INTERACTIVE MEDIA & CULTURAL HERITAGE:

Interpreting Oral Culture in a Digital Environment

A Thesis

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Abstract

Oral traditions and expressions in African cultures include a variety of forms: short stories, tales, riddles, proverbs, legends, myths, traditional songs and poems, prayers, theatrical performances and many more. African cultures use these avenues to pass on the knowledge of their society, values and the collective history of their tribes, which keeps their cultural identity alive.

This study explores how oral culture can be leveraged in the digital environment. To do this, all the forms mentioned above will be assessed on how they translate into the digital realm. Almost all the methods above involve some form of interaction, whether it is touch, question and answers, dances, acting or just clapping. There is also the important area of sound inflection, with which a good storyteller can bring the story to life in the minds of the listeners. The challenge that I anticipate and will try to resolve is how these delivery methods that rely on the surroundings and settings can be simulated in the digital environment.

This project is based on the hypothesis that the interactive environment will be more favorable for storytelling over the traditional book among the Diaspora communities. I will be testing a sample digital book created using the Apple

iBooks Author software on the iPad environment to gather data to prove or

disprove my hypothesis. I will then use the data to inform a future version of the

digital book that will be used as a self-standing educational tool on any mobile

device. I hope that this approach could be used as a template for documenting

appropriate cultural heritages around the world.

I strongly believe that the more cultures are documented, the more we can all

gain an understanding of one another which could lead to better communication

and fewer wars and conflicts. I see this project as a step in that direction.

Dedication

For my grandmother, Naomi Wambui Wanjema who helped shape me in my formative years and ground me in my family roots.

For my mother, Dorothy Wacheke Njau who sacrificed a lot for my development and modeled for me what hard work, perseverance and dedication can achieve.
For my family, that stood by me and never stopped believing in me.
For my friends, you gave me space when I needed it, but also kept close tabs on me and let me know when I became too reclusive.

For my wife Shontael who stands by me, challenges me and constantly encourages me to reach for my goals. I love you.

Acknowledgements

Thank you Robert Tauber, I was very inspired by the hearty discussions we had on book-making processes. It was in your workshop that I incubated this idea of taking my book digital. It was an honor to learn from such a Master of the print industry.

A big thank you also to my fellow graduate colleagues, you helped in facilitating an environment for many creative ideas to develop.

Thank you Cũcũ [grandmother] you helped me make sense of my world, taught me about my family roots, and was my constant champion. I miss you dearly and hope that my accomplishments make you proud.

Last, but definitely not the least, I would like to thank my family. Thank you for being so supportive through this endeavor, I could always count on your encouragement even when the going got really tough.

God Bless You All.

Vita

1972	Born – Nairobi, Kenya
1990	Kianyaga High School
1994	Diploma in Graphic Design and Communication. The Kenya Polytechnic, Kenya.
1994-1998	Art Director/Designer, Lowe Scanad & Marketing -Nairobi, Kenya.
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2001-2006	Ad Production Supervisor, Fort Wayne Newspapers, Fort Wayne, IN
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Fields of Study

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Area of Specialization: Visual Communication and User Experience Design

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Chapter 1

Introduction

Collectively the rich diversity of African heritage contributes a unique wealth to World Heritage. The study of this heritage makes it possible to better understand today's world and to better prepare for the future. However, for various reasons, the value of this heritage has not always been recognized. For a long time, this heritage was deprecated, and its owners and holders were sometimes even encouraged to forsake it. Thus, entire portions of African heritage were lost, and those which have been jealously safeguarded are often threatened by the impact of natural forces (the rain, the wind, vegetation…) as well as the fact that the physical and social conditions of its protection and maintenance changed, often drastically (respect of taboos, know-how, availability of the materials…) creating adverse conditions.

"Modernization, inevitable in every society, should not overshadow the importance of heritage as a vector of development and social stability, both for present and future generations. Even today, a number of traditional technical solutions remain unequalled in terms of efficiency. Some of them are particularly ingenious and deserve to be taken into consideration in the search for solutions to today's

challenges. In order to preserve this legacy from the past, national and local communities are encouraged to protect and valorize this heritage that represents the core of their common identity" (Barillet, Joffroy, and Isabelle Longue, 9).

There is a Kiswahili saying that states, "Mwacha mila ni mtumwa" which translates to, "He who forgets his culture or traditions is like a slave."

At its seventeenth session, the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) meeting in Paris on October 17 through November 21, 1972, adopted "new provisions in the form of a convention establishing an effective system of collective protection of the cultural and natural heritage of outstanding universal value, organized on a permanent basis and in accordance with modern scientific methods." This document has been instrumental in the preservation and raising awareness of cultural heritage in and for many countries all over the world.

This monumental work has received the support of most member nations of United Nations; however, after we have protected the cultural heritage entities, the question of disseminating it to a vast populace arises. Its dissemination is vital because a heritage will remain coherent and relevant as long as it remains alive in the people who created it and the generations that come after them. The populace I am referring to here is the African population in the Diaspora (any group of migrant population from a country or region), and their generations of offspring.

The study of this heritage makes it possible to better understand today's world and to better prepare for the future.

This study will seek to understand how the Gikuyu immigrant population informs itself about its cultural heritage and whether the new electronic avenues can be considered credible sources of their heritage. The Gikuyu people are found throughout Kenya (West central, Central Province, Kiambu, Murang'a, Nyeri, Kirinyaga and Nairobi districts), but their traditional homeland is Central Kenya around Mount Kenya. The Gikuyu are classified as Highland Bantu people alongside the Kamba, the Meru, and the Embu. These tribes usually understand each other although they may not speak each the other's language fluently. The Gikuyu are reported to be about 7,180,000 and increasing equal to about 23% of Kenya's total population. The Gikuyu speak several dialects which can be identified with the regions they live in; Southern Gikuyu (Kiambu, Southern Murang'a), Ndia (Southern Kirinyaga), Gichugu (Northern Kirinyaga), Mathira (Karatina), Northern Gikuyu (Northern Murang'a, Nyeri) (Lewis, ethnologue.com).

 The iPhone and iPad book App's will be tested as a possible delivery avenue. My hypothesis is that the interactive environment will be a more favorable platform for storytelling over the traditional book among the Diaspora community. This thesis will also seek to understand the various avenues that can be leveraged using technology to protect, preserve and disseminate a part of the Gikuyu culture – storytelling.

In order for me to see if my idea was even viable, I decided to have an informal discussion with my fellow graduate students in my graduate studio. My goals were to:

• Find out how they told traditional stories now.

• Find out how often they shared traditional stories among themselves.

• Find out what they thought of the current electronic books in the market and whether they thought video and audio files were necessary for this kind of book.

• Find out if they would share the experience/App of an electronic book with someone else.

Through those discussions, I discovered that most of them did not tell traditional stories. The few who did, told them orally or through a combination of books and movies or used other resources. So, I proceeded to discuss my idea with them and later asked what they thought about using the digital realm to collect and distribute oral traditional stories. All were very supportive of the idea, they thought that the medium was very engaging and the possibilities of extending the story from just the written form were limitless. One answer that stood out to me was how such a product would reach the new generation through a medium they are accustomed to, making it relevant to them and therefore preserving a culture. I was also curious about what they thought about the electronic books currently in the market. Most of them were appreciative of the electronic books

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currently in the market, but they felt that there was a lot more that could be done to fully utilize the inherent qualities of the digital devices that housed them. They liked that they could interact with the content through highlighting words, being able to jump to a page and bookmark a page, as opposed to just reading it like a traditional book. They also liked the search option afforded by electronic books, being able to find meanings for words and search them through the book was a feature most people appreciated. Those electronic books that incorporated audio, video and animations were a favorite because the extra content made the book more engaging.

Up to now, I had got a lot of positive feedback. But I also wanted to find out what aspects of the electronic books they would like to see changed or eliminated. Some of the electronic books could only be viewed in a vertical position. This they felt was an impediment to enjoying the book while lying down. Most of the hand-held devices in the market afforded viewing content horizontally and they felt that these books were not fully exploiting that feature. I should mention here that since then, most of those electronic books have issued updates which take advantage of the ability to view content horizontally. Another feature they thought was under-utilized was the help feature, many thought that something should have been prompting them when there was some interaction in the page. I think this comes from the expectation that there should be interaction in each page since it is a digital book. While some books had excellent navigation prompts, many others felt they were lacking in this area. Many felt that this was an area that really needs

deep thought and design improvement with future books.

I finally asked them if an App to explore and inform them about their culture was created, would they buy it and how much would they pay for it. They all said they would buy it and would pay anywhere from $1.99 to $5 or $6. Armed with this information, I felt that my hypothesis was merited and I should proceed with this project.

1.1 Research

Starting with chapter 2, I will seek to understand digital media as it relates to books. I will draw on insights from papers and publications on this subject. An understanding of how the future generations will be interacting with books will give me a better understanding of what to propose as a deliverable product. A brief history of digital media and oral culture will be highlighted to give us context. Current initiatives by United Nations Educational Scientific and Cultural Organization (UNESCO) will be discussed to give us further context.

Chapter 3 will discuss my analysis of existing industry products. I will extensively explore how they were developed, what is working or not, and their delivery methods. We will also explore user needs and use the knowledge from this chapter to inform the next stage of developing, which is prototype development.

Next in chapter 4, the development of prototype will be evaluated. I will discuss

how the persona for the user story was developed and tell the story here. I will also discuss the design process from wire-framing, to design and final deployment of the iPad as a draft book on my local iBook Apple App.

After creating the prototype, I wanted some user feedback to gauge acceptance and solicit ideas to make the product better. Chapter 5 will highlight these results and insights from the research study test. The data will be presented in a format that is easy to understand and assimilate.

This final chapter will then outline how I will implement suggestions and insights outlined in the previous chapter 5 into my final interactive book. A time-line of the expected release date of the Gikuyu Riddles Book to the Apple iBook store will also be outlined here.

1.2 Expected outcomes

The physical outcome of this research should be a digitally published book available in the digital bookstores that will hopefully begin a new revenue stream for my family. Academically, this processes and insights outlined in this work will hopefully be used as a stepping-stone in the research work of those working in this field of design. My other hope would be to see this product be used as a template for gathering, storing and disseminating cultural stories from many other cultures of the world.

Chapter 2

Background/Preliminary Research

"Necessity is the mother of invention." – Anonymous

As a father of interracial children, I soon discovered that I had a challenge at hand. How do I introduce my children to my Gikuyu culture, a culture they were not born into and do not live in? I wanted to and felt the need to share some of my cultural experiences with them, the riddles, the stories, the songs, the proverbs and sayings, my mother tongue, and also share all this heritage through my mother tongue. This was in the back of my mind as I thought about what project to pick as part of my thesis in graduate school, the idea of bridging this cultural gap between my kids and I looked like a good project to tackle. We all know that the best way to experience a culture is to be immersed in it (Kabira, 3) at some point of its study. For us as a family, that would mean a huge investment in both time and money. Time may not be a problem but money would be present a challenge since plane tickets to Kenya are estimated at around two thousand dollars per person - not including many other expenses. For a family of seven, that is a lot of money.

The most viable alternative for me is to rely on technology via television programs, the internet and other digital mediums to supplement the stories I tell my family about Kenya and Africa in general. This approach should work well because my kids are growing up in the digital age. They are exposed to all sorts of digital gadgets at home. To name a few, we have computers, televisions with digital cable service and all the interactivity that comes with it; we have game consoles like the Wii, and tablet computers. My children are also being introduced to these technologies in their schools. Just like Tapscott highlights in Growing up Digital (2009), I have also found that my children are "talented" in these new technologies; they sometimes know more about the devices and their content than I do. What better way to extend my cultural teaching experience than with this medium with which they are already familiar.

Even the business community is realizing that the interactivity platform is something they can leverage to sell their products. In an article by the The New York Times, Go Directly, Digitally to Jail? Classic Toys Learn New Clicks, toy maker Mattel has decided to include a camera in their latest version of the Barbie doll because their studies of children's play activities show that they revolved around gadgets.

"Mattel is [also] introducing a line of games called Apptivity for classic brands, including Hot Wheels, Fisher-Price and Barbie. Using free apps, children pull up a game on the iPad. But instead of using a virtual car or avatar, children move

small plastic toys with sensors around the iPad.

The make-overs have extended to hi-tech versions of board games, too. In the Game of Life, the plastic spinner has been replaced by a tablet, which shows a picture of the spinner and replicates the spinner's sound. In Monopoly, a tablet or Smartphone counts everyone's money and, when a player lands on Chance or Community Chest, it starts a short digital game, replacing the cards that told people to go to jail, go directly to jail." (www.nytimes.com)

That got me thinking about how the rich stories we have in my Gikuyu culture could also have their characters made into such interactive toys as a way to extend the stories and teachable moments. That would resonate more with the African kids when they play with toys that look, dress and act like the characters in their stories. This same tactic that major companies like Walt Disney employs with their stories and movies could be use here also. We can create products around the whole ecosystem of a story character, from books, to films, to toys and even clothing lines and theme parks, why not?

So I set out looking for any electronic resources with African stories that could help me understand the processes involved. Unfortunately I could not find any that I could leverage literally. There were interactive books developed and sold on the Apple Store, but these featured Western stories. Although it was good to see the advancement in interactive books designed for the handheld devices, I still felt that the medium could be pushed to deliver more engaging content for

the user, as well as a more culturally diverse content also.

2.1 Digital Media

I chose the digital media environment for a myriad of reasons. One of them being its portability; it can go with you wherever you want to take it. Here I am thinking of the digital books and movies on the hand-held devices. Access to the content is not dependent on connectivity once you have a copy of it on your device of choice; you just activate it whenever you need to access it. There is no waiting or having to deal with any other constrains to get to your content.

Digital content is also becoming more common in our homes prior to joining educational institutions. The children of today, mine included, start to interact with technologies very early in their lives. Schools also have recognized this and are aggressively implementing computer-based learning in their curriculums as a way to keep children actively engaged in the various subjects. Rachel Levy in her chapter "Young Children, digital technology and interaction with text" written for Deconstructing Digital Natives: young people technologies and the new literacies; set out to understand why the argument is so strong for "schools to recognize the new textual landscape of modern communication systems and accommodate this within the early years curriculum" (152) of school education. From the small group she tested, it was evident that children's experiences differed in the way they experienced technology between home and school. For one of the subjects, it was an enabler and the skills learned at home were

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able to translate to school. One other subject confined the use of technology to their home, and another didn't feel comfortable using technology since they didn't have it at home. Her suggestion was that we should not only find ways to "include such technologies in the classroom, but actively build on the skills and strategies young children develop in their homes in order to make sense of digital texts, and thus develop aspects of "digital wisdom" in order that they "become confident and efficient users of many different texts in modern society" (164).

