of households in the Limpopo Province have access to adequate sanitation (Johnson, 2017). Additionally, many young children in South Africa do not have access to formal early childhood development or early education programs.

Several organizations and government departments strive to address these lingering inequities and improve childhood conditions in South Africa. One such organization is the Centre for Early Childhood Development (CECD), which offers programs for physical and mental development, nutrition, learning and emotional wellbeing, especially for children from low-resource communities (CECD, #RighttoECDcampaign, 2018). To advance its mission, the CECD began developing the Cape Town Museum of Childhood (CECD, Cape Town Museum of Childhood, 2018). The first of its kind in Africa, the museum is designed to incorporate interactive, engaging exhibits that will represent the “heritage, documentation, memory, oral history, research, and interpretation of childhood” (CECD, Cape Town Museum of Childhood, 2018, p. 1).

The purpose of this project was to assist in the development of a curated collection for the Cape Town Museum of Childhood based on the themes and attributes of UNICEF’s State
of the World’s Children report. We accomplished this through a human centered design process, drawing on the expertise of CECD staff to identify relevant topics in childhood welfare to be portrayed in the collection. We interviewed museum curators and made qualitative observations of existing exhibits to learn design strategies and how to effectively convey a message through a museum medium. Finally, we developed a floor plan design for the room, and a guide that compiles all of the identified themes and suggestions for how to display them. The collection is meant to represent the state of childhood accurately and honestly, evoking a sense of moral responsibility and raising awareness of the importance of upholding children’s rights and promoting childhood prosperity globally.
BACKGROUND

Addressing inequities in education, sanitation, healthcare access, and protection for children in South Africa

Since the introduction of democracy, significant improvements have been made to social, political, and economic inequities established during the colonial and apartheid eras of South Africa. Infant and under 5 mortality rates have been steadily declining (Millennium Development Goals, 2015), given implementation of the Child Support Grant, improved newborn care, prevention of mother-to-child HIV transmission, the promotion of breastfeeding, and routine health monitoring (Child Mortality in South Africa, 2013). By early 2017, almost five million children up to age six had access to the Child Support Grant (Statistics South Africa, 2018). In 2016 infant breastfeeding increased to 73% of children less than one year old being breastfed with the inclusion of other foods (Statistics South Africa, 2018). Along with the encouragement of mothers to breastfeed their children in the first year of life, the Department of Health introduced the Prevention of Mother to Child Transmission (PMTCT) of HIV program in South Africa, initiated in 1998 in the Western Cape. This plan provided HIV positive mothers free access to antiretrovirals, which can dramatically reduce mother-to-child-transmission of HIV (Barron et al., 2012). Between 2008 and 2012, the HIV transmission rate from mother to child decreased from 9.8% to 2.5%, an exceptional stride toward eliminating a prevalent cause of infant mortality (Child Mortality in South Africa, 2013). Several organizations and initiative programs such as Vaccines for Africa (VACFA) have attempted to increase vaccination coverage rates to eradicate these preventable diseases; the proportion of total children under age 1 who receive all necessary vaccinations is climbing. Improvements in vaccine coverage can also be observed in the national school-based human papilloma vaccine (HPV) campaign. HPV vaccines were provided to more than 350,000 young girls in Grade 4, covering over 16,000 of South Africa’s public schools, “[translating to] 94.6% of schools reached and 86.6% of age-eligible learners vaccinated” (Delany-Moretlwe et. al, 2018, p. 1).

While access to healthcare and safety are critical to childhood welfare, children’s rights extend farther than physical health and protection. Recently, improvements have been made in critical elements of both formal and informal education in South Africa, particularly those related to early childhood development (ECD). Additionally, the Department of Justice and Constitutional Development has devised an extensive plan to be implemented by 2030 (National Planning Commission, 2013). This plan envisions a better South Africa by addressing early childhood development, the needs of education, and research conducted at a national level. The plan targets aspects of ECD by establishing standards such as making “2
years of quality preschool enrolment for 4 and 5 year olds compulsory before Grade 1” (National Planning Commission, 2013, p. 300).

However, low-income families continue to struggle to access healthcare (Knapp et. al, 2018), quality housing with access to hygiene and sanitation facilities, safe living environments, and equitable education. A case study in Delft, a low-income neighborhood of Cape Town revealed an estimated 61% vaccination coverage (Williams, 2017), falling just over 20% short of the national average. According to VACFA, MCV1 (measles containing vaccine) had declined 13% between 1990 and 2013 (Vaccines for Africa, 2015). A similar trend of declining coverage was reported with the DPT vaccine (diphtheria, tetanus, and pertussis) which reached 89% coverage in 1990, but declined to 69% in 2013, as shown in Figure 1.

Statistics South Africa reported that in 2015, two thirds of children in South Africa under the age of 17 lived below the upper bound poverty line (“Poverty on the Rise in South Africa, 2017) and 14.3% of children live in informal housing1 (Young Lives, 2007). Many of these children and others living in poverty conditions lack access to proper sanitation resources and are therefore placed at an increased risk for infectious disease. One third of the South African population does not have access to clean water and proper sanitation. In 2017, it was reported that 2 million people in South Africa, primarily those belonging to lower income families, use a bucket toilet as opposed to a sanitary chemical or flush toilet. In 2001, the percentage of children with access to piped water either inside their homes or in their yards was 51.2% (as cited by UNICEF, 2007). A study of the Limpopo Province found that although municipal water supply was not found to contain fecal contamination, natural water sources used as a primary source of drinking water for many households were contaminated (Edokpayi, 2018). Diarrhea and enteropathy result from drinking contaminated water, which can escalate to severe dehydration, delayed physical development, and death. A study by Tanser and colleagues (2018) analyzed the effects of piped water on health outcomes in KwaZulu-Natal, South

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1 “Areas where groups of housing units have been constructed on land that the occupants have no legal claim to, or occupy illegally; unplanned settlements and areas where housing is not in compliance with current planning and building regulations (unauthorized housing)” (Glossary of Environment Statistics, Studies in Methods, Series F, No. 67, United Nations, New York, 1997).
Africa and found that high coverage of piped water in the community resulted in an eightfold decrease in risk of schistosomiasis infection among children (Tanser et al. 2018, p. 1).

Impoverished communities in South Africa also experience higher rates of violent crime. Gang activity and violence has become increasingly abundant in South Africa’s low-income neighborhoods, a consequence of a slow economy, and an under resourced education system (Barnes et al., 2017). It is estimated that 1 in 3 South African children will experience some form of physical or emotional violence, and 1 in 5 will experience some form of sexual violence (Save the Children, 2015). According to 2013 UNICEF estimates, 1 in 5 incidences of sexual assault took place on a residential street, and a third of the perpetrators who had raped a child were teachers (The Study on Violence, 2013). Lasting impacts of sexual violence experienced during childhood include increased risk of substance abuse, high-risk sexual behavior, and mental health problems in adulthood (Ward et al., 2018). These high national rates of abuse have a significant and lasting effect on the country. A study by Hsiao and colleagues (2018) projected that self-harm could be reduced by 23% if physical violence towards children could be reduced by 14%.

Despite advancements in improving the delivery of high quality education, access to early childhood development provisions remains limited. The Department of Education’s nationwide audit of ECD provisioning found that “84 percent of young children do not have access to formal ECD provision,” placing the full responsibility for early education on parents and guardians (UNICEF, 2007, p. 2). In his compilation of several studies pertaining to early childhood and cognitive development in impoverished communities of South Africa, Selim Iltus indicated that less than 30% of families read or looked at picture books with their children on a regular basis (Iltus, 2007). The study also found that only about 50% of caregivers stated that they had played with their children in the past week, the smallest percentage compared to the other four countries examined. Each of these activities are pivotal in nurturing cognitive development and fostering a healthy bond between parent and child. Centre for Early Childhood Development founder, Eric Atmore, found that most working parents do not have time to sit and read or play with their children, and those that do may not have access to children’s books or toys (Eric Atmore, personal communication, November 1, 2018). Furthermore, the 2018 Mbalo Brief found that 47% of children under age 6 in South Africa live with a single parent, limiting the extent of income that is achievable for those families (Mbalo-Brief, 2018). Atmore further explained that given long working and transit hours, parents are often unable to spend more than two hours a day with their children between work, school, and sleep. Having a restricted income also obligates parents to prioritize their spending; food is necessary for survival and books are not, therefore learning materials often take a backseat (Eric Atmore, personal communication, November 1, 2018).