In January of 2012, as Apple introduced their updated product iBooks 2, their premise was that this revamped service would revolutionize the U.S. education sector and how students learn and interact with content. In their video presentation (http://youtu.be/1qo3nYQu6FM) "school teachers across America rattled off a litany of things hobbling their efforts: Overcrowded classrooms, crumbling facilities, disinterested students. "We need to find out what's wrong" concluded one on-screen teacher, "and fix it." (core77.com). Apple decided to focus on the area of student engagement with whatever material they were reading. With this new service and their iPad, not only would "all your textbooks be in one place," but you can now interact with the content through manipulating the 3D models, magnifying images, playing video and audio files. The user can also now interact with the text by highlighting it and make notations. "The software then compiles these passages into a list and even automatically converts them into flashcards—designed to look like index cards, naturally—that you can flip

through in preparation for a test. (There's even a shuffle feature)" (core77.com).

In other words, the user would have a richer experience with the iPad, and with

that the issue of student engagement would be addressed. Apple's venture into

the education sector is to make a profit. They identify a need in the market,

create a solution for it and sell it for a profit. That is what these companies do.

But I concur with the closing thoughts of this article, with Apple "attempting to

improve the education of children, by aiming their massive resources at how they

assimilate information, provides an encouraging example that design, marketing,

and business acumen can all be combined to not only create wealth, but perhaps

improve the minds of future generations" (core77.com).

Some countries like South Korea have already put in place structures to help

make the digital realm the platform of future education. In an article for BBC

News Business online, Gary Eason reports how the South Korea's Ministry of

Education "wants to be able to deliver all its curriculum materials in a digital

form through computers. The information that would once have been in paper

textbooks will be delivered on screen" (Eason, 2011). With the wireless networks

set up to support this infrastructure, it means that the students can learn from

anywhere which increases chances of collaboration. They won't have to carry the

many cumbersome books since they will come pre-loaded with them or can be

accessed through the Cloud, and as a result this will extend the learning environ-

ment beyond the traditional classroom.

Digital media also allows for the content to be experienced in a very rich way. The quality of picture and sound has improved so much that we don't think of buying anything that is not high definition or 3D (three dimensional). The compression qualities of video and sound have also vastly improved such that larger and larger files can now be sent over the internet or stored in smaller devices with very minimal loss of quality and in some cases none at all. When these mediums of electronic text, sound, video and animation together with latest hand-held devices are combined into a learning environment, they make for a rich interaction that has the user engaged, interested, plus keeps the cost of owning and delivering that content down. Whenever new content is generated, the author or publisher can send updates to all subscribers through the feature of 'pushing the content' just like how mobile e-mail browsers send e-mails to hand-held devices.

2.2 E-Commerce

As digital content and the digital environment become more and more main-stream, marketers are not be far behind. Sites like trendwatching.com who have been keeping an eye on this have noted that with 'increasing (mobile) internet penetration' (Trendwatching.com) consumers are shifting their spending to online retailers. This new shopping habit has got the attention of marketers who have increasingly been devoting their advertising dollars to develop their online presence. Here are some statistics:

- US: e-commerce sales will grow 62% by 2016, to USD 327 billion (Source: Forrester, February 2012).

- Europe: e-commerce sales will grow by 78% by 2016, to USD 230 billion (Source: Forrester, February 2012).

- Brazil: e-commerce sales will grow 21.9% in 2012 to USD 18.7 billion (Source: remarketer, January 2012).

- China: e-commerce sales were CNY 780 billion (USD 124 billion) in 2011, an increase of 66% from 2010. E-commerce is expected to rise from 3% of consumption to 7% by 2015 (Source: IDC, March 2012).

- India: e-commerce market is expected to grow to USD 70 billion by 2020, from just USD 600 million in 2011 (Source: Technopak Advisors, February 2012).

- Indonesia: e-commerce sales are forecast to grow from USD 120 million in 2010 to USD 650 million by 2015 (Source: Frost & Sullivan, February 2012) (Trend-watching.com, 2012).

That's why I am convinced that the delivery of this content in the online digital environment is the way to go; the above statistics can attest to that.

2.3 Oral Traditions

"Just like culture in general, intangible heritage is constantly changing and evolving, and being enriched by each new generation. Many expressions and manifestations of intangible cultural heritage are under threat, endangered by globalization and cultural homogenization, and also by a lack of support, appre-

ciation and understanding. If intangible cultural heritage is not nurtured, it risks becoming lost forever, or frozen as a practice belonging to the past. Preserving this heritage and passing it on to future generations strengthens it, and keeps it alive while allowing for it to change and adapt" (Esson, 6).

When I mention intangible heritage here, I am referring to all aspects of oral traditions as I understood it from reading some of the material put out by United Nations Educational Scientific and Cultural Organization (UNESCO). UNESCO, is the only specialized agency within the United Nations system with a specific mandate in culture, assists its Member States in the elaboration and implementation of measures for an effective safeguarding of their cultural heritage (Esson, 3). UNESCO defines intangible heritage as "not the cultural manifestation itself but rather the wealth of knowledge and skills that is transmitted through it from one generation to the next. The social and economic value of this transmission of knowledge is relevant for minority groups and for mainstream social groups within a State, and is as important for developing States as for developed ones" (Esson, 4).

The skills and knowledge referred to here comes from the experiences a group of people have with the land, their neighbors, with trade and commerce, with conflicts and reflections of human relations and accomplishments. So a study of the African oral literature will show themes and characters that are very similar, the only difference will be in the adaptation of it's delivery to the various regions.

"A narrator may embellish, recast and refine stories known elsewhere and give them the mark of his own creative genius, or compose new narratives out of the experience of day-to-day living" (Courlander, 3).

2.4 UNESCO's Cultural Heritage Initiatives

On UNESCO's website under the culture tab, they have outlined comprehensive program goals for preserving cultural heritage, and the plans to implement them. They have listed them as "Biennial sectorial priority 1: Protecting and promoting heritage and cultural expressions"and "Biennial sectorial priority 2: Advocating the inclusion of culture and intercultural dialogue in development policies to foster a culture of peace and non-violence"(Program, 2012). Some of the program goals include, implementing the 1972 World Heritage Convention document mention earlier, increasing awareness of heritage protection and conservation by developing integrated and comprehensive information and knowledge-management systems (Program, 2012). Regarding inherent cultural heritage, their goals are to "ensure the effective implementation of the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage, by facilitating the decision-making process of its governing bodies and the advisory services of their subsidiary and consultative bodies; support and process requests for inter-national assistance from the Fund for the Safeguarding of the Intangible Cultural Heritage" (Program, 2012).

They also plan to "enhance the safeguarding and transmission of the intangible

cultural heritage by supporting States Parties in developing and/or strength-

ening national policies and human capacities in the field of the intangible cultural

heritage; facilitate the participation of communities, practitioners, cultural actors,

NGOs, non-profit making organizations, experts, and centres of expertise in the

implementation of the Convention, with a special focus on youth and women;

implement international assistance-funded safeguarding activities; and effective

utilization of best practices for public awareness and strengthened safeguarding

capacities, targeting, in particular, youth and women" (Program, 2012).

Another goal is to "increase general awareness of the importance of the intan-

gible cultural heritage and its safeguarding for sustainable development, social

cohesion, dialogue and peace through the further development of an integrated

and comprehensive information and knowledge-management system, as well as

the effective promotion of best practices in safeguarding" (Program, 2012). This

is very encouraging to me, because they not only want to write policy about this

but also implement it by dedicating funding to the projects.

In their priority 2 goals they outline that they intent to "strengthen management

for sustainable development in cities through heritage preservation and the

Creative Cities Network;" "continue efforts to create an enabling environment

for the emergence of cultural and creative industries;" "mobilize innovative

partnerships to promote and strengthen the role of museums as social, educa-

tional and economic channels, particularly in Africa and the least developed

countries;" "mobilize innovative partnerships to promote and strengthen the

role of museums as social, educational and economic channels, particularly in

Africa and the least developed countries"(Program, 2012). This next goals was

of particular interest to me because of the nature of my study, and it was to

"promote the pedagogical use of the UNESCO general and regional histories, in

particular the General History of Africa through the production of teaching mate-

rials and their integration into school curricula;" "consolidate efforts to promote

dialogue among cultures and increase awareness of cultural interactions, through

flagship projects," "promote multilingualism and enhance the intercultural skills

of youth through information and communication technologies (ICTs);" Promote

and protect indigenous and endangered languages; contribute financially to the

implementation of activities regarding multilingualism through extra budgetary

resources, with a view to ensuring linguistic diversity and endogenous develop-

ment;" and "to allocate for this purpose an amount of $15,708,400 for activity

costs, and $36,504,800 for staff costs" (Program, 2012).

UNESCO has also produced a good body of communication material promoting

the preservation of culture, most of which can be found under their resources

tab on their website (Resources, 2012). The few shown here were a great resource

for me as I informed myself about what UNESCO was doing in the cultural

heritage field. The World Heritage Brochure (see Figures 1 and 2) gives a short

introductory overview of the subject (The World Heritage Brochure, 2012).

Another resource was the Handbook on Cultural Heritage and Local Develop-

Figure 1: The World Heritage Brochure - front

WHAT IS
THE WORLD HERITAGE ?

THE WORLD HERITAGE CONVENTION

THE WORLD HERITAGE FUND

HOW DOES A SITE BECOME WORLD HERITAGE ?
THE PROCESS AND ITS ACTORS

States Parties

UNESCO World Heritage Centre

Advisory Bodies

World Heritage Committee

Preservation

Figure 2: The World Heritage Brochure - inside

ment for African Local Governments Published (Handbook, 2012). They have

also produced material reaching out to the youth. Developed under the auspices

the World Heritage Education Programme, "The UNESCO Young People's World

Heritage Education Programme (WHE Programme) seeks to encourage and

enable tomorrow's decision-makers to participate in heritage conservation and to

respond to the continuing threats facing our heritage." Their goals are:

- "To encourage young people to become involved in heritage conservation on a local as well as on a global level

- To promote awareness among young people of the importance of the UNESCO 1972 World Heritage Convention and a better understanding of the interdependence of cultures amongst young people

- To develop new and effective educational approaches, methods and materials to introduce/reinforce World Heritage Education in the curricula in the vast majority of UNESCO Member States

- To create a new synergy among educators, heritage experts, environmental specialists, States Parties, development actors and other stakeholders in the promotion of World Heritage Education on a national and international level.

In September of 1996 the First African World Heritage Youth Forum for English

speaking countries was organized in Victoria Falls, Zimbabwe. Countries repre-

sented were, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Madagascar, Malawi,

Mozambique, Mauritius, Namibia, Nigeria, Sierra Leone, Swaziland, Seychelles,

Uganda, Zambia, Zimbabwe, Croatia, Norway, New Zealand. The students who

attended discussed concepts of heritage preservation, conducted creative work-

shops and had study tours. They learnt about the "criteria used in selecting a site

for the World Heritage List and what it entails to be on that list" (First, 2012) The

choice of workshops was sculpture, journalism, environmental impact assess-

ment, cultural landscape/music, restoration/conservation (see Figure 3).

At the end of the forum the students resolved:

The students resolved:

- To involve and educate their communities on the importance of their heritage;

- To introduce in their education at an early stage an awareness of world heri-

  tage. They also appealed for help in organizing traditional culture oriented

  events like workshops and seminars;

- That authorities should be able to control the number of tourists visiting

  heritage sites, and encourage a respect for their value;

- To restore chiefs' powers.

The teachers also made so resolutions:

• Actively support and participate in the UNESCO ASP/WHC World Heritage

  Youth Project.

- Commit themselves to the ideals of identifying, protecting, preserving and

  promoting World Heritage Sites and Monuments for prosperity and overall

  benefit. (First, 2012)

PHOTO: *Students in Creative Workshops*
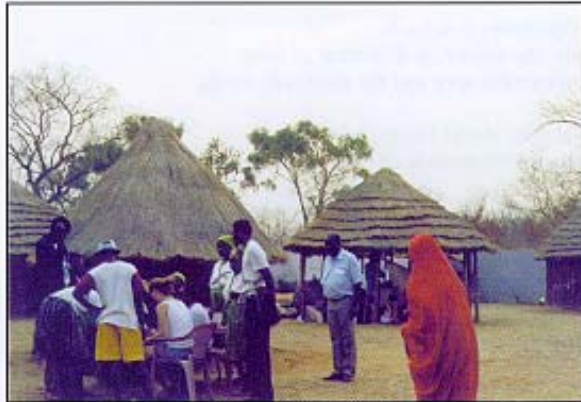
Figure 3: Report of the First African World Heritage Youth Forum-workshops

Some of the field trips undertaken by the Forum Participants.

The first African World Heritage Youth Forum would have been incomplete without a visit to the world famous Victoria Falls. There was a consensus amongst Forum participants that this World Heritage Site is a spectacular natural wonder and that it is being well cared for. Appreciation of the beauty of nature was consolidated by an educative tour of Spencer's Creek crocodile farm and a boat cruise on the tranquil waters of the mighty Zambezi River. Fauna observed included elephants, giraffes, duikers, wildebeests, zebras and warthogs.

Victoria Falls Craft Village
A visit was paid to the Victoria Falls Craft Village which operates under the theme "Traditional Living in Zimbabwe". The craft village depicts the customs of the diverse ethnic groups found in Zimbabwe. Tour guides were able to explain quite clearly the functions of various cultural artefacts as well as the rationale behind ethnic customs and beliefs.

Figure 4: Report of the First African World Heritage Youth Forum-field trip-1

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and entertained with a display of openness and affection which was typical of the whole Forum. The Chief's respect for and tolerance of all participants'cultures,strong commitment to his own culture and his easy diplomatic style inspired teachers to re-double their efforts to work for greater understanding between peoples through World Heritage Education.

DANCERS FROM MUKUNI VILLAGE

Figure 5: Report of the First African World Heritage Youth Forum-field trip-2

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I come from a society that has a rich oral history; this is how we passed on the cultural identity of the community. In a time when we did not transcribe in the written form, our elders would tell and retell tales that contained the communities or family's history, accomplishments, defeats, dreams – these and many other topics in turn became the pillars that formed that community.