Language barriers additionally contribute to poor performance in primary school learning. Juan and Visser (2017) discuss these components in their study on the relationship between home and school environments on academic achievement of South African students, specifically in science. Their study found that “the language of instruction (and of testing) has
not been mastered by the time students are in Grade Nine” (Juan and Visser, 2017, p. 5). The
2011 Trends in International Mathematics and Science Study (TIMSS) exposed that South
African students in Grade 9 performed substantially lower than that of the international
average (Juan and Visser, 2017). This finding may be attributed to the quality of language
instruction to children in the earliest years of school.

**Non-government organization efforts to improve childhood welfare in South
Africa**

Organizations addressing child health, particularly efforts to improve sanitation
facilities, include Domestos and the Mvula Trust. Domestos by Unilever created the germ-
busters club program in 2015 alongside the national hygiene program that reached over one
million children (as cited by Mahlangu, 2018). The program is intended to improve sanitation
and hygiene in South African schools, which would lower the prevalence of preventable
diseases and increase school attendance rates. The Mvula Trust has focused on providing
improved sanitation facilities in informal settlements and low-resource schools in South
Africa (Thenjiwe Nzama, 2017).

Given poverty related housing challenges, several organizations provide services to
children who may not have homes or do not have supportive home environments. As an
example, Good Hope Volunteers provides daycare services to children of working parents that
do not have the time to teach them how to read, write, and brush their teeth (Good Hope
Volunteers, 2018). The Homestead Organization is another South African based agency that
provides a temporary shelter for children to receive the care and attention they may not
receive at home (“Shelter for Street Children”, 2018).

Organizations addressing early childhood development include the Children’s Institute
at the University of Cape Town, the Adolescent Youth Health Services Forum, and the Centre
for Early Childhood Development. The Children’s Institute has worked to raise awareness for
organizations that improve child growth and has emphasized how families contribute to
children’s cognitive development through their annual “Child Gauge Report” (Jamieson,
Berry, and Lake, 2017, 31). The Adolescent Youth Health Services Forum, stationed in
Khayelitsha, creates a way for NGOs working in ECD to collaborate and share resources
(Jamieson, Berry, and Lake, 2017).

The Centre for Early Childhood Development has been instrumental in improving
ECD services for children in South Africa (Centre for Early Childhood Development, 2013).
The organization sponsors programs that train, support, and give advice about ECD to
teachers, parents, principals, and children (Centre for Early Childhood Development, 2013). It
also works with communities and other organizations to increase effectiveness of childhood
development provision (Centre for Early Childhood Development, 2013). The CECD has
researched factors that stunt growth (Atmore et al, 2017, 11), created the National ECD
Leadership Programme (Atmore et al, 2017, 11), spearheaded a picnic for Universal
Children’s Day (Atmore et al, 2017, 13), and created an outreach program that provides
support to vulnerable families (Atmore et al, 2017, 9). The CECD holds the philosophy of putting children first, and strongly believes that children are key to the future of South Africa’s productivity.

**Advancing the mission of the CECD - advocating for children’s rights through the Cape Town Museum of Childhood**

The CECD has begun developing the Cape Town Museum of Childhood to further promote its philosophy, recognizing that museums are viable tools for taking a stance against childhood injustices. This museum is unique in that it is meant to be educative as well as entertaining, providing visitors an opportunity to learn about global and local disparities in childhood (Centre for early childhood development annual report 2016-2017, 2017, p. 10). The CECD has elected to utilize a museum medium given the many successes of other museums around the world as advocacy tools. For example, in 2014 the curators of the Eastern State Penitentiary museum aimed to change public perception of controversial issues such as racism, law enforcement, and mass incarceration (Merrit, 2016). To accomplish this task, the curators developed an exhibit in which visitors were tasked with distinguishing criminals and non-criminals by physical appearance and verbal testimony of crimes (Merrit, 2016). The Leighton House Museum, educated visitors of gay Iraqi men who were forced to leave their homes in order to challenge “viewers’ expectations, preconceptions, and potential prejudices” (Museums Change Lives: Leighton, p. 1). These exhibits offered an experience to visitors, compelling them to think about a social issue, rather than just presenting information. In addition, museums are effective tools for advocacy campaigns because they foster a learning environment. Most people visit museums with the intention of being educated (Falk and Dierking, 2018), and because of this, museums have the unhindered attention of those who visit. They are able to spread their message, inspire, and help us understand the complex world around us, encouraging visitors to “reflect on contemporary challenges” (Museums Change Lives: Inspiring, p. 1).

The CECD also recognizes the necessity of utilizing design elements to convey a message and evoke an experience or enlightened perspective. It is not sufficient that the exhibits are exciting to look at; if the museum-goer is not stimulated mentally, the purpose is lost (Hein, 1998). One successful way of keeping museums both interesting and exciting is through hands-on exhibits (Cohen, 1987). The use of participatory exhibits in museums “[increases] motivation to learn, learning itself, retention of information, and education oriented recreation” (Cohen, 1987, p 1). Furthermore, the notion that a museum must be interactive and stimulating is pertinent, but even more so is that the exhibition displays a simple and understandable, yet meaningful message that a wide range of visitors can engage with (Eric Atmore, personal communication, October 22, 2018). The CECD will utilize these design elements to create an engaging environment for visitors to take an empathetic approach in understanding the issues facing children in South Africa.
Developing a State of the World’s Children curated collection for the Cape Town Museum of Childhood

The CECD has called upon the influence and expertise of the United Nations Children’s Fund (UNICEF) to promote the goals of the Museum of Childhood and advocate for impoverished children in South Africa and around the world. UNICEF was envisioned by founding executive director, Maurice Pate as a program that puts the survival and prospering of children above political differences (UNICEF, 2018). Pate, in 1950 famously asserted, “There are no enemy children,” initiating the mobilization of aid to reach impoverished children worldwide. UNICEF directs relief efforts to “the world’s toughest places to reach the children and young people in the greatest need” (UNICEF, 2018).

Emergency relief and healthcare initiatives led by UNICEF have reduced child mortality around the world. In 1982, UNICEF proposed a program involving four key strategies to prevent childhood deaths: the growth monitoring of young children, oral rehydration therapy, breastfeeding, and immunization (Grant, 1982). The program became known as GOBI; a revolutionary initiative for child survival and development (Fifield, 2015). By the early 1990s, global child vaccination coverage had skyrocketed from 20% to 80% and an estimated “25 million children were alive because of [UNICEF driven] worldwide action” (Jolly et al., 2001, p.46). Political commentator, Nicholas Kristof, in writing for The New York Times, noted that the GOBI initiative “probably saved more lives than were destroyed by Hitler, Mao, and Stalin combined” (Kristof, 2008). UNICEF also works to improve at-home access to healthcare as an estimated 80% of healthcare in developing countries occurs informally, within the home (Goal: Reduce child mortality, November 7th, 2018). UNICEF develops tools and resources to help parents provide better informal healthcare to their children at home, as an estimated 40% of childhood deaths within the home could be prevented through this practice (Goal: Reduce Child Mortality, accessed October 24, 2018).

In addition to decreasing child mortality, UNICEF has also improved early childhood education and development programs. The 2030 Agenda for Sustainable Development, officially adopted by all United Nations member states, called attention to the need of countries to “invest in [their] children…. [and to provide them] with a nurturing environment for the full realization of their rights and capabilities” (United Nations, 2015, p. 11). UNICEF regularly publishes educational tools and literature to support member states in achieving the goals that relate to global welfare of children and adolescents. The fund has notably authored the Early Childhood Development Resource Pack and Early Childhood Development Kit for childhood educators and caregivers.