Oral traditions and expressions in African cultures include a variety of modes; short stories, tales, riddles, proverbs, legends, myths, traditional songs and poems, prayers, theatrical performances and many more. African cultures use these avenues to pass on the knowledge, values and collective history of their tribes which keeps their cultural identity alive. For the African, with "his myths and legends he bridges back to the very dream morning of creation, while in his systems of divination he projects himself into time not yet come; in his epics he asserts the courage and worth of the human species; in his tales he ponders on what is just or unjust, upon what is feeble or courageous, what is sensible or ridiculous, on what moves the spirit to grief or exultation; in his proverbs and sayings he capsulates the learnings of centuries about the human character and about the intricate balance between people and the world around them. What we, standing on the periphery, see as lore and tradition is the accumulation of experience that has made mankind in Africa capable and confident in the endless effort not only to survive, but to survive with meaning" (Courlander, 1).

The Gikuyu community which is the subject of my study used a compilation of

these oral expressions to help foster unity, chastise and criticize each other as they built the society they wanted. As (Mwangi, 3) noted "the Kikuyu society praised communal unity, hard work and honesty", so you will find that many of the songs, riddles, and tales praised the virtues of hard work and honesty and sometimes very harshly chastised those individuals thought to be lazy and dishonest. And just like in many other African societies, the stories that were created featured animal figures so that through the humor of laughing at the animal, the moral is subconsciously communicated to the community since "the fun is not being poked at individuals but at human follies, faults and weaknesses"(Mwangi, 4).

This study explores how oral culture can be leveraged in the digital environment. To do this, all the modes mentioned above (short stories, tales, riddles, proverbs, legends, myths, traditional songs and poems, prayers, theatrical performances) will be assessed on how they translate into the digital realm. Almost all these modes involve some form of interaction, whether it is touch, question and answers, dances, acting or just clapping. This part I think will be a challenge. There is also the important area of sound inflection, with which a good storyteller can bring the story to life in the minds of the listeners. Rules and conventions help establish this. For example when the stories are being told, the listeners sit in a circle around the storyteller. Then salutations like 'Ugai Itha' (Mwangi, 8) which meant 'say Itha' which was a way of letting the group know that the story is beginning now. And at the end the storyteller would say 'Rũkirika' (Mwangi,

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8) meaning it is finished. In the same way, if the presentation involved a song, the listeners were expected to participate when cued by the presenter. Through this, the listener would learn the song and internalize the message. If the storyteller was good, they would employ a myriad of these techniques seamlessly, and in so doing keep the audience engaged and thus communicates his message. "Dramatic dialogue was most important in the tale because it brought out the humorous and pathetic aspects of the tale. The narrator achieved this through his ability to mimic and to identify himself with the characters in the tale" (Mwangi, 10). Stories that included aspects of everyday life heightened the dramatic quality of the narrative (Mwangi, 16).

With my study I hope to propose a way to resolve how these delivery methods that rely on surroundings and settings can be simulated in the digital environment.

The study is based on the assumption that the interactive environment will be more favorable for storytelling over the traditional book among the Diaspora communities. I will be testing a sample digital book of riddles on the iPad environment against a printed book with the same riddles. These riddles are in both Gikuyu and English. I will then use the data and suggestions given to inform a future version of the digital book that will be used as a self-standing educational tool on any mobile device. I hope that this approach could be used as a template for documenting appropriate cultural heritages around the world.

Chapter 3

Analysis of Existing Industry Products

In the computer's new role as communicator, interface design should serve as a multimedia toolkit that helps to orchestrate the effective communication of ideas unrelated to the computer's functions. Just as filmmakers use sound, light and moving images to express ideas using the film medium, interface designers now have the potential to use color, graphics and moving images to express ideas using the computer medium (Ropa, 110). In this chapter existing industry products in the digital storytelling family will be analyzed to help us understand exactly what is working in terms of design, content and overall delivery of the whole digital story ecosystem.

I will do this by giving a general overview of the product, then I will expound on the users goals as they interact with this product. After that I will look critically at the book and highlight its areas of strength and then offer opportunities for improvement.

Most of the books I will be looking at will be on the Mac iOS platform and mainly on the iPhone and iPad devices. I should mention here that the iPod

Touch also delivers the same experience as an iPhone, it is for all intents and purposes an iPhone without the phone features.

3.1 Popout! The Tale of Peter Rabbit

Figure 6: The start up screen of Peter Rabbit on the iPhone interface.

The first book that I would like to review here brought the interaction of pop-up books to the digital realm. Loud Crow Interactive is a company out of Canada that is generating these pop-out books. According to their web site, "Loud Crow Interactive Inc. is a Canadian digital book publisher based in Vancouver, British Columbia. The company was founded by a group of former video game developers with over three decades of experience in interactive media."

The founder's inspiration came from watching children play and fight over

pop-up books. They felt that they could extend the life of the paperback book in a digital interface and at the same time create a new experience. Their book The Tale of Peter the Rabbit, by Beatrix Potter (see Figure 1) is created to simulate a pop-out book; the paper interface is given a texture and shading to enhance that perceived feeling and look of an actual paper page.

3.1.1 User Goals

Step 1: Reading the book

- On the homepage
    - set the music volume level
    - Choose the reading options-'Read to me' or 'Read myself'.
- Tap start or the book itself to begin reading the book

Figure 7: Some of the controls the startup page affords.

The user of this product would be an Apple iPhone or iPad owner or a person

exposed to digital interactive devices and thus has basic domain knowledge of how interactive handheld devices work. Some of the tasks would involve:

- Launching the App on the iPhone or iPad device. The interface will orient horizontally right away since the book is meant to read this way.
- Setting the music volume level using a sliding level control. (see Figure 2)
- Choosing the reading options-'Read to me' or 'Read myself'. (see Figure 3)
- Turn the page just like you would with a book by placing your finger on the bottom right or left side of the book and simulating a page-turning motion.
- Then engage with the animation in each page.
- Use the tab at the middle of every page to go back to the contents pages as needed.

3.1.2 Areas of strength

- The first of its kind in the market. It was the first interactive book designed for the iPad and iPhone available that utilized the inherent features of the iOS devices. Features like the "Three-axis gyro (gyroscope) and accelerometer" (Apple, iPad Specs) which allow "the user to tilt the mouse one way to cause a horizontal scroll and another way to cause a vertical scroll and yet another to tilt a graphic" (Kahn, 2010). Basically what this did is bring motion sensitivity to the iOS devices making them similar to game controllers. By simply tilting the device, you could affect the position of an illustration on the page. This makes the book highly interactive and engaging.
- Over 50 pages of authentic text and illustrations with realistic page turning

Step 3: Engage the animation.

• Touch the falling leaves to have them pop out and become bigger objects

Figure 8: More touch interactions

interactions just like the original hardcover book. The most interesting part

of the book has to be the interactive illustrations; they do not have much

interactivity other than moving up and down and pivoting along the drawn

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• Touch the falling fruits to have them pop out and become bigger objects

• Tap twice on the fruits to have them splatter across the page just like a real one would if pressed down.

Figure 9: More touch interactions

screws. These screws are drawn along the elbows and hands to simulate movement. Some of the images also have tabs to pull alone or roll around much like a normal paper pop-out book (see Figure 5). One more interactive feature helps this product stand out, and that is the falling leaves and berries that are in some parts of the book. When they are touched, they enlarge and

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come to rest at the bottom of the page, when the berries are double tapped, they burst open much like real berries would if squeezed (see Figure 4). That makes for an entertaining interaction once this feature is discovered. Having discovered these feature for myself I wanted to test how 'digitally literate' (Glister, 3) my kids are, especially my six-year-old daughter. To my surprise, she plowed though the interactions like it was 'native' to her. She understood that the pages could be turned much like a traditional paper book because the interface is designed to simulate that. The falling leaves and berries were a not very intuitive for her, but once I prompted her on what she thought those leaves would do if touched - then she realized everything could be touched. The background music and read-to-me features which can be turned on or off were the other features that helped keep these kids engaged.

- Beautiful vocal performance, music, and sound effects will immerse you in the story. These features are activated at the beginning of the book once it is opened. The music used in this book is instrumental and so not intrusive or overbearing. The voice used for the read-to-me feature commands a motherly presence without being too firm. The text is highlighted in green in the read-to-me mode, making it easy to follow the story (see Figure 3).

- Clean interface layout making it easy to read and experience the animation. There is no clutter in the design; it is easy to see that every item designed with the intention of occupying a certain space. The text is well spaced out so that it is easy even for a child to read along.

- Since its release, this book has been adapted for various other operating

Step 3: Engage the animation (cont.)

• Pull on the tabs to have the image move.

Figure 10: Interaction icons

systems like, the Android Market, Amazon Appstore and Barnes & Noble's

Nook.

3.1.3 Opportunities for Improvement

• Icons for the iPhone interface are too small. In such a small display interface,

Step 3: Engage the animation (cont.)
• Running your finger on the spin wheel to trigger the repetitive motion.

• Pull down on the tab at the top of each page to engage the content page.

Figure 11: Interaction icons

Recommendations (cont.)

- Redesign the 'home' tab or it's interaction so that it is easily recognizable as the 'content page' or 'home button'.

O NCE up

- Reposition some animations away from the page edges to avoid triggering a page turn when interacting with them.
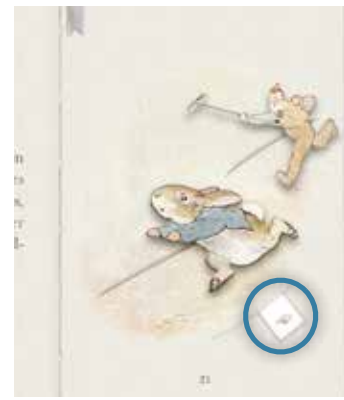
Figure 12: Suggested redesigns

it may be easy to overlook the interaction handles (see Figure 5). So increasing

the visibility of the icons can alleviate that. This could be done by size of

color; this will help draw attention to those features.

- The tab at the top of every page is not easily recognizable as the 'content

page' or 'home button' (see Figure 6). In fact it looks more like a bookmark

than a home button. By redesigning the 'home' tab or its interaction this

confusion could be avoided, I would even suggest incorporating a table of

content icon which looks like four sheets of paper laid on top of each other.

- Some animations need to be moved away from the page edges so that they do not trigger a page turn when interacting with them (see Figure 7). Repositioning them away from the edges will help here.

Loud Crow also produced another book I would like to talk about, Barnyard Dance! because of the user group I think it is targeted to. Produced in the same way as The tale of Peter the Rabbit, its large images, a mixer of bright colors and lots of white space make it ideal for kindergarten kids. It has short sentences per page and sketchy drawings that are not too intimidating, ideal for this young demographic of users. The interface is designed to look like the hardcover books for kids in kindergarten, another feature that makes it look familiar to the physical books they are already accustomed to reading. In summary, the book leverages all the inherent qualities of the iPad environment, touch, accelerometer, sound and crystal clear picture to deliver a very rich and satisfying reading experience.

3.2 Operation Ajax

Another book that I would like to talk about, also designed for the Mac OS App Store is Operation Ajax: The Rise and Fall of Iranian Democracy. This one is produced with the look and feel of a comic book. With very detailed drawing, sequential speech and picture frames, sound effects, archive video; it makes for a very engaging interaction.

Operation Ajax is currently just an iPad book which tells the story of "the

first CIA backed coup which toppled Iran's democracy in 1953." The story is

presented in a comic style format supported by historic CIA documents and

photographs. The story is very rich because of the inclusion of so much historical

facts and detail. The inclusion of the "9 historical newsreel videos" (CIA: OPERA-

TION AJAX, 2012) makes the book even more believable in my view.

The book is published by a company called Cognito Comics. It has also won

numerous awards including, Top Three Mobile Apps Showdown - CES 2012,

FWA Mobile Of The Day (MOTD) Award for 26th January 2012, Finalist - Flurry

App Spotlight Awards, Finalist, Publishing Innovation - Digital Book World, 2010

and Runner-Up 148 Apps Best App Ever Awards - Comic Category

3.2.1 User Goals

Operation Ajax tells a story of the "CIA plot to stage a coup of Iran's govern-

ment" using "recently declassified documents, historical photos, and video film

reels from the era are embedded" in the book. The user of this product would be

an Apple iPad owner or a person exposed to digital interactive devices and thus

has basic domain knowledge of how interactive handheld devices work. Some of

the tasks would involve (see Figure 8):

• Launching the App on the iPad device.

• Reading through the introduction page
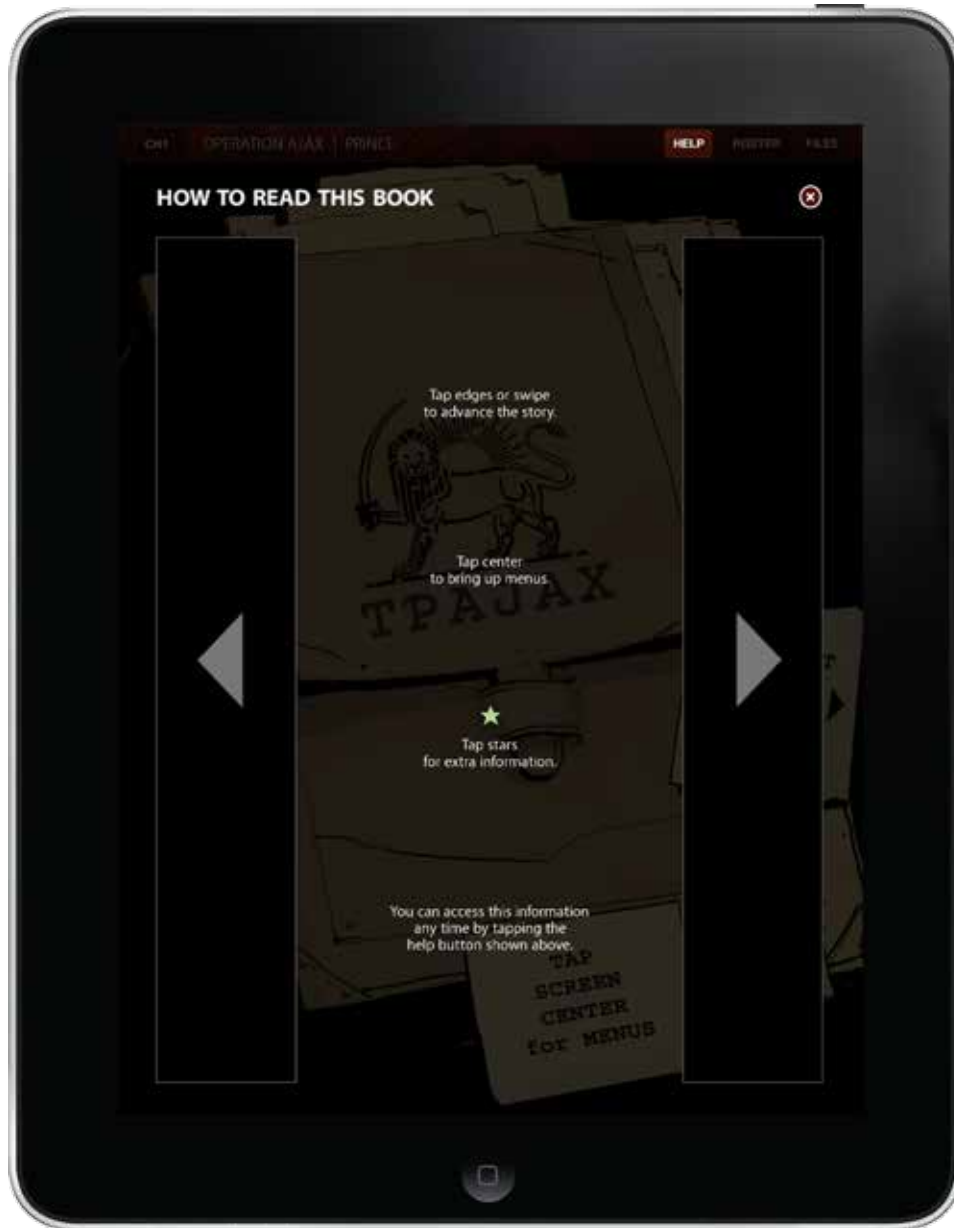
Figure 13: The introduction page. It contains instructions on reading the book.