UNICEF not only promotes childhood welfare through initiatives and relief programs, but also through robust, statistical analysis that holds policy makers accountable. Following his work with the Overseas Development Council, Jim Grant was appointed executive director of UNICEF in 1980 at the request of President Jimmy Carter (Farmer, Kim, Kleinman & Basilico, 2013). Under his 15-year tenure, UNICEF had grown to become “the world’s leading source of credible data and analysis about the situation of children” (UNICEF 2018).
In the celebratory book *Jim Grant: UNICEF Visionary*, UNICEF pediatrician John Rhode (2001) explained how Grant would often talk about the importance of indices and statistical analysis to show social progress. He noted how Grant would often say, “If you can measure it...you have a better chance of holding people accountable” (2001, p. 42). Promoting accountability through documentation is still a widely utilized strategy in UNICEF publications; most UNICEF reports and initiatives are introduced with reminders of the commitments to social progress that member states of the UN have made. For example, many of the UNICEF “Call to Action” publications, which aim to solicit an immediate response, are introduced by calling specific attention to irresponsibility of policy makers for ignoring key issues.

UNICEF emphasizes the importance of providing children an opportunity to advocate for themselves and have their voice, opinions, and feelings heard. The fund explained how, as first outlined in the Convention of the Rights of the Child, “measures should be put in place to encourage and facilitate [a child’s] participation” in matters that affect them (UNICEF, 2010, p. 14). As is stated in *Every Child’s Right to Be Heard*, UNICEF, 2011:

> Adults do not always have sufficient insight into children’s lives to be able to make informed and effective decisions on the legislation, policies and programmes designed for children….Decisions that are fully informed by children’s own perspectives will be more relevant, more effective and more sustainable (p.5).

To aid UN member states in upholding this fundamental right of participation and activism, UNICEF has authored a *Child and Youth Participation Resource Guide*. The online guide compiled a wide range of existing resources that can help get children involved in speaking out against injustices in childhood welfare (UNICEF, 2010). Furthermore, many UNICEF publications involve children’s perspectives, and include direct quotes and narratives from them.

Most notable of these publications is UNICEF’s annual *State of the World’s Children* report, which blends together the fund’s pursuits of promoting accountability through documentation and involving the thoughts, opinions, and concerns of children. The report is unique in that it discusses several components of childhood welfare in reference to a common theme, recently covering such topics as child labor, disabilities, and children in war zones (*The State of the World’s Children* reports, 2017).

The Cape Town Museum of Childhood will feature an exhibition based on the themes and principles of the report, drawing upon the message and many successes of the report in the *State of the World’s Children* curated collection. For example, the third *State of the World’s Children* report demonstrated the widespread influence of accountability through documentation. The report, published in 1983, served as a pivotal tool in the child advocacy movement in the 1980s and is considered to have kick-started the child survival revolution (Fifield, 2015). In the report, Grant provided the alarming insight that “[severe dehydration]
kills a child every six seconds,” as an introduction to his oral rehydration initiative (Grant, 1983, p. 8). He then explained how GOBI’s proposed oral rehydration solution would cost no more than ten cents to save the life of one of those children (Grant, 1983). This dichotomy between death and ten cents was a compelling argument for action and helped push policy makers around the world to uphold the GOBI initiatives, which today save an estimated 10 million lives annually (Adamson et al., 2001).

The State of the World’s Children report is unique from many other advocacy publications in that testimonies from children and adolescents are used to drive the narrative of issues facing them. The most recent issue of the report, Children in a Digital World features quotes and stories from children and adolescents that unpack some of the disparities, nuances and applications of technology in childhood (UNICEF, 2017). The Cape Town Museum of Childhood’s State of the World’s Children curated collection will feature and expand upon the contents of the report, while highlighting the impact of involving children’s thoughts and opinions about issues facing them. The room is meant to inspire and evoke feelings of responsibility for adult visitors, and teach the importance of investing in South Africa’s and the world’s children.
METHODS

This project was intended to support the CECD’s development of the Cape Town Museum of Childhood through the curation of an interactive collection that depicts issues facing children on a global and local scale. A human centered design approach, involving a stakeholder group, was guided by the following objectives:

1. Identify relevant themes from the UNICEF State of the World’s Children reports that are most pertinent to childhood in South Africa
2. Design and prototype exhibits

Human centered design process

To inform ourselves on how to most accurately depict the state of childhood in South Africa, we consulted with a committee of CECD directors, employees, and parents. For the purposes of this project, this committee was our primary point of reference to learn about childhood in South Africa and served as our experts in this regard. To develop the curated collection, we utilized a human centered design process (Figure 2), which involved the input of our stakeholder group at all steps throughout both research and design. The committee consisted of six stakeholders and experts in the field of early childhood development that were recommended to us. This group guided our decisions and research throughout the project. Committee members included:

- Eric Atmore - Director and CEO
- Sarah Atmore - Programme Manager
- Jessica Blom - Programme Manager
- Catherine Blom - Parent and former educator
- Boniswa Gquma-Lisa - Office Administrator
- Chanel Fredricks - Museum Outreach Worker

At weekly meetings, committee members provided us critical feedback on our ideas and informed future procedures in our design process.
Objective 1: Identified relevant themes from the UNICEF State of the World’s Children reports that are most pertinent to childhood in South Africa.

Initial committee consultation: what is the state of childhood in South Africa?

The initial committee meeting provided us the opportunity to discuss with experts in the field which components or principles of the State of the World’s Children report are most relevant to childhood in South Africa and what themes should be represented in exhibition design. We also used the initial meeting to get permission to record all future meetings using the consent form in Appendix A. All four members of our research team were present during each of these meetings and all members were assigned to guiding a piece of the conversation. We followed this structure to ensure that the conversation with the committee flowed naturally and that research team members were not talking over one another. The following free-list prompt was provided before the discussion portion of the committee meeting:

“Please list 10 words or phrases you would use to describe childhood”

Committee members were asked to generate as many terms as they could based on the given prompt, with 10 being the desired number of terms or phrases. We asked the committee to be honest and reminded them that their answers would be confidential. Each committee member typed their list into Poll Everywhere survey software, which automatically generated a word cloud once finished to show the themes people mentioned.

Through preliminary review of academic literature, advocacy web pages, local news articles, and other similar publications, we made initial observations of recurring themes and relevant issues facing children in South Africa. Following the free-listing activity, the committee was provided a list of child survival, development, and protection indices reported
in the final pages of every *State of the World’s Children* report and were asked to rearrange these topics using Poll Everywhere based on relevance to South Africa. To prevent bias or priming, the indices were initially listed in randomized order. Topics that the committee perceived as the most immediate threats to child welfare were sorted to the top of the list. The results of this sorting exercise guided the remainder of discussion. With the permission from each member of the committee, the full conversation audio was recorded and then transcribed after the conclusion of the meeting. From the transcribed notes and the audio, we derived a list of themes that emerged from the meeting.

*Collaboration with theMAAK: 1000 wishes for childhood*

To supplement the findings from our committee meeting and gather the opinions of non-experts, we collaborated on a community engagement event with fellow IQP students working on a project with theMAAK, a social architecture firm. This engagement involved asking parents and caregivers outside of Mountain Road Primary School in Woodstock, Cape Town, “If you could grant one wish to the children of Cape Town, what would it be?” Taking inspiration from Japanese folklore, we asked participants to write their answers on origami paper cranes. The cranes were then hung on a standing metal grate, as seen in Figure 3.

![Figure 3 - 1,000 wishes for childhood](image)

To indicate which responses were provided by adults, teenagers, or children, each crane was marked with an A, C, or T respectively. This coding allowed us to distinguish answers from our target demographic (adults and teens) and those submitted by children. At the conclusion of the collaboration, we transcribed each wish and developed codes for recurring themes. From the data collected through the crane exercise, we developed a radial plot based on frequency of coded themes. The graph was then used to further inform the identification of relevant themes to be represented in exhibit designs.
Public awareness survey

To further supplement the information gathered from the first committee meeting discussion, we conducted a brief public awareness survey. The survey assessed awareness of the *State of the World’s Children* report itself and asked for opinions of some key issues facing children in South Africa that the publication addresses. The survey also assessed awareness of global and local non-government organizations and their involvement in child welfare in South Africa.

Qualtrics Surveying Software was used to collect responses and process the data collected. Consent for use and publication of survey responses was incorporated directly into the survey, as shown in Appendix B. If the box indicating that consent is given to use and publish the anonymous survey results is not checked, then Qualtrics Surveying Software did not permit the respondent to move to the next page. This consent release technique allowed survey respondents to remain anonymous, while helping us ensure that we and our sponsor had permission to use any survey data we collected. The survey structure was outlined in Qualtrics Surveying Software as shown in Appendix F. A convenience sampling approach was taken, with a link to complete the survey sent out in the CECD online newsletter. The survey was sent to several South African Childhood Advocacy Facebook pages, but was not posted. Responses were used to inform our development of exhibits involving organizations addressing inequities in child welfare and exhibits encouraging participation in advocacy.

We collected a total of 57 responses to the survey, mostly from women living in the Western Cape. The average age of these respondents was approximately 42 years old with an average monthly household income of about R32,493.35. Reference Appendix F for a complete breakdown of survey content, correct answers, responses received, and demographics of respondents.

Objective 2: Designed and prototyped exhibits.

Museum visits

To inform our committee discussions of exhibit design ideas, we visited museums in Cape Town to learn about common museum practices. We chose this method so that we could experience firsthand exhibition design, floor plan management, and other techniques that museums use to effectively engage their visitors. We visited a total of ten museums:

- District Six Museum
- Cape Town Science Centre
- Cape Town Holocaust Centre
- Military Museum - Castle of Good Hope
- South African Jewish Museum
- Cape Medical Museum
- Cape Town Diamond Museum
In addition to learning about museum design, we also used these visits to inform our consultations with curators from their respective museums, referencing specific exhibits during our interviews. Each member of the team recorded qualitative observations using an exhibit worksheet, as shown in Appendix C. The worksheet was used to ensure that we examined the same details of each exhibit and could later discuss our findings as a collective. We considered how each exhibit we viewed utilized color, text, and text color as well as more subjective criteria such as exhibit memorability, impact, simplicity, and design. Additional informal notes were taken on the back of these worksheets regarding floor plan and other noteworthy design aspects in the museums. For further reference, we took photographs (with permission) of the exhibits that we used the worksheet. Once we had finished collecting information, we compiled all of the data we gathered for each exhibit and museum onto a single spreadsheet. This data was used to guide the development of our own designs and floor plan for our curated room.

**Museum curator consultation**

To inform ourselves on common museum practice and, design processes, we interviewed curators, archivists, and directors of local museums in Cape Town. These interviews helped us understand the small purposeful details in a museum that we may not have noticed on our tours but are still pertinent to exhibit effectiveness. We also felt it was necessary to have experts’ opinions on the exhibit design process and useful ways to gather feedback. We interviewed six curators from different museums to gather a range of unique perspectives on the curation process and answer the many questions we had about exhibit design. The six experts that we interviewed were:

- Tina Smith – Exhibitions Manager, District Six Museum
- Richard Freedman – Director, Cape Town Holocaust Centre
- Michal Singer – Archivist, Cape Town Holocaust Centre
- Dmitri Abrahams – Archivist, Cape Town Holocaust Centre
- Akash Dusrath - Manager, Cape Town Science Centre
- MJ Schwartz - Education Manager, Cape Town Science Centre

We conducted semi-structured interviews and audio recorded them pending permission (see Appendix D for consent statement). Using a computer, we took notes on important pieces of information discussed during the interview. We also transcribed the audio recordings of the interviews and gathered relevant information from those. We asked questions regarding processes of creating an exhibit, methods to engage a variety of visitors, strategies for use of limited space, museum neutrality, how to elicit emotional response, and
making exhibits updatable. These questions are listed in Appendix E. We compiled the information collected into an easily referenced document and identified recurring themes and relevant ideas presented to us by different curators about exhibit design, suggestions for our collection, and other considerations of museum curation. This information was then used to inform us in the creation of our exhibit designs and floor plan.

Second committee consultation

Having carried out the 1000 wishes for childhood event, we began the second committee consultation with a visual comparison of the responses from the event to the themes in childhood welfare we discussed in the initial consultation. We then presented the idea of a choice-based exhibit inspired by SPENT, a game played from the perspective of an unemployed American who has lost their job, housing, and savings (SPENT, Retrieved December 5, 2018). To do this we first took the committee through some of the choices the player must make, highlighting the difficult position in which the character of the game is placed. We then introduced the idea of a similar interactive, choice-based game played from the perspective of a single parent in South Africa, featuring decisions that parents make that affect the wellbeing of their children on a daily basis. We then brainstormed potential content for the exhibit based on the committee members’ experiences as parents and experts in the field of ECD. Later in the meeting, we presented our initial suggestion of a floor plan as shown in Figure 4. The proposed plan involved a description of the room’s purpose at the entrance leading into informative exhibits based on themes in childhood welfare, exhibits focused on interconnectivity of those themes, and finally exhibits involving visitor participation in advocacy. The committee then considered the advantages and disadvantages of partitioning in relation to display placement and flow throughout the exhibition space. Finally, we discussed the feasibility of an exhibit inspired by the 1000 wishes for childhood

Figure 4 - Initial floor plan. The lines represent partitions using wall dividers, the pink images represent electronic devices for an interactive exhibit, and the symbols at the bottom represent other potential exhibit content: cranes for wishes, and rand, clothing, and books for donations.
activity and an opportunity for visitors to share a paper crane wish for childhood welfare in South Africa.

**Third committee consultation**

We began the third meeting with a discussion about the feasibility and accuracy of the scenarios we developed for the choice-based game. We presented an overview of all of the scenarios, decisions, and outcomes we had developed at that point using note cards on a large poster board. The committee members read through all of the potential scenarios and their outcomes, and provided their initial feedback immediately afterward. They informed us of content that was not representative of the current context of South Africa and discussed with us additional ideas for realistic scenarios moving forward. We then asked for the committee’s opinions and edits of our initial draft of the room description, shown in Figure 5.

### State of the World’s Children Room: Inspired by the State of the World’s Children reports published annually by the United Nations Children’s Fund (UNICEF), this room depicts childhood welfare both in South Africa and around the world. The room is divided into three sections to guide your learning experience:

- **The Scope of Issues Facing Children**
- **Interconnected Themes in Childhood Inequities**
- **Advocacy Organizations and What You Can Do to Help**

As you go through the room, you are encouraged to follow the footprints on the floor for the most effective experience.

**Figure 5 - Initial draft of room purpose**

We then discussed suggestions for exhibits providing background to UNICEF and asked for feedback. Ideas that we presented as prospective displays included: background to UNICEF and the *State of the World’s Children* reports and their notable contributions to upholding children’s rights throughout history and a collage of recent report covers as a semi-transparent shade backlit by the window along with powerful quotes from those reports underneath. To address some of the themes we identified with the committee, background research, and 1000 wishes for childhood, we introduced the concept of using global statistics to measure how South Africa compares to the rest of the world in child poverty, nutrition, or access to ECD. The final exhibit idea we proposed was a timeline of events in the history of childhood welfare in South Africa and globally. The initial idea was to have these events displayed in the form of panels surrounding the crown border of the room. Some potential events and milestones in history to be included in the timeline were presented to the group through
verbalization of a current list we had constructed, followed by asking for their recommendations of additional dates.

**Fourth committee consultation**

At the final committee meeting, we presented all of the design suggestions that we had developed and asked for critical feedback. Each design (excluding the choice game, timeline of events, and wishes for childhood) was displayed in a PowerPoint presentation. First, we displayed a new iteration of the room purpose on a screen in the CECD conference room for the committee to read. We then showed the committee plans for a children’s art design exhibit and discussed practical locations for drawing to take place in the museum along with final placement of completed designs in the *State of the World’s Children* room. We then followed up on the idea of a global comparison exhibit, as mentioned in the previous meeting, and introduced our idea to use slide tabs to represent statistics on social progress issues like child poverty globally and in South Africa. To represent disparities in access to ECD as it was identified as a pressing theme with respect to child welfare in South Africa, we proposed a three-dimensional pyramid that would display information provided by the CECD’s research (Ashley-Cooper, personal communication, November 20, 2018) and outside research. Our suggested designs for all four sides of this pyramid were shown as separate infographics along with a visual representation of the pyramid on top of a turntable including descriptions for each side. We asked for the committee’s feedback on both display logistics and content accuracy.