- Setting the music volume level using the iPad control or turn it off completely.

- Turn the page just like you would with a book by placing your finger on the left or right side of the iPad, and simulating a page-turning motion.

- Then engage with the animation, video and photography where applicable.

Figure 14: This images illustrate what McCloud calls the "interdependent" model of presenting stories; where words and pictures go hand in hand to convey an idea that neither could covey alone. 1. This image sets the context for this segment of the story, 2. The back story revealed and 3. More of the back story is revealed.
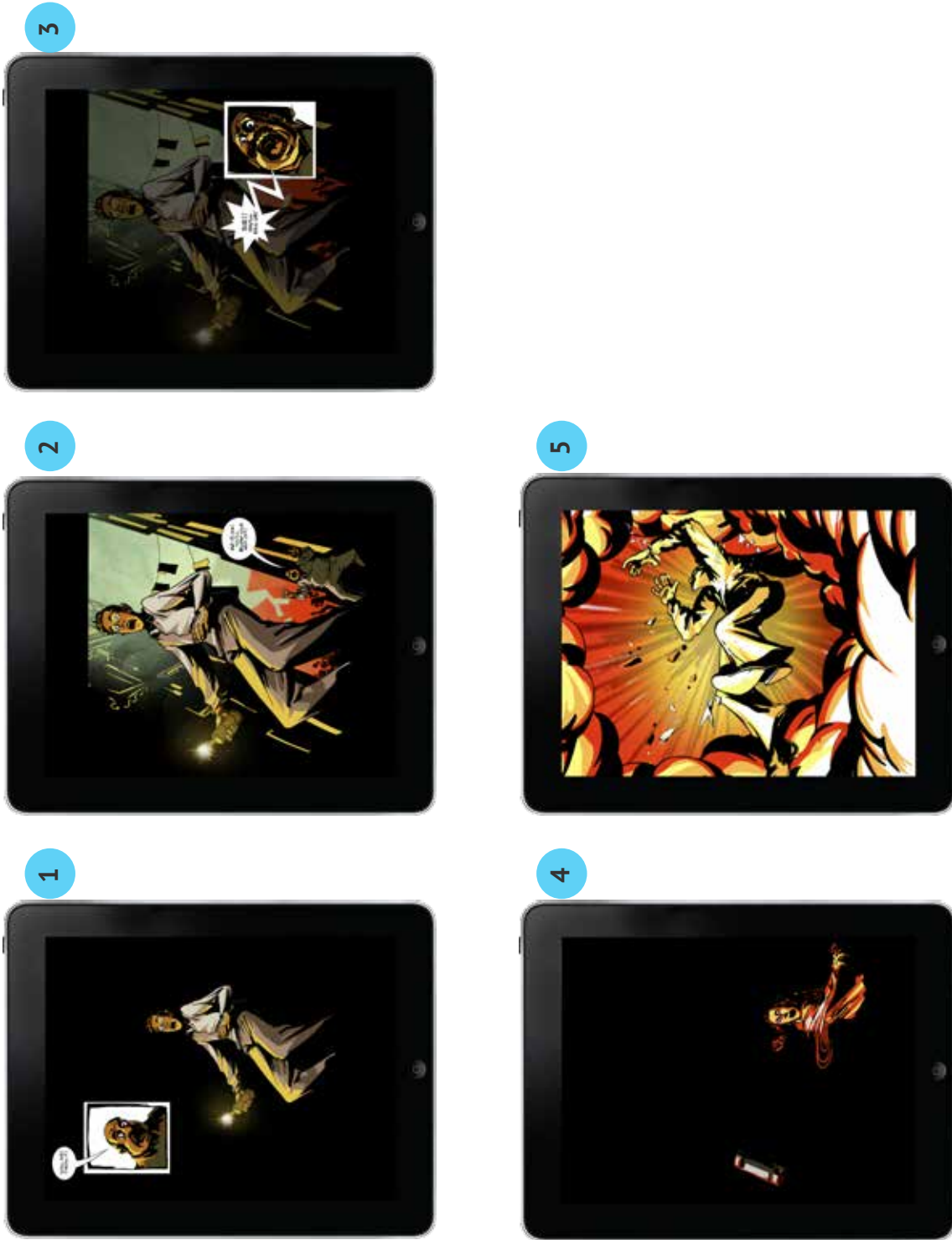
Figure 15: More of the "interdependent" model. These set portrays the sequential action as if you were looking at it on a film strip. The same background image is left in the frames 1-3 to draw attention to the insert image of the other character talking.

- Where there is a star, tap for more in-depth information

3.2.2 Areas of strength

• A very fluid and easy to use touch multi-touch interface. As you read, every touch reveals the next graphic in the story along with its speech bubble. The pages are purposely laid out this way in order to simulate feeling of reading a printed comic, Scott McCloud calls this the "additive" process, "where words amplify or elaborate on an image or vice versa" (McCloud, 154). The book also uses another way of presenting stories in the graphic novel format (see Figures 9 and 10) that McCloud calls "interdependent, where words and pictures go hand in hand to convey an idea that neither could covey alone: (McCloud, 155). The use of this two ways, among many others; makes this book a hard one to put down once you start reading it.

• A scrolling snapshot of pages at the bottom of the page that acts as a table of contents. It is still a welcome surprise because we are conditioned to expect the old, dry wordy pages, the scrolling snapshots of pages aid the "function and flow of information" (Meggs, 313). This visual aid the makes sense as the logical way of presenting a table of contents page in such a visual book. This also utilizes the high quality imagery and touch qualities of the iPad interface. This "simple visualization language with emphasis on graphic charts, diagrams, and pictures" clarifies "complex information" which saves "reading time" (Meggs, 315). In this case, it makes for an easy memorable reading experience that is different from what we've come to expect.

Figure 16: The use of the newsreel footage makes the story feel well researched, credible and unbiased. 1. Tap on the desired movie file, 2. It immediately fills the screen and 3, it starts playing.

Figure 17: Dossiers to make the reading experience rich and enjoyable. When tapped the folder opens up to reveal the contents.

• Historical newsreel footage and sound effects (see Figure 11). The historic footage is a coup in my books; I think this gives a lot of credibility to the content of the book. Because although this graphic format is becoming popular, McCloud talks about a "widespread feeling" that graphic novels are "base or simplistic" (McCloud, 141) and therefore not credible sources of factual information. The use of the newsreel footage makes the story feel well researched, credible and unbiased. I should note here that the files can only be read in the horizontal format, while the movies take advantage of both horizontal and
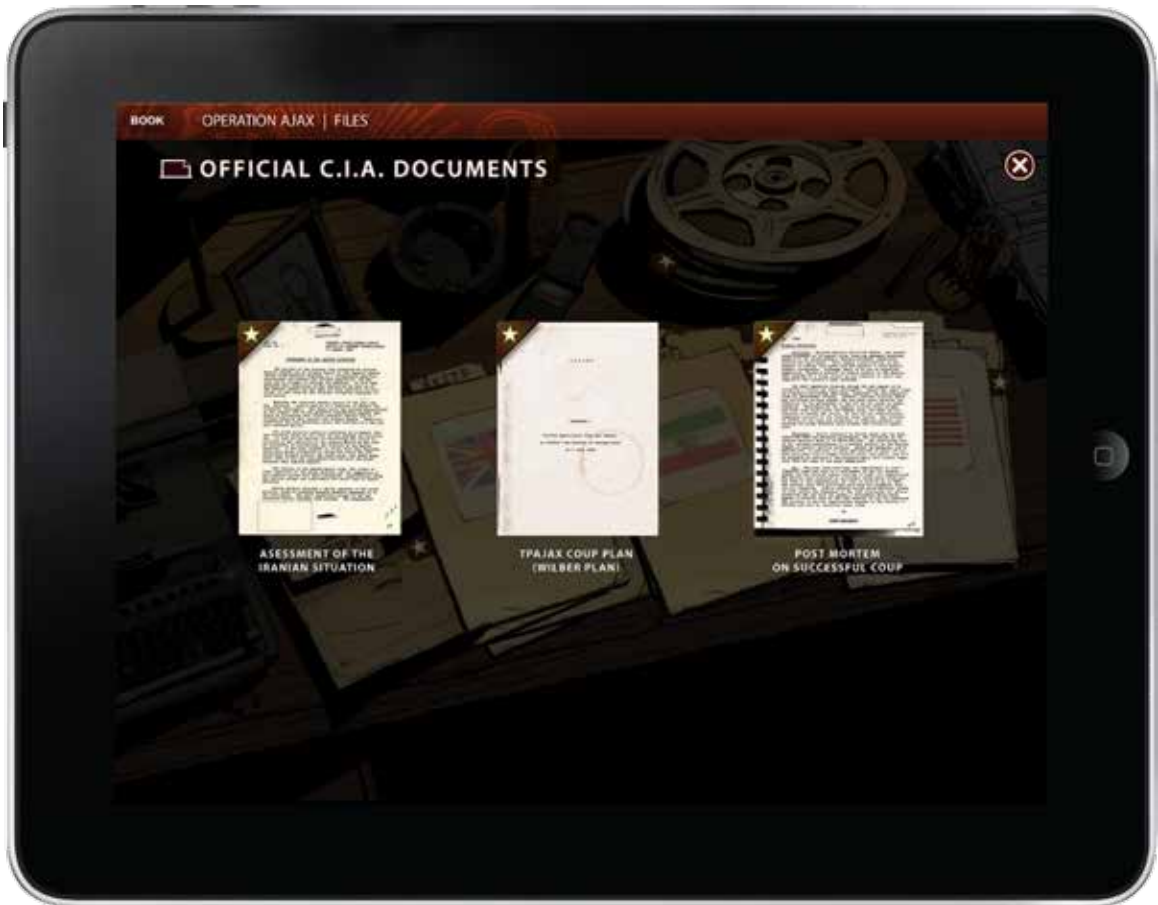
Figure 18: Historical notes to make the reading experience rich and enjoyable. When tapped the papers fill the screen and we can read the contents.

vertical orientations.

- This book has 210 pages of interactive comic content with sound and animation, "22 character dossiers loaded with historical photos and notes," and because it is packaged and delivered at your fingers reach, makes the reading experience that much more enjoyable (see Figures 12 and 13).

3.3.3 Opportunities for improvement

• Translating the book into different languages to reach larger audience. This kind of topic is of great interest to a lot of people not just in America, but worldwide. So I feel that if it were translated to as many languages as possible, the markets that would open up would be unprecedented.

• Currently only in a horizontal format. I feel that the full capabilities of the iPad should be exploited as much as possible and adding vertical reading format just like many other books on the iPad do would be a bonus feature that makes for a richer reading experience.

• A glossary to help with the words used in the book. Although the extra dossiers help with clarifying some of the complex aspects of the stories, a glossary would make the search for specific words or phrases that much quicker. With the words hyperlinked to the pages, that is one more feature that iPad affords the user of the device. The glossary could also use the iPad internet capabilities and search for meaning on the World Wide Web, touch a word and get instant definations.

3.3 Al Gore: Our Choice

Al Gore's book Our Choice: A Plan to Solve the Climate Crisis is an interactive book in the form of an App for the iPad and iPhone. In it according to their iTunes store, "Al Gore surveys the causes of global warming and presents ground breaking insights and solutions already under study and underway that can help stop the unfolding disaster of global warming."

Figure 19: The introduction page. The world images spines and files the screen at the end of the introduction animation.

The book is published by Rodale, produced by Melcher media, and powered by Push Pop Press software. The Company Push Pop Press has since been acquired by Facebook. This App was the winner of the 2011 Apple Design Award.

3.3.1 User Goals

This interactive iPad experience tells a story from Al Gore's perspective on how we could solve the global warming disaster we have brought onto ourselves. The user of this product would be an Apple iPhone, iPod Touch or iPad owner or a person exposed to digital interactive devices and thus has basic domain knowledge of how interactive hand-held devices work. Some of the tasks would involve:

• Launching the App on the iPhone, iPod Touch or iPad device. The interface will orient horizontally right away since the book is meant to read this way (see Figure 14)

• Listening to the introduction video narrated by Al Gore himself

• Setting the music volume level using the iPad control or turn it off completely

• Turn the page just like you would with a book by placing your finger on the right or left side of the IPad, iPod Touch or iPhone and simulating a page-turning motion

• Then engage with the animation and photography where applicable

Figure 20: Scrolling snapshot of pages at the bottom of the page that act as a table of contents

3.3.2 Areas of strength

• A very fluid and easy to use multi-touch interface

• A scrolling snapshot of pages at the bottom of the page which acts as a table of

contents (see Figure 15)

• Original audio commentary by Al Gore himself, music, and sound effects

Listening to Al Gore give a commentary of the pictures, diagrams and anima-

tions personalizes the whole reading experience. Most books with audio

commentary usually employ a professional actor or voice over artist, but by

Figure 21. Original interactive info-graphics. 1. Tap on the graphic image to activate it, 2. It fills the screen, and 3. Tap the individual bars to reveal the enclosed data.

Figure 22. Original interactive animations. 1. Tap the graphic to activate the interactions, 2. The animation and narration starts playing, 3. Shows the final results of the animation.

Figure 23. Original interactive animations. 1. Tap the graphic to activate the interactions, 2. The animation and narration starts playing, 3. More of the animation is revealed.
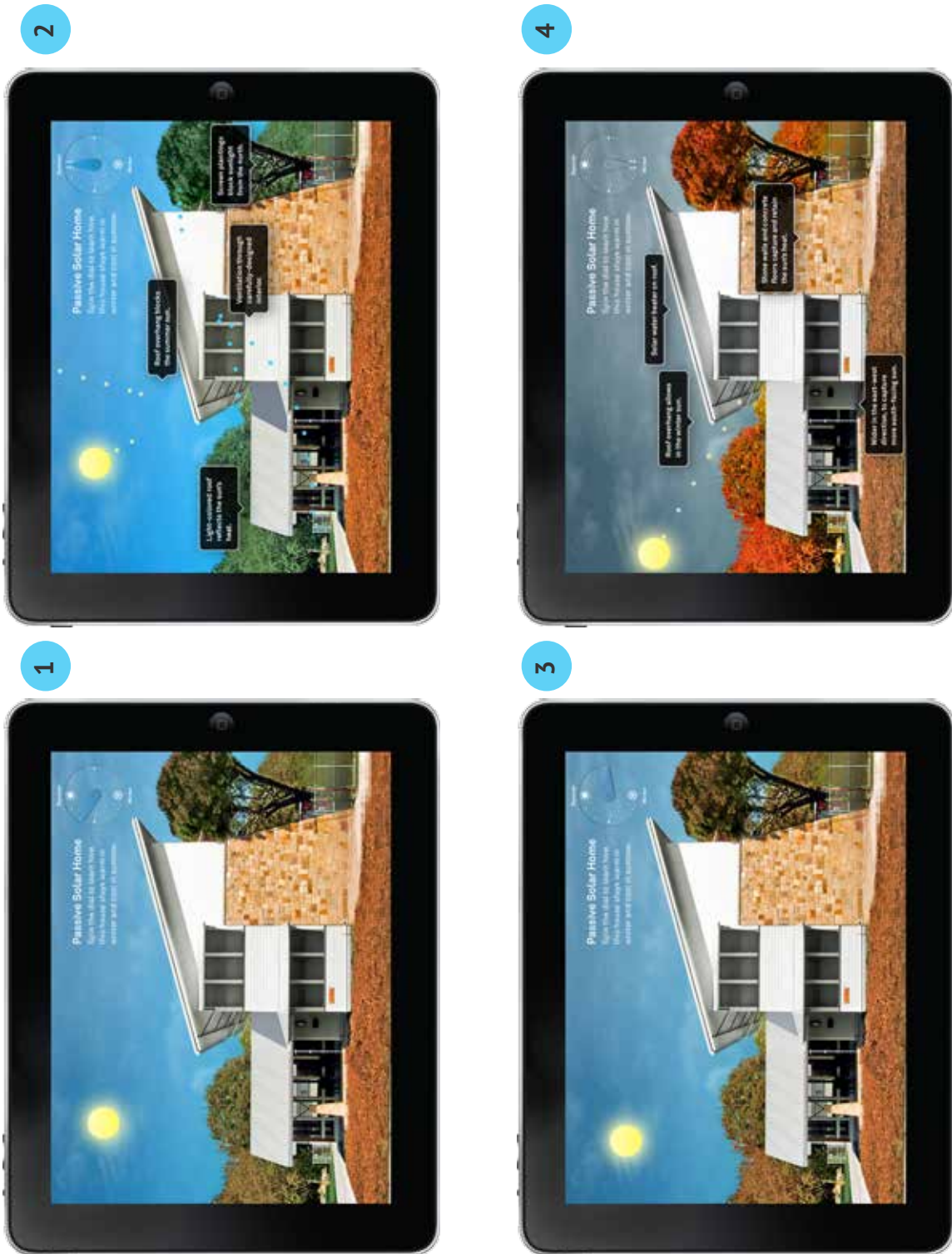
Figure 24: The touch interface of the iPad helps further drive the story of the augmented home. Here it displays the relevant information corresponding to the time of day, 1. at 10 o'clock, 2. at midday, 3. at three o'clock, and 4. at six o'clock.

Figure 25: Maps that go further than just showing locations but situate it for the reader respective to where they are located while reading the book. 1. When the image is tapped, 2. It reveals more and fills the page. Now embedded in the image is a graphic of the globe, tap this to reveal 3. a world map showing the geographic location of the picture you just saw. 4. The blue dot shows your location relative to where the image was taken.

Figure 26: Video footage always adds another element to the reading experience. It can play within the text or you can double tap to have the movie fill the screen.

having the author do the voice-over helps sell the story or argument the book is trying to make

- "More than 30 original interactive info-graphics and animations." These graphics add yet another level of interactivity to the reading experience, keeping the reader engaged and involved (see Figures 16, 17 and 18)

- The ability to explore the location of every photo on an interactive map. (see Figure 19) This feature also helps further drive the story of the augmented home. The map helps situate the image for the reader so that it is not just another red dot or blue pin on a map (see Figure 20). A very effective story-telling tool in my opinion

- This book also employs the use of video footage to support their story and add another element to the reading experience (see Figure 21)

3.3.3 Opportunities for improvement

- Translating the book into different languages to reach larger audience. This book has a message with an international appeal and would benefit from its availability in as many languages as possible

- Incorporating a text search function. For a book with so much content, a search feature would definitely enhance the reading and searching experience of the book. This is also a feature that buyers of hand-held devices have come to expect of these devices, so why not leverage that feature in the book environment?

- A glossary to help with the words used in the book. This I think would go

hand-in-hand with the search option above; adding it makes the reading and

searching experience much smoother and intuitive

3.4 Treasure Island Book

According to their web site, Cyberia "Quite simply, we work to make you look

good. We are creative problem solvers; thinkers, designers & techies who live to

harness new technology. We value content and ideas. Our world is cross–plat-

form media. We create in video, motion graphics, print and mobile. Media for

live events, marketing, branding, ID, video walls and mobile content. We are the

smart imaginative people you are looking to work with. Ideas. Design. Produc-

tion. Cyberia is media" (Treasure Island for IPad, 2012).

The team, or as they call themselves, the "Core" come from a diverse back-

grounds. They come from film and TV commercial production, design, screen

writing, journalism and photography. The company is based in Santa Monica,

California.

3.4.1 User Goals

This interactive iPad experience is a retelling of the classic adventure tale Trea-

sure Island, by Robert Louis Stevenson. The user of this product would be an
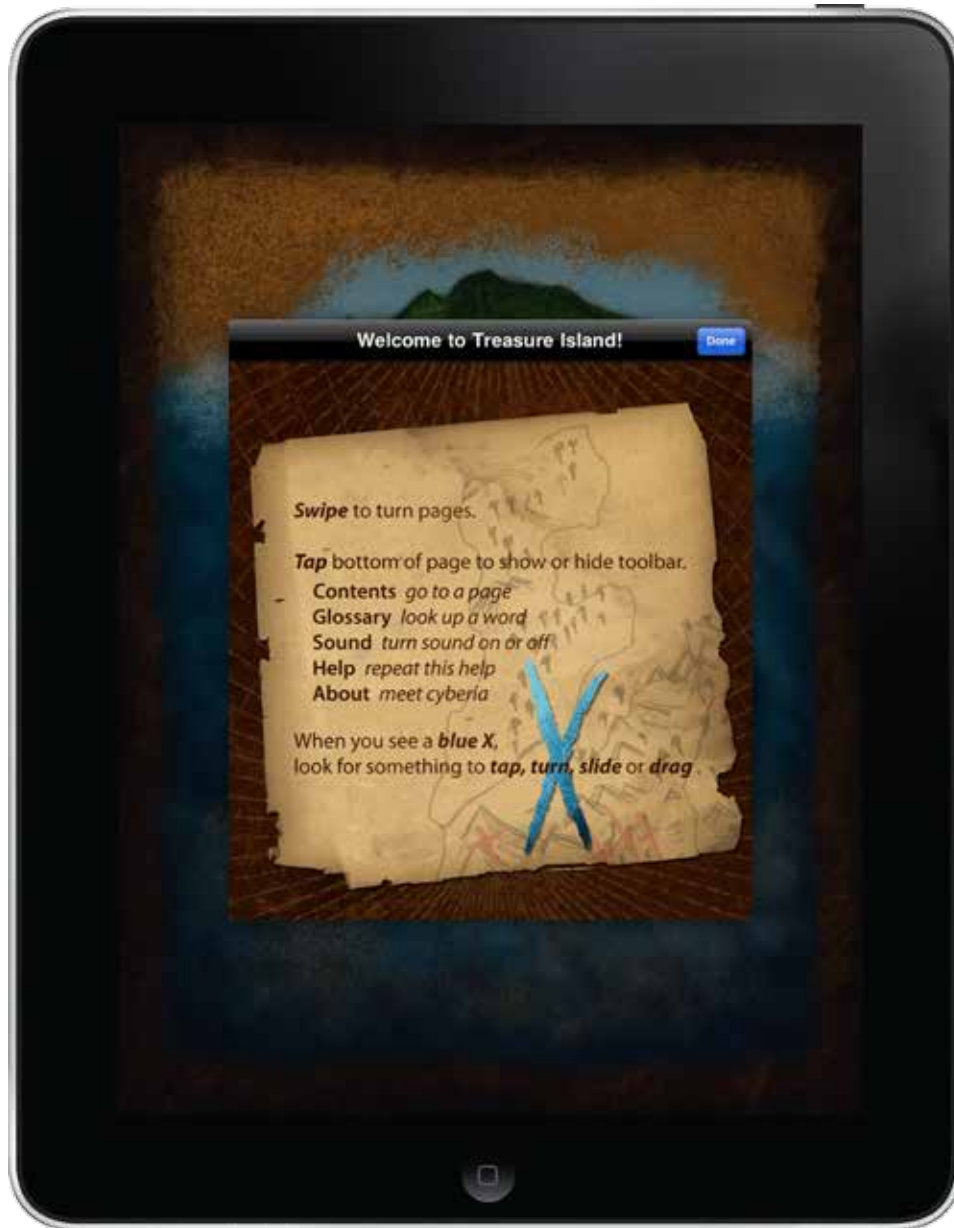
Figure 27: The welcome page also gives instructions on how to interact the book.

Apple iPad owner or a person exposed to digital interactive devices and thus has basic domain knowledge of how interactive handheld devices work. Some of the tasks would involve:

- Launching the App on the iPad device, the book is set to be read in the
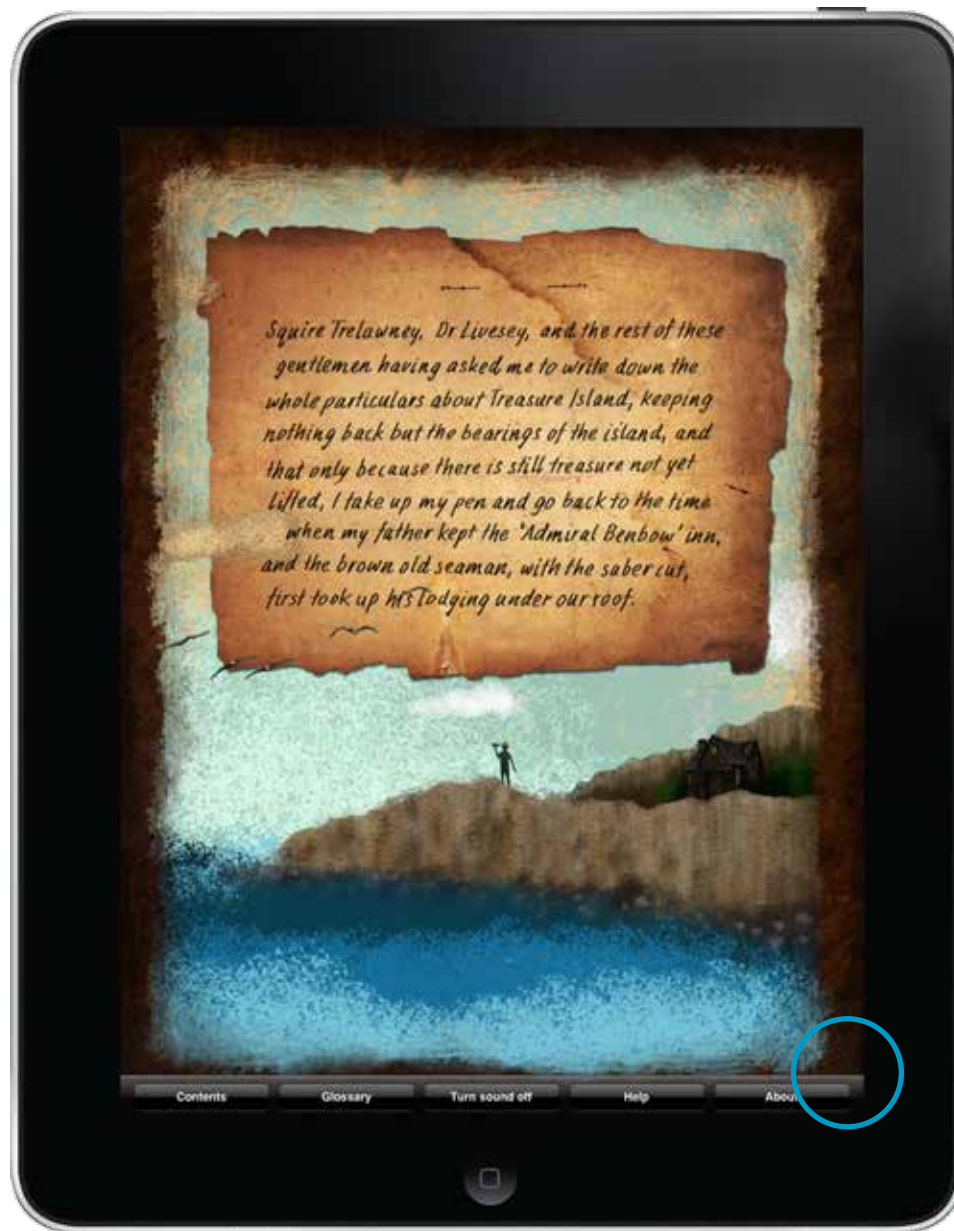
Figure 28: The activated menu bar at the bottom

vertical orientation.