To follow up on our discussion of a timeline exhibit in the previous meeting, we distributed an extensive list of events and milestones in global and local childhood welfare. The committee was asked to be critical of this list and circle dates they believed would be most relevant or important to feature in the exhibition and to provide any additional events they felt were left out. We encouraged the committee to take this list with them after the meeting to consider the content more thoroughly and return it to us with their recommendations. We followed this same procedure for an update of the choice-based interactive exhibit with a list of our new ideas for scenarios and outcomes, encouraging the committee to think deeply about parent’s experiences and provide us with feedback to accurately portray decisions parents and caregivers face every day in South Africa and the options accessible to them. At this point, we had indicated that the purpose of this exhibit had shifted from branching decisions and consequences to a broader overview of daily situations like getting children to school. We then asked about the feasibility and effectiveness of a “What Can I Do” exhibit featuring tangible objects corresponding to organizations where visitors can donate either items or money along with brochures listing this information. The final exhibit suggestion discussed in the meeting was a “Make a Wish, Take a Wish” display, which we presented to the committee as a sketch of landmarks in Cape Town including Table Mountain, the Cape of Good Hope, the Cape Flats, and Bo Kaap. We explained our vision of the display as a mural including landmarks and places in Cape Town which museum visitors
could recognize and personally connect to their own lives. We further asked the committee for their feedback on this exhibit idea and if they could think of more relatable and appropriate visuals of Cape Town to be portrayed in the final display.
FINDINGS

Objective 1: Identified relevant themes from the UNICEF State of the World’s Children reports that are most pertinent to childhood in South Africa.

Challenges of childhood in South Africa are interconnected. It was collectively acknowledged that the most immediate threats to childhood welfare in South Africa are those that are related to child survival, including protection, poverty, and nutrition. Access to early childhood development provision was additionally identified as important to childhood welfare, but prioritized after those related to survival. A motif frequently referenced in conversation with the committee was that the primary challenges affecting children in South Africa are interrelated. None can be addressed successfully as separate. For example, Eric Atmore explained, “throwing one program at [a child], a nutrition program, you can give that [child] a ten-course meal [but it is] not going to help with the absence of learning materials or access to ECD” (Eric Atmore, personal communication, November 1, 2018). The committee additionally concluded that each of the themes are intimately related to poverty, clarifying the prioritization of “children below the poverty line” in the sorting as shown in Table 1. Respondents of the public awareness survey also indicated a prevalence of childhood poverty. When asked, “what percent of children in South Africa are estimated to live under what is considered ‘extreme poverty’”, the average response was 57%, as shown in Appendix F. While the true value is found to be 36% according to Hall and Sambu (2016), the results of this survey question indicate the widespread sentiment that poverty is a pressing issue facing children in South Africa. Addressing poverty could potentially improve all other childhood challenges. For example, improving poverty would allow families to afford learning materials, transportation to work and school, nutritious food and other necessities.

Table 1 - Committee ranking of themes

| 2. | Percent of Children Below the Poverty Line |
| 3. | Nutrition |
| 4. | Access to Early Childhood Development Programs - Enrollment, Adult Support for Learning |
| 5. | Women and Girls Literacy and Education |
| 6. | Health - Immunization, Drinking Water, Sanitation |
7. HIV/AIDS

8. Learning Materials in the Home - Children’s Books, Playthings, Parents Reading to Children

9. Disparities by Residence - Urban vs. Rural Birth Registration, Primary School Attendance

10. Maternal, Prenatal and Postnatal Health

11. Youth Literacy

12. Under 5 Mortality Rate

Violence toward children in South Africa emerged as the most immediate threat.

As shown in Table 1, protection from violence, abuse, and neglect was the most frequently identified concern for children in South Africa. Office Administrator Boniswa Gquma explained how “[child protection is] the most concerning at the moment...children are being killed” (Boniswa Gquma, personal communication, November 1st, 2018). The initial free listing activity with the committee was compiled into a word cloud, revealing that children in South Africa are often subject to dangerous conditions that place them at risk of harm. This evidence is shown in Figure 6, with words such as “traumatic,” “daunting,” “sad,” and “angry” scattered amongst other words commonly associated with childhood or the idea of what children should experience.

Figure 6: Committee responses to free list activity

Clarifying these responses, CECD Programme Manager Jessica Blom explained that “children experience very high rates of abuse, neglect...there are multiple areas that are unsafe, and they are exposed to traumas all the time” (Jessica Blom, personal communication, November 1, 2018). This finding was further confirmed by the 1000 wishes for childhood
activity, with child protection and safety being the most frequent response. In total, this theme was mentioned on 16 cranes out of the total 45 from adults as shown in Figure 7. “Stop hurting children” and “a safe space to play” were also included as responses from children.

![Figure 7 - Code analysis of 1,000 wishes for childhood responses from adults.]

Providing insight on the scope of violence toward children in South Africa, the committee disclosed that children experience the most violence from within their own home communities and by people they know well, supporting data presented by UNICEF. The committee members indicated that children are particularly affected by parental substance abuse during prenatal stages of development, also noting that children are more likely to engage in personal substance abuse and risky behavior later in life if they were previously exposed to violence, supporting the evidence offered by Ward et. al (2018): impacts of sexual violence experienced during childhood include increased risk of substance abuse, high-risk sexual behavior, and mental health problems in adulthood.

Malnutrition and food insecurity were identified as adversely affecting children’s health in South Africa. The committee agreed that South Africans are aware of what constitutes a healthy meal and that children require adequate nutrition for proper development, but access to food is lacking. Eric Atmore wants people to be aware of how many children go to bed hungry every night and how much edible food is thrown away daily. The committee acknowledged that access to food is linked to poverty, and under resourced communities are
likely to experience higher rates of malnutrition, stunting, and wasting. To supplement this information, we further researched the prevalence and causes of malnutrition in South Africa and around the world. We found that, in 2017, 27% of children under 5 were stunted and 5% were wasting (Nutrition at a Glance South Africa, Retrieved December 4, 2018). We also learned that an estimated 15 million people in South Africa are food insecure² (Misselhorn & Hendriks, 2017). Due to limited income, some South African parents and caregivers admit having to choose between food that is filling and food that is nutritionally robust. As an example, in an interview with Health-E News, a grandparent from Gauteng indicated that, “what matters is that we go to bed with a full stomach” (as cited by Molelekwa, 2018).

**Access to education, ECD, and learning materials were established as critical concerns for childhood wellbeing in South Africa.** The committee discussed access to learning materials and its consequences on child learning progress and literacy at length. It was determined that learning materials such as books are not available or affordable, and most families in impoverished communities cannot afford to have a single book in their homes (Eric Atmore, personal communication, November 1, 2018). This finding was further exemplified by the responses from the *1,000 wishes for childhood* activity, as seen in Figure 7, where education was the second most frequently noted theme on the cranes. Of the responses related to education, most were tied to a desire for free or better quality education for children.

As described by committee member Jessica Blom, schools switch the language of instruction from a child’s home language to English in Grade 4. This switch often hinders children’s development of critical linguistic skills, limiting learning capacity across other subjects throughout their education. Blom suggests that, “if children learn to read and write in their home language first and properly, then they are more able to understand the English language better and properly” (Jessica Blom, personal communication, November 1, 2018).

The committee indicated that another barrier to learning development for children in South Africa is lack of time. Many working parents, especially single parents, must work long hours to provide for their families. For families still suffering the effects of spatial apartheid³, as suggested by Eric Atmore, the commute to and from work is more of a burden than the commute for families who can afford housing near their place of employment. Many families have few opportunities to read or engage with their children given minimal free time between working and commuting. The committee further added that access to learning materials is limited, and parents may not be literate themselves. We explored this further, and found it to be confirmed by UNESCO who reported that one million children in South Africa live in households with illiterate adults (Hanemann, 2016).

Through more literature review, we discovered that some ECD centers, called crèches, struggle to formally register with the South African Government and lack proper

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² Food insecurity is defined as lacking reliable access to a sufficient quantity of affordable, nutritious food.
³ A term used to describe the effects of racial segregation and spatial relocation of Blacks, Coloureds, and Indians into rural areas (Lemanski, 2004).
infrastructure and materials to support the children that attend them (Johnson, 2017). The 2000 ECD audit revealed that 8% of crèches in South Africa do not have electricity, running water, or sanitation facilities (Williams & Samuels, 2001). This lack of infrastructure can compromise young children’s safety and hinder their cognitive and social development in comparison to their peers attending formal crèches in more affluent areas.