- Read the welcome note which informs you of the available interaction in the

    book (see Figure 22).

- Setting the music volume level using the iPad control or turn it off completely.

- Turn the page just like you would with a book by placing your finger on the

Figure 29: A typical page with the smoke being animated from the chimney stocks.

right or left side of the IPad and simulating a page-turning motion.

- Then engage with the animation where applicable.

- At any time tap the bottom of the page to activate the menu bar and its

contents (see Figure 23).

Figure 30. The drag feature here revealing the image behind the head as the heads gets smaller

3.4.2 Areas of strength

- The pirate music, background sound effects of an inn, the splashing sea among others complement the page images well. The background sounds supported the images very well, the most impressive ones were the ambient sounds of a bar or inn. Another one was of the sounds by a marine dock, the wood on the ship expanding and contracting, water splashing and seagulls calling. These sounds are repeated throughout the book such that when you hear them again you can form a quick mental image of the scene based on the picture on that page. This makes for a very experiential way of interacting with the book.

- The drag feature in some parts of the book helps create a riveting experience. As one drags the slider, images are revealed, moved or hidden. I believe this action has been translated from traditional pop-out books very well. With the traditional pop-out books, the page came alive because of how the images seemed to jump out of the pages. One could touch them and even manipulate them, with the drag feature simulating the manipulation feature remarkably well (see Figure 25).

- 91 pages of abridged text and original illustrations with realistic page turning interactions just like the original hardcover book. The pages are beautifully designed and laid out; every page turn delivers a new experience (see Figures 26, 27, 28 and 29).

- A glossary to help with the 'pirate language' used in the book. The definitions add to the fun of learning the old maritime terminologies (see Figure 30).
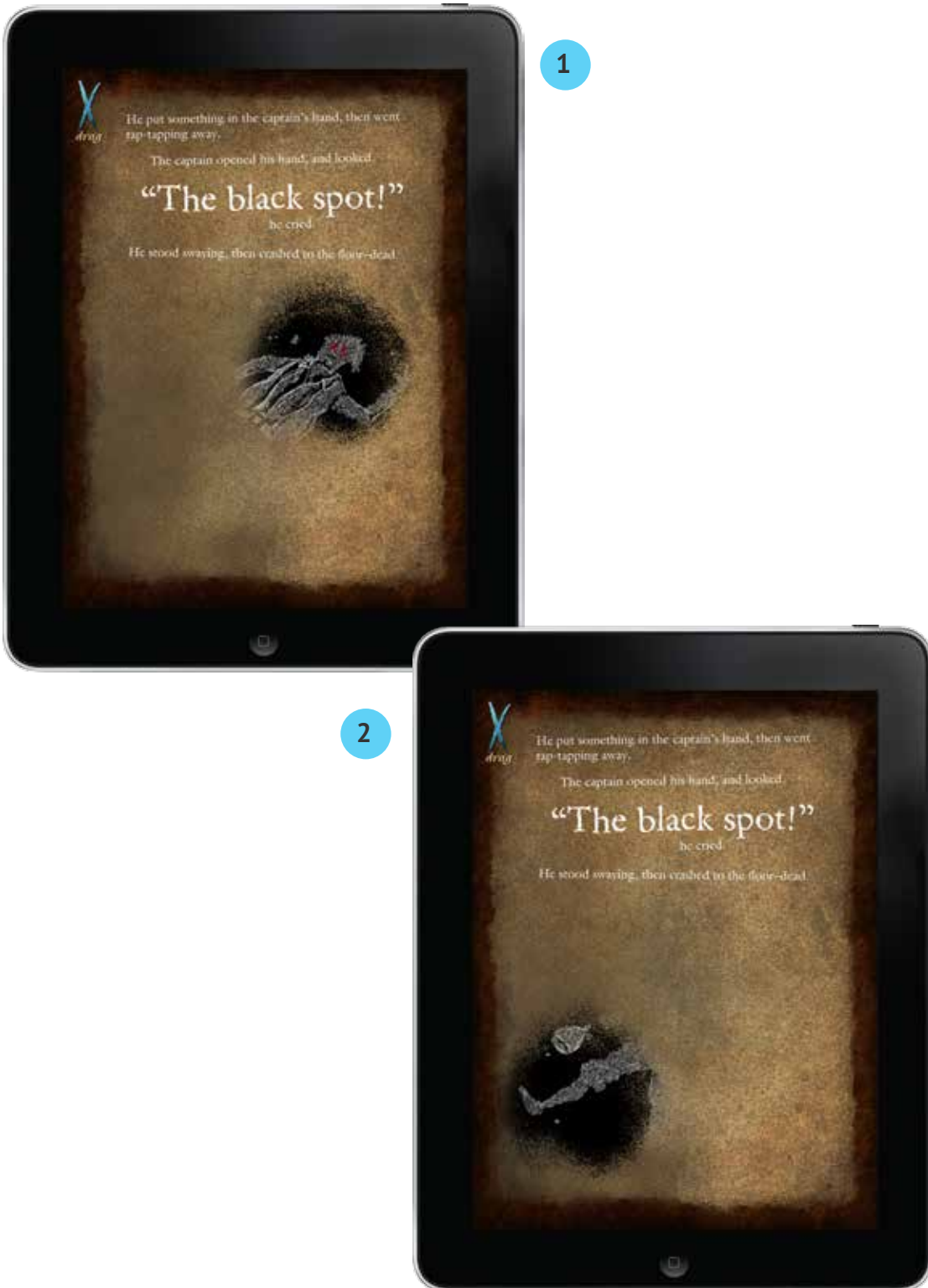
Figure 31. On this page, the reader moves the "black spot" to reveal hidden parts of the page adding another level of interaction.
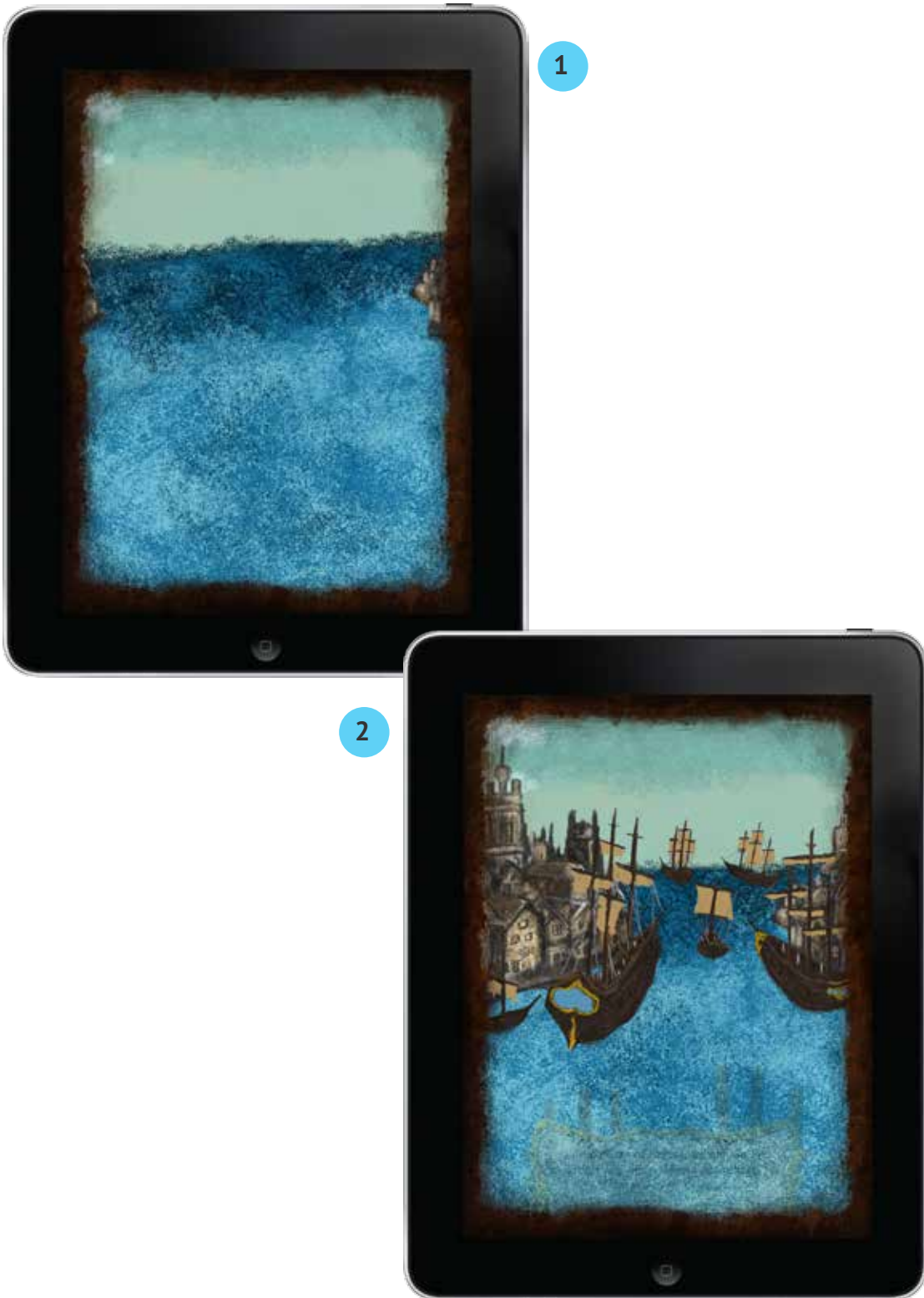
Figure 32. On this page, the artwork gradually appears from the edges of the page similar to how it would on a printed pop-up book.

Figure 33. On this page, moving the steering wheel at the bottom of the page adjusts the time-of-day graphic in the top circle.
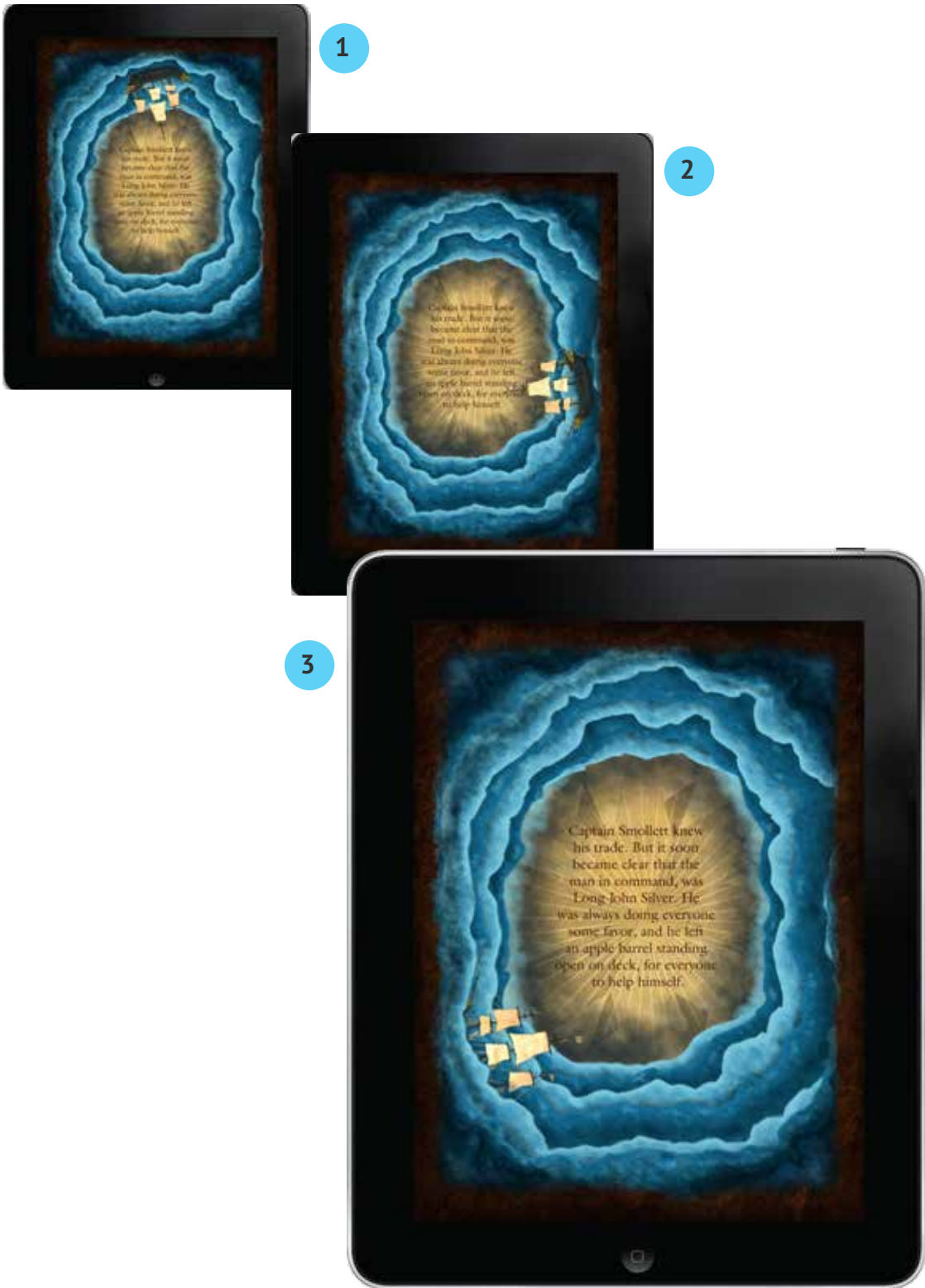
Figure 34. Supported by sound effects, this page displays the ship sailing across the oceans. The ship sails round the whole page.

Figure 35: A glossary of the 'pirate language' used in the book. The definitions add to the fun of learning the old maritime terminologies.

3.4.3 Opportunities for improvement

• The animated objects do not take advantage of the iPad accelerometer; they
move on a predetermined path and are not affected by change of orientation.
Not accommodating these inherent features of the iPad environment is unfor-
tunate especially since it would enhance the reader's experience.

• There is no 'read-to-me' feature which would be helpful for the visually
impaired. This is another feature that should be standard with short story
books. It would allow the reader the opportunity to fully appreciate the illus-
trations, photographs, animated graphics or videos in the book.

The books examined here represent a small fraction of similar products out there.
Many exploit the features inherent in the operating systems they reside in, some
do not. The goal in developing my book is to capitalize on the lesson learned here
so that my book can close the gap left open and become very successful.

Technology is also changing fast. At the time I started this research, Microsoft
was not a major player in the tablet market. Now with the launch of 'Surface'
(Chang, 2012) and not yet disclosed processor speed, future books could pack
more features to take advantage of the expected faster speeds.

Chapter 4

Prototype developments

"Identities become iconic through the deployment of a visual language that brings out the feeling brands want to convey and the feelings people are expecting across a variety of media and brand experiences. An iconic brand design campaign keeps on refreshing itself and, most importantly, stands out with a message that connects to our hopes." (Gobé, 110).

For my prototype, I felt that it needed to be something manageable because of the time limitations I had and also because I wanted to do it myself. I researched a few options that I could use other than just creating a portable document (PDF), I wanted some more originality and content that was current with the devices I was hoping to use to test it. These devices were the iPad and iPhone. I found a product by Adobe called Adobe Digital Publishing Suite® which they said was "a complete solution for individual designers, traditional media publishers, ad agencies, and companies of all sizes that want to create, distribute, monetize, and optimize engaging content and publications for tablet devices." (Adobe. com). Quite a few popular publications use this product including, National Geographic®, Wired®, Readers Digest®, Golf Digest® to name a few. So I

thought I would give it a try. The beauty behind this product is that it used the files created in its other sister program, InDesign and helped the designer convert it to a digital magazine. The drawback in this workflow is that the user would have to have some knowledge of working in InDesign and the other Creative Suite products, because the files used in the digital space are created in this program. Even as a professional user of the Creative Suite products, I still found it a tough learning curve to work in the Digital Publishing Suite as there were quite a few new things and work flows in this new environment. But fortunately for me, Apple released a new product along with their revised iBook 2 App, This was the Apple's iBook Author®.

What sold me on this software was that it promised seamless synchronizing with my iPad, the device I was going to use for my study. But, most importantly, the user interface was really simple and geared for the book interface I wanted to create. They also had templates that usually come in handy when working with a new program and trying to figure out its intricacies. So I created my Gikuyu Riddles book in iBook Author and tested it using the iPad. I had hoped that I could also use it on my iPhone, but that was not the case.

After narrowing down the riddles I had recorded to ten, I then went about figuring out the imagery that would support those riddles. From the onset, I wanted images that would be quickly understood and be memorable. My reasoning was partly because I wanted the look to be consistent with the

published version. The published version was created using off-set printing and was just one color, a very dark brown which looked like black to the naked eye. The images were monotone and looked like stencil block prints.

4.1 The Riddles

Creating an image for each riddle presented a challenge too since I could not find all images that I felt translated well and kept my block print look. These are the riddles that I chose were:

Riddle: Njoroge bundi wa mbaũ. Answer: Nding'oing'o. (Gikuyu)

Riddle: Njoroge the carpenter. Answer: A beetle

• For this riddle I did not think that showing a carpenter's workshop image would translate well since the riddle talks about how destructive the beetle is to the wood framework of a house. So I thought the image of a beetle drawn in my own style would work better.

Riddle: Ndakũona mara thĩinĩ. Answer: Ikũmbĩ rĩtarĩ kĩndũ. (Gikuyu)

Riddle: When I look at you I see you through to the intestines. Answer: Granary.

• The image used here was drawn from part memory and from some other images I found online (see Figure 31). The granaries I have been around had large spaces for air circulation and so one could partially see what was stored in them. Hence the play with the phrase "I see you through to the intestines'.

74
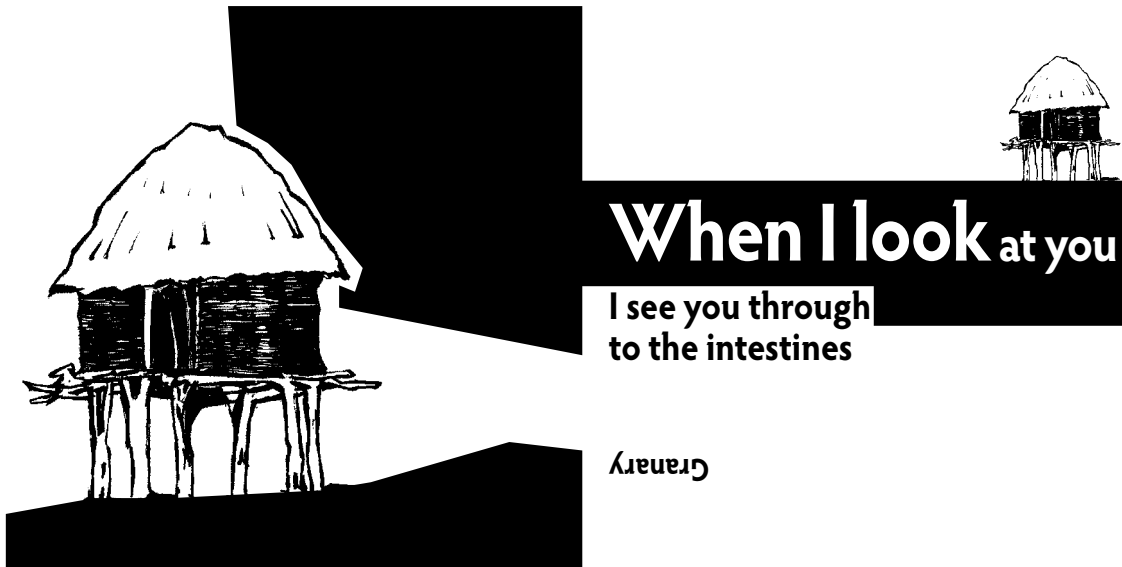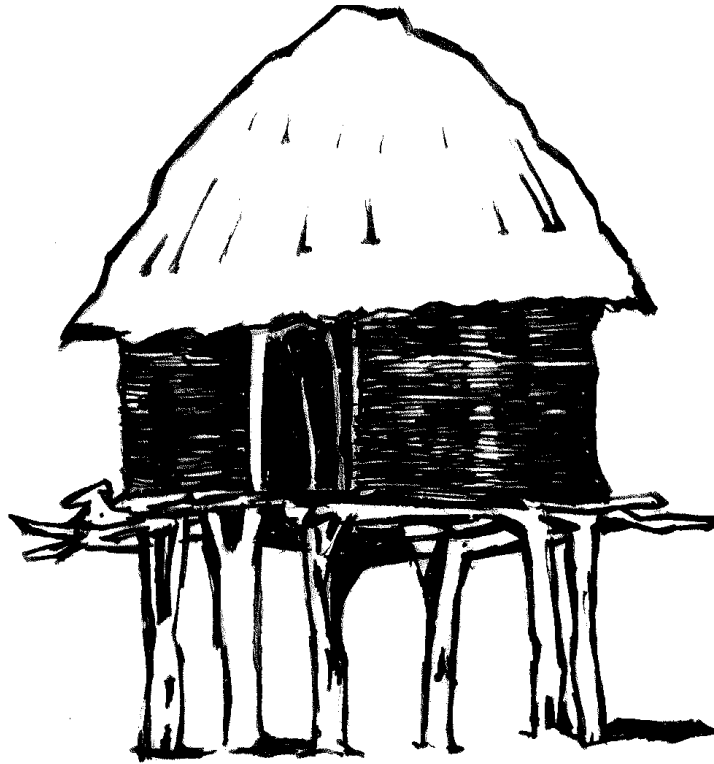
When I look at you

I see you through
to the intestines

Granary

Figure 36. The image on the top shows the finished granary image and the image below shows how the image was used in the book.

I move
zigzagly

Trappers paths

Figure 37. The finished map of Kenya on a tracing paper on the top and below that shows how the image was used in the book.

Riddle: Ndaathiĩ na ũtanjĩĩra hurũka. Answer: Kĩruru gĩakwa. (Gikuyu)

Riddle: I have travelled with one who never tells me to rest. Answer: My shadow.

- The image I chose here was of a giraffe running on the savannah planes. The angle of the image is one seen from above, either on a balloon safari or on a plane or helicopter. This angle allows for the elongated shadow that would be seen on the savannah floor especially during a sunset.

Riddle: Nyũmba ya cũũcũ ĩrĩ mũtĩ ũtooma. Answer: Njagathi. (Gikuyu)

Riddle: My grandmother's house has an undying piece of wood. Answer: Lizard

- This image was not hard to create; there are many images of sterilized lizards available as royalty free images. But I wanted my image to complement my other images in the book, and that is how I arrived to what I drew. The lizard is one of those 'accepted house guest' as they serve the purpose of eating small insects like spiders, moths and any other critters that lurk in the ceiling corners and attics of houses. They are welcome because they do not stay in the open, they come out to get their meal and they skittle away into hiding until the next insect comes around. Since most of the houses were made of mud supported by wooden branches/frames and exposed thatched roofs, the lizards would use these to get around.

Riddle: Ndaathiĩ ũũ ndaathiĩ ũũ. Answer: Njĩra cia ategi. (Gikuyu)

Riddle: I move zigzagly. Answer: Trappers paths.

- The image for this riddle proved quite challenging to me since I wanted the image to relevant to the lifestyle of the Gikuyu community of the olden times (see Figure 32). Just like the hunters of today, the Gikuyu hunters did not have defined paths that they followed. They went where the prey was or the new places they wanted to place traps or had traps. So I settled on the drawing of an ancient map of Kenya.

Riddle: Kĩini gitaita. Answer: Nyũndo ya ng'ombe. (Gikuyu)

Riddle: It is upside down but does not leak. Answer: A cows udder.

- The image for this riddle is my own rendering of a cows udder. My hope was that once the riddle was understood, the image would make sense. The Gikuyu are pastoralist and this riddle helps emphasis some of their daily chores, one of them being the task of milking their cows.

Riddle: Ndĩ nyũmba yakwa ĩtarĩ mũrango kana ndirisha. Answer: Itube. (Gikuyu)

Riddle: I have a house without a door or a window. Answer: An egg.

- I felt that just having the image of an egg would not create some interest in the page. So I decided to draw part of a chicken coop with some light coming through, just to try an throw the reader off the obvious answer.

Riddle: Ndatema mũti ndatigs ũgĩtoga. Answer: Maĩ. (Gikuyu)

Riddle: I cut a tree and left it smoking. Answer: Human excreta (excrement).

I cut a tree
and left it
smoking.

Human excreta (excrement).

Figure 38. The finished out-house image on the top and how the image was used in the book.

- This riddle by far is one of the most popular with young children in the Gikuyu community. This community lives in the highlands and the temperature gets pretty cold in the mornings. So it goes without saying that when something warm lands on the cold ground in the morning, steam rises as it loses it's heat to the ground and air. And with one outdoor toilet per family, some people had to improvise and help themselves in nearby bushes or forests. The act of defecating compared to cutting a tree; this simile draws on those pastoralist roots. When the act is done in the frigid mornings, it always steams. For the image, I felt the image of an outhouse would be best suited for this riddle, I didn't want families to be put off by the image of faeces on a family book. So yes, the smoke is missing (see Figure 33).

Riddle: Muciĩ wakwa wa atumia atheri. Answer: Mũgũda wa marigo. (Gikuyu)

Riddle: I have a home where only women dwell. Answer: A banana plantation.

- The answer for this riddle has always puzzled me because I had seen men planting banana stems and harvesting the bananas. As interesting as the banana tree is because of its layers of forliage. I wanted to try and get some tonal range even with the challenge that would present with a one color off-set printing process. I was pleased with the outcome.

Riddle: Njogu ĩgũtũ kũmwe. Answer: Gĩkobe. (Gikuyu)

Riddle: An elephant with one ear. Answer: A cup

- This riddle came about after the colonization of the Gikuyu lands by the

An
elephant
with
one ear.
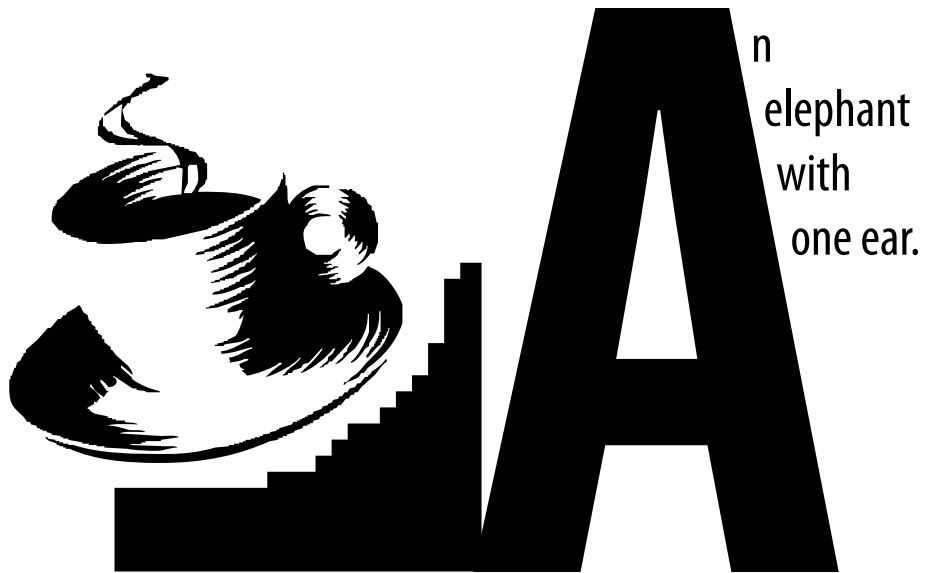
A tea cup

Figure 39. The finished tea cup image on the left and on the right how the image was used in the book.

British. They introduced the tradition of tea drinking and with that the tea cups (see Figure 34). As tea drinking was adopted by the Gikuyu, the practice of drinking from tea cups was also adopted. This riddle could have been a way of making sense of this new practice. The image of a tea cup and saucer was the logical choice as I could play out the shadows to complement the other images in the book.

Chapter 5

Results and insights

Having created the prototype Gikuyu Riddles Book using iBook Author for

Macintosh, I set out to test it with my target demographic group. The group I had

chosen were Kenyans aged 5 to 40+ years old who were living in Fort Wayne,

Indiana; the community that I was very conversant with.