**Objective 2: Designed and prototyped exhibits**

**Lighting can be manipulated to direct focus and create a more immersive experience.** As an example, the Diamond Museum blocked out all natural light sources from the exhibition, creating an entirely black room with directed lighting that could better showcase the glimmer of the diamonds on display. The Holocaust Centre used backlit text to enhance the focal point of the exhibit. Richard Freedman, curator of the Holocaust Centre further explained how lighting can be harnessed to create a desired ambiance (Richard Freedman, personal communication, October 30th, 2018). The use of natural light can also enhance the experience of some museum visits, as seen in the District Six Museum. The museum is set in a church with stained glass windows on all sides, creating a colorful and very surreal experience.

**The quantity and quality of text are important in museum exhibitions.** Text is essential in displaying important information, but, if possible, it should not be central to an exhibition. When asked about the use of text in museums, Richard Freedman explained, “the text is in a way dictated by the images that you are using.” He also explained how images are the main focal points of exhibitions, and when used properly, text can be auxiliary to those images (Richard Freedman, personal communication, October 30th, 2018). We also found that in excess, text can detract from the impact of an exhibit. Freedman pointed out that “words are our friends and our enemies, because too many words kills everything. Nobody can read a book on a wall.” Some people simply do not have the attention span or are not keen to read a detailed and lengthy explanation on a certain topic, so text should be kept to a minimum to ensure that visitors are engaged in learning.

We noticed the negative effects of excessive text in our tour of the District Six Museum. Some exhibits that were almost exclusively text made it feel like a task to absorb the information, instead of feeling like an experience. Despite this, we were concerned that shortening the length of the text in our exhibit designs would result in a less meaningful message. In an interview with South African Holocaust and Genocide Foundation (SAHGF), archivist Dmitri Abrahams, he explained how, when done right, minimizing the amount of text in an exhibition does not detract from its information value: “[the exhibit] is about a World War II soldier, and there are two or three paragraphs about him, but it encompasses his whole story. So you can tell a story in as little words as possible you don’t need to give people all the information” (Dmitri Adams, personal communication, October 30th, 2018). The content of the text can also impact the visitor’s experience.
When a museum is advocating for something (a group of people, a cause, change) quality of text is what often dictates the difference between persuasion and presentation. Richard Freedman explained how the content of text in an exhibition can be very influential, and when not thought about carefully, can manipulate visitors into thinking a certain way (personal communication, October 30th, 2018). He also explained that, to maintain exhibit neutrality, a curator should consider eliminating adjectives in all text exhibits, so the information has less bias and allows visitors to come to their own conclusion on a topic.

**Layered exhibits increase visitor participation and self-guided learning.** This method of displaying information was seen in the Springbok Experience Rugby Museum, where visitors can interact with a touch screen that allows them to choose which information they want to learn about. The information is first presented in a broad context, and if the visitor decides that they want to learn more about a certain subset of that information, they can then delve deeper into another layer of information. Richard Freedman explained how this exhibit technique is also useful in presenting uncomfortable information to people who are interested in it and shielding it from those who do not want to see it. Another benefit of this technique was described by MJ Schwartz, who indicated that providing visitors a chance to predict future information by first only seeing one part of the exhibit and then leading into the next creates a more meaningful learning experience than passively reading the same content (personal communication, November 6th, 2018).

**Interactive exhibits create a more engaging learning environment for visitors.** Much of our preliminary research suggested that we include interactive elements in our room to increase visitor engagement and excitement about our material. As noted in our museum visits, interactive exhibits allow for a more immersive experience, and visitors are more likely to retain the material they have learned. The Springbok Experience Rugby Museum was particularly engaging and memorable, due to its highly “video game-like” interactive exhibits. Interactive exhibits are also important because they offer a change of pace from the normal display of information that one would find in any text-based exhibition.

**Exhibits must present information in a way that accommodates a variety of audiences.** Individual exhibits cannot cater to everyone, so a curator still must find a way for the information to be absorbed by different types of learners. Richard Freedman, when explaining a particular exhibition focused on the stages of the Holocaust, explained that “it’s a fine exhibition: historically perfect, wonderful images, very good documents are reflected, it looks very appealing. But it’s absolutely a book on a wall” (personal communication, November 6th, 2018). Some people are very interested in text-based exhibitions, but other people would rather go to a museum to experience the information, instead of just reading text. The Science Centre uses highly interactive exhibits, appealing to those who are less interested in reading, allowing them to physically engage with the information instead. However, additional descriptions are written adjacent to the exhibits for those who prefer to learn through textual explanation. Other learners, are more imagery and visual based learners. To accommodate this, the District Six Museum created replicas of people’s stores and
bedrooms to immerse the visitor in a separate environment. They include a large map covering the floor of the exhibition that features notes from previous residents of District Six.

**Encouraging visitors to participate in the exhibition space can create a more meaningful and personal experience.** We found that providing visitors a platform to share their thoughts and reactions to an exhibition can create a sense of involvement in the conversation of the museum. This type of participatory exhibit was used in the District Six museum, in which visitors and past residents could write their thoughts and experiences of the District Six removal on large cloths. The cloths were then displayed for other visitors to see. This style gives visitors the opportunity to become co-creators of knowledge and meaning in the museum and creates a more personal experience.

For a complete list of design suggestions, reference our Recommendations for the *State of the World’s Children* Curated Collection document.
FUTURE CONSIDERATIONS

There are several limitations of this research. Regarding our public awareness survey, our major limitation was sample size and composition, given our convenience sampling approach. There were only 57 survey responses, and of those responses, the vast majority were indicated female and from the Western Cape. Since our survey was completed by primarily CECD staff and just sent out through the organization’s online newsletter, it likely reached a very limited audience. We have to consider how the results might have been different if the survey had been more available or more advertised to people from every province. To the same argument, what of those living in rural areas that do not have access to the technology required to complete the survey? The limitation of using a volunteer-based digital outlet to gather data is the exclusion of an entire group of people whose input should be heard, especially considering the survey addresses issues that affect them. Furthermore, it cannot be said that the opinions of the people who responded to the survey are reflective of sentiment across South Africa. In order to draw more accurate conclusions, we would have needed to sample far more people and taken steps to ensure that the overall demographic of survey respondents matches the overall demographic of South Africa. In the future, we recommend taking a more stratified survey approach to more accurately represent awareness, thoughts and opinions.

The results of our 1000 wishes for childhood exercise were also limited by sample size and location. Much like the public awareness survey, the public space event reached a small number of parents, all having children that attend the same primary school. Mountain Road Primary School in Woodstock, where the event was held, is classified as a quintile 5 school, meaning that the surrounding area is relatively affluent. We must ask ourselves how the responses might have been different if we had asked parents whose children attend a quintile 1 or quintile 2 school the same question. Aside from sampling issues, it is also possible that in explaining the activity to parents as they stopped to talk to us, we primed them to answer in a certain way. Several parents did not understand the exercise but still wanted to participate. In our explanations we gave them some examples of wishes they could make, which might have influenced them to simply write what we said or something to the same effect. Additionally, the activity took place on a street corner at a very busy time of the day when children were being released from school and parents were coming to pick them up. We were hoping that the activity would be more reflective, allowing participants to give their responses a lot of thought as they were making a paper crane. Unfortunately, having the activity at such a busy time and inconvenient location, the participants mostly wanted to quickly share a response and return to their daily routine. If this exercise were to be repeated, we recommend being more thoughtful about how the question is asked, making sure to have clear directions that do not prompt parents to respond in a certain way, and encouraging participants to spend more time reflecting on the question by holding the activity in a more relaxed environment.
Finally, our human centered design approach was relatively flawed. Human centered design is meant to collaboratively involve human opinion at each step in the process, from abstract discussion to tangible design. Our committee was very involved in the abstract discussion components of the human centered design, but we often failed to provide them the opportunity to design with us collaboratively, and did not give them platform to offer thoughtful, constructive input. Given the time constraints of the project, we tried to quickly design exhibits to present to the committee, as we thought showing fully developed designs and asking for feedback would be the most effective use of our limited time we had to meet with the group. However, with this approach we lost the ability to design collaboratively. We did not visualize and brainstorm with our committee all of the possible ways that thematic information could be portrayed and picked a way to represent the information ourselves, only asking for feedback when they were near completed. Moreover, since so much time was spent developing designs, we did not always have time to put together thoughtful, effective questions to ask the committee, and frequently defaulted to, “what is your feedback?” To implement a true human centered design, we should have laid all the possible solutions on the table with the committee and together decided how to move forward with and iterate the best ideas. Additionally, with our approach, committee members neither saw designs until the moment they were being asked in person to critique them nor were given any agenda prior to the meeting. Because of this, they did not have the opportunity to familiarize themselves with the material we wanted to talk about and could never be able to fully contribute constructively during the meeting. In the future, we recommend determining what will be discussed at a meeting several days in advance, and making sure that committee members know what they will be asked to talk about or critique.
CONCLUSION

In closing, we used a human centered design approach to develop thematic and display recommendations for the Cape Town Museum of Childhood’s State of the World’s Children collection. Through background research, committee consultations, administration of an awareness survey, and our 1,000 Wishes for Childhood event, we identified child protection, nutrition, access to education and early childhood development provisions and the percent of children below the poverty line as the most pressing issues facing children in South Africa. Informed by this thematic information, UNICEF principles of upholding accountability and involving children’s voices and opinions in matters that affect them, and museum curation strategies learned from curator interviews and museum visits, we were able to develop a suggested floor plan of exhibits for the State of the World’s Children collection.

Through this project we had the opportunity to learn not only about the museum curation process and childhood in South Africa, but also about the importance of good research and committee practices.
REFLECTIONS

We are told time and time again that our projects will have bigger impacts on our own lives than the lives of the people we are doing the project for. I’ve learned that there is a lot of truth to this. Before taking on this project, I thought that there was no problem I couldn’t fix by putting in more time, working harder, or researching more. I applied this thinking to this project, and I put so much pressure on myself to have answers and try be able to solve every problem, feeling that if I didn’t know how to do something, it meant that I haven’t tried hard enough. The hard truth is that in life, some tasks are going to be outside of the scope of your skillset; but there’s intelligence in recognizing that, and value in admitting it. Over the past fourteen weeks, I spent hours upon hours trying to research and understand an entirely new culture and become versed in disciplines that people dedicate their lives to. In retrospect, an absurd and impossible thing to try to do. In being realistic about your own limitations, you can understand where you can contribute your piece to a larger puzzle. It’s okay to not know the answer and okay to admit that you’re struggling. I feel this is all best summarized with a quote: “Admitting that you need help doesn’t make you broken, it makes you fixable and teachable.”

I’m inspired and humbled by the time that I’ve spent in Cape Town and am so grateful for all of the priceless experiences I’ve had. In learning about the hardships that children face and at such young ages, it became so clear how cushy my life back home has been and I realized how fortunate I was to have had a childhood free from those hardships. My most moving experience was volunteering at the CECD’s World Children’s Day, helping children into their bags for sack races and cheering them on as they were jumping. Children would lean right on my shoulder and fully trust me to support them while they got their balance stepping into the bag. It made me see the beauty in the innocence and vulnerability of childhood, and how we as adults and as a global society share a responsibility of supporting and protecting the world’s children. Our sponsor Eric frequently said to us that, “childhood is the most beautiful of all life’s seasons”, something I didn’t truly understand until the end of my time here. Children, no matter where they are from, independent of their language, culture, religion and race, rely on us to create a world in which their innocence and vulnerability is celebrated and protected. I look forward to hearing about the Cape Town Museum of Childhood being finished, and though our contributions have been small, I’m so proud and honored to have been a part of the process.

Alexa Davis
As a student from WPI, I have become complacent in thinking that I can learn and understand anything on my own. Beginning this project, it seemed enough to me to scour the depths of Google Scholar and library databases because the internet should tell me anything, right? I did not yet recognize why physically setting foot into a different country, with a completely different culture and circumstances from my own would be any more valuable than what I could learn on my computer. I have grown up in a generation that relies on technology to accomplish anything, often ignoring the value of physical experience.

As I began working on this project in Cape Town, I felt relatively confident in my understanding of the struggles children face simply because I had done so much research. After brainstorming exhibit ideas with my team and attempting to represent the situations children and their caregivers face in South Africa, I realized in our weekly meetings with the committee at the CECD and with our professors that I had only acquired such a surface understanding of these issues. I was beginning to grasp the concept that personal testimony and listening to someone’s own experiences is far more revealing and meaningful than what any research study or article could offer. It was most humbling to learn that I did not and most likely would never truly comprehend what people in South Africa experience because I have not lived here, and I have not personally encountered any of the circumstances I was trying to represent in the museum. It was never my story to tell.

Looking back on my short time here in Cape Town, I am so grateful to have worked with such compassionate and accepting people. The Centre for Early Childhood Development welcomed me into their project with open arms and invited me to join their mission of putting young children first. They shared their experiences with me and they treated me like family; someone who came to them from an entirely different culture with no real understanding of their own. I will never forget our lunches together, sharing our stories from when we were children, and the feeling of being at home each day I walked into the office greeted with a “good morning” and a smile from everyone. I am thankful to have had the opportunity to learn and to push the boundaries of my comfort zone. It has been a pleasure and a privilege to add even the slightest contribution to the creation of the Museum of Childhood. To me, this chapter in my life has not closed. I will continue to look back on this journey and remember the genuine kindness I have been shown. I will remain humble, knowing sometimes it is better just to listen than to assume I already know.

Amanda Grossi
When coming into South Africa I thought I had a good grasp on what the state of the country was. I thought that, based on my research, I knew what needed to be changed and how to change it. I saw the usefulness of a museum portraying these issues and solutions, as well as how to create this meaningful experience for the visitors. We were told time and time again that we can’t change the world, but I still saw the project still as a small stepping stone for the movement for change in South Africa. This view began to change after beginning the work, and I realize now why I can’t be as great of a help in the cause than I originally thought.

When I went abroad, I didn’t expect to see as many small changes to life as I did. In my mind, I thought I was coming to Africa and it would be very different. Getting here and seeing the city of Cape Town I began to feel a sense of familiarity. There were grocery stores, malls, gas stations, all of these things that I see at home. Nothing seemed too foreign, except for the Appletiser brand of sodas. I didn’t see how this could affect my project until we went into one of our group meetings. One of the members, Jessica Blom, mentioned to us when discussing one of our concepts that “bottled water isn’t something people usually buy” in South Africa. At that point I had never considered the smaller aspects of life that were different from what I was used to. From then on in our meetings I was informed that students don’t generally use school buses, most students don’t go to university, and how most fathers don’t live with their children. These aspects and many more were explained to me, and I began to develop a greater picture of what it’s like to live somewhere else.

These smaller aspects would add up, eventually creating a difference so great between my culture and the culture of South Africa. Discovering this changed the course of my project for me. Originally I saw the project as a whole: I was designing exhibits with my team based on what we’ve learned. I began to see that no matter how long I was here, I still couldn’t think like a South African. From then on I was more inclined to question the smaller aspects of life, and began to try and see life here not as a citizen from the US but as a newcomer to South Africa. These small differences in culture ended up mattering more to me than the larger differences, such as different types of currency and food. No matter how much I research South Africa, I will never know what it’s like to not ride the school bus as a kid like many South Africans. In the future I now know that there are more aspects to life and culture than the significant, and will think of that whenever I am brought into a situation where I don’t know everything.
As students, we are brought up to believe that we can solve any problem with hard work and dedication. If you see something wrong with the world, and you are passionate enough to see that problem put to rest, you can be instrumental in fixing it. To some degree, that is true, but I think it is important to realize the magnitude of undertaking such a task.

The first step of the IQP process is to attempt to understand the problem that you are going to be working on for the next 14 weeks. To my surprise, problems are a lot more complex than we initially understand them to be. A substantial amount of energy goes into researching, conceptualizing, and reflecting on issues that are affecting people halfway across the world.

I think that the most valuable thing I heard someone say out in the field actually came from a museum curator of all people. Richard Freedman of the Cape Town Holocaust Centre had said that we “are talking about theories and statistics. But actually the basis of all of this is the human experience… when you unpack it, it’s about what happened to that small child in Umtata”. What we often forget, is that, that statistic that you read on child poverty back in the United States, is a reality for millions of real children here in South Africa. While we are sitting in our comfortable office, sipping our coffees, and working on our expensive computers, we forget that the individuals we are trying so hard to understand and accurately represent in our curated room are right outside our door. As foreigners, it would take us years and years to actually understand these issues, we just haven’t been exposed to them for long enough to appreciate their magnitude.

So where do I think our group fits in here? Do I think we shouldn’t attempt to work on these issues because we don’t fully understand them? The short answer is no. As long as the work I did was helpful in some form to the CECD, or saved someone somewhere legwork in developing designs or thematic ideas, then my time here was well spent. For no problem can be solved by one person alone. It is the small contributions from people all over the world, along with the structured work from organizations like the CECD, that really makes a difference for struggling parents and children in South Africa.
BIBLIOGRAPHY


Appendix A - Audio recording consent form: CECD committee members

You are being asked to participate in a board meeting to discuss the conditions of childhood in and early childhood development programs in South Africa. The purpose of this meeting is to gather opinions and experiences about childhood in South Africa which will aid in the development of exhibits for the State of the World’s Children curated collection at the Cape Town Museum of Childhood.

By signing this form, you are agreeing to participate in this board meeting and for your comments to be recorded and used for design development purposes.

Your Signature: ___________________________ Date: ___________________________
Printed name: ___________________________

In addition to agreeing to participate, I also consent to having the conversation audio recorded.

Your Signature: ___________________________ Date: ___________________________

Signature of person seeking consent: ___________________________
Printed name of person seeking consent: ___________________________
Date: ___________________________
Appendix B - Public awareness survey results release form

This survey is part of a student project assisting the Centre for Early Childhood Development to develop the Cape Town Museum of Childhood. Thank you for taking the time to participate.

I am over 18 and I understand that my
☐ information and responses will be used for this student project.
Appendix C – Museum exhibit worksheet

<table>
<thead>
<tr>
<th>Museum name: ___________</th>
<th>Exhibit name: _______________</th>
<th>Interactive?</th>
<th>Y / N</th>
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<td></td>
</tr>
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<td>Text Color:</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Simplicity:</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Design:</strong></td>
<td></td>
<td></td>
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</table>
Appendix D - Audio recording consent form - museum curators

You are being asked to participate in an interview to discuss exhibit design techniques.

The purpose of this interview is to learn about effective exhibit design, floor planning and other facets of museum curation, which will aid in the development of exhibits for the State of the World’s Children curated collection at the Cape Town Museum of Childhood.

By signing this form, you are agreeing to participate in this interview.

Your Signature: ___________________________ Date: ___________________________
Printed name: ___________________________

In addition to agreeing to participate, I also consent to having the conversation audio recorded.

Your Signature: ___________________________ Date: ___________________________

Signature of person seeking consent: ___________________________
Printed name of person seeking consent: ___________________________
Date: ___________________________
Appendix E - Curator interview questions

○ What processes do you use when you creating an exhibit?
  ○ We plan on utilizing a human centered or iterative design process in the
    creation of our exhibits, do you have any examples of this in your own
    museum?
  ○ What issues have you encountered with the human centered design process?
  ○ We will be prototyping exhibits for our room, what methods of cost and time-
    effective prototyping have you used in the past to further flush out your ideas?

○ In what ways do you consider an exhibit design successful?
  ○ Could you show us (give us an example of) an exhibit that you think is very
    successful in engaging people?

○ Our room is supposed to be engaging for all ages. How do you make your exhibits
  engaging for children and adults alike?
  ○ How do you take the issue of exhibit maintenance into account during the
    design process?

○ What do you do if an exhibit is not perceived well by the public?
  ○ Could you show us (give us an example of) an exhibit that you found
    unsuccessful in engaging visitors?

○ How do you circumvent size restrictions and still have a room that’s effective?
  ○ We are restricted to a smaller space in our curated room, are there any small
    details in a room design that are very important when it comes to considering
    the floor plan?

○ How do you address the issue of museum neutrality?
  ○ What is your professional stance on this debate?
  ○ Do you think that it is more effective and engaging to visitors to take a stand,
    or just report the facts?
  ○ Our room addresses issues that children globally are experiencing. How do
    you feel we should address these issues in regard to neutrality?

○ Our room is supposed to inspire a feeling of motivation to act in its visitors, how do
  you go about eliciting a specific emotional response in a room?
  ○ If that emotional response is different from the rest of the museum, how do you
    transition from room to room without having an abrupt change in mood?

○ Our room is meant to be updateable every year when an annual report (State of
  World’s Children) is published.
  ○ How do you update changing exhibits?
  ○ Are there types of exhibits that are more easily updated and adapted than
    others?
  ○ On average, what proportion of exhibits do you update or change annually?
Appendix F – Public awareness survey results

Table 1 - Age

<table>
<thead>
<tr>
<th>#</th>
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<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Variance</th>
<th>Count</th>
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Table 2 - Identified gender

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<td>3</td>
<td>Trans/Non-Binary</td>
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Table 3 - Monthly household income in rand

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<th>Field</th>
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<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Variance</th>
<th>Count</th>
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<td>100000.00</td>
<td>32493.35</td>
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Table 4 - Province

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<td>3</td>
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<tr>
<td></td>
<td>Province</td>
<td>Percentage</td>
<td>Count</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
<td>------------</td>
<td>-------</td>
</tr>
<tr>
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<td>Mpumalanga</td>
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<td>6</td>
<td>Eastern Cape</td>
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<td>0</td>
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<td>7</td>
<td>North West</td>
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<td>1</td>
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<td>8</td>
<td>Free State</td>
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<td>9</td>
<td>Northern Cape</td>
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</tr>
<tr>
<td>10</td>
<td>If not SA, What Country?</td>
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Table 5 - “Have you heard of UNICEF’s State of the World’s Children report?”

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<td>Unsure</td>
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Table 6 - “Have you heard of the Declaration of the Rights of the Child?”

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<td>No</td>
<td>6.38%</td>
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### Table 7 - “What percent of children globally are estimated to live under what is considered ‘extreme poverty?’ (Defined as living on R28 per day)”

<table>
<thead>
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<th>#</th>
<th>Field</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Variance</th>
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<td>15.00</td>
<td>95.00</td>
<td>53.98</td>
<td>22.62</td>
<td>511.84</td>
<td>43</td>
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</table>

### Table 8 - “What percent of children in South Africa are estimated to live under what is considered ‘extreme poverty?’ (Defined as living on R28 per day)”

<table>
<thead>
<tr>
<th>#</th>
<th>Field</th>
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<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>Variance</th>
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<tr>
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<td>98.00</td>
<td>57.61</td>
<td>23.74</td>
<td>563.60</td>
<td>44</td>
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</table>
**Figure 8** - “Which South African Province do you believe is experiencing the highest rate of childhood poverty?”

![Heat map of childhood poverty prevalence. Red indicates more respondents having clicked on the area.](image)

**Table 9** - “How do you believe childhood vaccination coverage in your province compares to the national average in South Africa?”

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>%</th>
<th>Count</th>
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<td>2</td>
<td>Average</td>
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<tr>
<td>3</td>
<td>Below Average</td>
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Table 10 - “Do you believe childhood vaccination coverage rate in South Africa is above, meeting or below the national goal coverage rate?”

<table>
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<th>%</th>
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<td>2</td>
<td>Meeting</td>
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<tr>
<td>3</td>
<td>Below</td>
<td>46.34%</td>
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</table>

References used for these survey answers can be found in UNICEF data, (retrieved October 25th, 2018), Hall & Sambu, (2016), and Statistics South Africa, (2015).

Table 11 - “Which of the following sustainable development, childhood development and/or advocacy programs have you heard of? Check all that apply”

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
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<th>Count</th>
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<td>United Nations Children's Fund (UNICEF)</td>
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<td>2</td>
<td>Centre for Early Childhood Development</td>
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<td>3</td>
<td>The South African Government Child Support Grant</td>
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<td>4</td>
<td>Good Hope Volunteers</td>
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<td>The Homestead Organization</td>
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<td>Mvula Trust</td>
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