5.1 Participants:

I used a wide variety of participants and the breakdown is as follows:

Ages 5 – 8:   1

Ages 9 - 12:   0

Ages 13 – 17:   2

Ages 18 – 25:   3

Ages 26 – 30:   2

Ages 31 – 35:   4

Ages 36 – 40:   1

Ages 40 +:   3

5.2 Observation:

I received IRB (Institutional Review Board) approval to interview the participants at locations suitable to them and it proved to be very beneficial since most of the participants wanted to be interviewed in their homes. Especially the families with small children because they could keep an eye on things at home and the kids felt more comfortable.

In the future, if I were to do this again, I would opt for the verbal consent process because it is less intimidating for the participants since there are no papers to sign. Verbal consent also makes it easier to transition to the questions since the interviewer is not shuffling papers but engaging with the interviewee.

One of the questions in the pre-session and post session questionnaires asked them how many Gikuyu riddles they knew before and after the interviews. On all occasions they reported to know more riddles after the interviews. Quite a few (8 out of 18) reported to know more riddles after the interviews. This tells me that the book could be used as a teaching tool and not just for personal enjoyment.

Since I was also interested in seeing how this new interactive medium for experiencing culture would be received, I posed a question asking whether the participants felt that the book was authentic and why. The overwhelming response was that it was;

"Very authentic and made me feel like I am in the village again",

"Yes, it has more of the cultural look",

"Yes. Cultural riddles have been lost from generation to generation; this book was a way to capture the information to keep it from getting lost",

"Yes, because the same information that I know and probably have forgotten refreshes back in my mind. As the true teaching of the culture that I was exposed to",

"Yes, because they relate very well to what I know about Gikuyu culture",

"Yes, because it covers real traditions and standard riddles known among the Gikuyu and are relevant".

Another question addressed the length of the book; the overwhelming response was that it was too short. Participants wanted to see more content to interact with. I interpreted this in two ways:

1. The content was really interesting and they wanted to see more of it. One of the young teen participants wanted to see "something to show you how to pronounce the words, because you can't assume that everyone knows how to pronounce the things [Gikuyu words]." The participant was referring to the Gikuyu section of the book. Some of the words have accents and it would be confusing to someone not proficient in reading and speaking Gikuyu. I thought this was a good suggestion since a majority of Gikuyu words are not used in everyday vocabulary.

2. If they were going to buy the book (a question we asked in the post test ques-

tionnaire), they want to pay for a substantial amount of content. To address this, I would increase the number of riddles in the book in addition to a glossary and a help area for word pronunciation using voice-over.

I had initially envision interviewing a single participant at a time, or a parent and a child for each session. But after consenting (having the family sign the consent form) the first family group of participants, it became pretty obvious from their excitement about the study, that I could not do the interviews in the single participant way I had hoped for. This first participant group consisted of an immigrant family. The parents are well educated and they have a teenage daughter who is in high school. The teenager was comfortable reading the English version but struggled with the Gikuyu version. This is where her parents would step in and try to explain the meaning of the riddles. This would happen over and over again and the communication created an interaction dynamic that I had not expected when drafting the interview. Another outcome of interviewing with this group was that I got corrections for some of the sentences in the riddles. It was brought to my attention that some of the special characters I had used were not in the right places and as a result some of the words didn't read right. I was very happy with this because it showed me that this group of participants had developed vested interest in the Gikuyu Riddles Book. The book had also created an environment where the family was engaged in teaching one another and passing on the knowledge.

The next groups of participants that I interviewed were young adults who gave me very positive feedback. They liked both the paper and electronic iPad book, but preferred the electronic iPad book better for reasons such as its 'portability', the fact that it was 'on an iPad' and it was 'easy to navigate'. Also this group was more fixated with the riddle that stated, "I cut a tree and left it smoking" with the answer being human excreta (excrement). When I asked why they found it funny, they said that they could quickly relate to the situation the riddle spoke of. When I pressed further to understand exactly what situation this was, they said that they could relate to the awful smell some people leave after using the bathroom; a situation society has learned to laugh at. My association with this riddle is somewhat different from the one explained above. When my grandmother explained this to me, she told me that when one goes and digs a hole and defecates in the bush early in the morning (as was the culture back in the day when they had only one pit latrine) the frigid early morning temperatures would actually make the faeces start to steam as it came out warm from the body. So, being the adventurous boy I was, I went outside and tested the theory and actually confirmed it for myself.

Another group that I interviewed was an interracial couple; the lady is Gikuyu while the man is a Caucasian man. Their interaction was similar to the first one discussed but with a very interesting twist. As the husband was asking questions since he didn't understand some of the riddles, the lady got a chance to

showcase the richness of her culture and share it with her husband. At one point after struggling with one particular riddle he remarked, "You are smart people, because I cannot understand this!" To which she replied without hesitation, "Yes we are." I think it validated not only her culture but also herself as a person.

I also interviewed one other group with the father-daughter dynamic and got the same favorable interaction. In this group, the daughter was much younger than the other one and she was not confident in reading the Gikuyu riddles part of the book at all. But as her friend and father read with her and encouraged her, she slowly began pronouncing some sentences in Gikuyu. This was a very encouraging outcome for me as well.

After observing this parent-child dynamic twice, I began to envision another interaction dynamic. That of a spouse to a spouse; this book could facilitate the same kind of dialogue and interaction observed with the two fathers and their daughters. So this book assumed the role of a facilitator of content interaction between vested users, just as I had anticipated.

5.3 Results:

In this section, I would like to highlight specific answers to some of the questions I had posed in the questionnaires. Answers that I feel validate this study and my proposed future steps.

My test group was composed of seventeen participants, ten were female and seven were male. Most of my participants identified themselves as Kenyan, the single non-Kenyan was an American.

All but one who indicated 'maybe' felt that the electronic book could help in learning about cultures. This to me indicated the acceptance of this new medium of reading. Many reasons were given for this, the main one being ease of use since they are already sensitize to reading digital content on computer screens, televisions, movies and game consoles. So to them this is just another extension to consume content in a current and culturally relevant way.

On the question of what languages they would like to see cultural materials presented in, all but two of the participants indicated both native languages and English, the two indicated only English. This was important to establish specifically because it is very hard to translate some cultural nuances into another language. A good example would be the Xhosa people of South Africa, the clicking in their language cannot really be translated into any other language (Lynette Mpolweni, 2008).

Since this book is to be used as a learning tool, I wanted to find out whether it accomplished that during this study. Over half of the participants indicated that they knew more riddles after the study than they did before the study. These results were very encouraging for this study since it proved that learning did

actually happen with this electronic book medium.

After participants had interacted with both the traditional printed and the
electronic books, I asked them to tell me whether they felt the electronic book
was authentic. When I mention authentic here, I am referring to something Alan
Cooper refers to as ignorance of most content creators about their users, "It's a
sad truth that the digital technology industry doesn't have a good understanding
of what it takes to make users happy. In fact, most technology products get
built without much understanding of the users. We might know what market
segment our users are in, how much money they make, how much money they
like to spend on weekends, and what sort of cars they buy. Maybe we even have
a vague idea what kind of jobs they have and some of the major tasks that they
regularly perform. But does any of this tell us how to make them happy? Does it
tell us how they will actually use the product we're building? Does it tell us why
they are doing whatever it is they might need our product for, why they might
want to choose our product over our competitors, or how we can make sure they
do? Unfortunately, it does not" (Cooper, 438).

I tried to bring some authenticity to the book with the illustration I used to
complement the riddle images. I strived to make each image evoke a feeling
of familiarity or close similarity to the scenic setting in which that riddle may
have been created. Some images like the beetle, granary, lizard, cow's udder and
out-house/toilet were pretty straight forward. But the others, the giraffe, map,

chicken, banana plant and tea cup may have been a little cryptic.

So, when I asked this question of authenticity on the electronic book, I got answers like:

"Yes it gives us the real feeling on what's written and also the cultural feeling,"

"Very authentic and made me feel like I am in the village again,"

"Yes, it has more of the cultural look,"

"Yes, because the same information that I know and probably have forgotten refreshes back in my mind. As the true teaching of the culture that I was exposed to,"

"Yes, because they relate very well to what I know about Gikuyu culture."

I then asked the participants what their attitudes were towards the interactive book itself. I wanted to measure the level of acceptance for this new electronic medium as a cultural learning tool. The answers I received were all very positive and also helped to answer the question of whether they found the book useful. Some of the answers were:

"Positive, because it give out important cultural information,"

"Easy to use,"

"I think it will influence our children who did not get to live in the village and learn things orally,"

"Very excited. I believe cultural riddles should be captured and preserved, this book does that,"

"I loved it because it will transfer out heritage over thousands of generations."

But by far the most moving answer I got was from an interracial couple, the gentleman wrote, "I enjoyed it because I learnt about [my wife] Vicky more. I didn't like electronic as well." So although he did not enjoy the experience on the iPad, the time Vicky spent explaining the riddles meant a lot to him and their relationship.

Then I asked the question about which medium would be better for both passing on and learning about culture for children in the United States, and the featured electronic book was the choice that most of the participants chose. To me this speaks highly to the acceptance of the electronic book.

When I asked about the length of the book, there was an even spilt on the answers. One participant's answer reflected something I had been thinking about after I had put the book together; it needed to have a lot more content and detail. The participant said, "Well, it is informative but it could be better if it is more comprehensive and detailed."

When asked whether they would purchase the electronic book, all but one said yes. The one who said, "Maybe" wanted to see more riddles, this echoed the need for more content and detail.

As for the price they would pay for the book, I got answers that ranged from 99¢

to $300 US.

Some suggestions I received for improving the book included features like adding color to the illustrations. There was also a request to incorporate a pronunciation and explanation aid for the Gikuyu section of the book. One participants noted that this would help them have a more fuller experience with the book on their own without needing someone else to come and expound on the riddles.

There was also a request to have the riddles translated into many other languages so as to reach a greater audience.

Chapter 6

Conclusions and Recommendations

The goal of this research was to find out whether the Gikuyu community in the Diaspora thought that one aspect of their oral tradition-story telling could exist successfully in the digital book environment. The simple answer to that was a resound YES!

The idea of a digital book developed after I had completed a printed book that I designed and printed at the Center for Book Arts & Logan Elm Press at Ohio State's University Libraries Tech Center. The challenge I was facing was how to make this book available to a larger audience. The audience that could not afford limited release copies that I had produced.

The digital book was the most logical choice for this highly technologically advanced age. Logical because it could be produced cheaply and would be relevant to the target user — since this younger generation is highly mobile and consumes a lot of their content through hand held devices.

6.1 Recommendations

With the technological advancement that have been made in hand held devices over the last two years since the iPad was launched (Apple, 2010). The next generation of users could experience this information in a very immersive way. With features like strong central processing unit (CUP's) that makes the device respond faster; to larger storage space, location awareness and most recently the highly touted Retina display that enables the viewer to see the images with crisp detail (Apple, 2012) the digital reading experience has gone through unprecedented improvements.

The advantages the digital book holds over the traditional book are:
Its accessibility potential. In the digital format it can be saved on servers around the world making it easier to engage with it anytime, anywhere. This is a trend used the internet providers (Orange, 2011).

It also enables a personalized learning experience. Studies have shown that when a user interacts and customizes their content, they generally tend to retain the content more (Ropa, 1990). Customizing the content to the cultural needs of the user also helps with the content penetration and assimilation (Griffith, 1994). Along with personalizing the learning experience, the digital format affords the user the capability of sharing the content with contacts on their social media outlets. With the integration of social media features in the content, the sharing process has been made very easy (Your Kindle Content, 2012).

When designing the digital book, being culturally relevant will help establish credibility of the content. This observation also came out of the research I did with my book. Many of my research participants were able to identify with the content because it bore a cultural resemblance to what they already knew or had previously experienced. I produced the digital book to look like its printed counter-part. I used monotone images, in this case black and white colors to extenuate the dark and light areas of the illustrated images.

As we design for the mobile space we need to understand and anticipate the users interaction expectations, and also formulate new ones that create a richer user experience. Some of these expectations are:

• Only the most essential information is displayed on a mobile platform as opposed to a web space. This is so that more information is displayed in the limited screen size of the mobile space.

• The mobile spaces should include more 'white space' or just open areas to allow for easier navigation (see Figures 8, 9 and 11). With the reduced screen size this becomes essential for easier legibility.

• Some mobile platforms still minimize the use of images on their spaces. However with the development of newer faster mobile devices, this is soon not

going to be an issue. Mobile platforms with more images and videos get more traffic than those without since they are easily identifiable, e.g. with the use of their logos.

• On the mobile space content is prioritized for the user and not the company. E.g. bank websites know that their users want to log into their accounts and not be bombarded with special offers, so they will bring the sign in page right away when a user pulls up their mobile page.

• Mobile spaces also allow for interactivity with content, so content designed for this environment has to factor that into the design. Making text-hyperlinks, still-shots for video and animations and links to larger images, all these help in visitor retention and engagement with the space. Limit the use of pop-ups or directing users to a new window without their permission. Sites that do this irritate the users and eventually loss them.

• Most mobile sites are developed in plain (X)HTML(5)/CSS since not all mobile devices support Flash or JavaScript. Having this understanding is essential to design mobile sites that are accessible of many mobile devices.

• Designers for the mobile space also have to think about testing their space or site on the various array of tablets and mobile platforms. Nothing kills a good design than when it does not display properly or is not usable on some

devices. In today's age we have to consider the two leading platforms, iOS and Android. Each optimizes sites differently and understanding this enables the designer to create a better mobile experience.

• When developing a mobile presence, constant evaluation of the most visited areas is essential also. This helps in keeping the space current and relevant to the users otherwise you will loss them. A constant effort to understand your mobile user and the environment they live in should be a ongoing goal of any mobile content developer.

6.2 Next Steps

From my interviews, it was clear to see the enthusiasm the participants had for the project. Many saw this as the logical step in the evolution of oral tradition if it is to be saved for future generations.

Going forward I would engage more with the younger generation both here and in Kenya to establish a baseline of what they know and don't know, plus get to hear what they would like to see in the book.

The next step would be to catalogue the cultural stories, tales, proverbs, legends, myths, traditional songs and poems, prayers, theatrical performances and any other oral culture in both video and audio. Along with that I would also capture as much imagery as possible to incorporate in the interactive book environment.

An investigation of the different interaction models currently in use would be the next step. This way, challenges that may lie ahead are identified early and accounted for.

After doing the background research, collecting a cataloging the data and identifying the tools available for the project. It is then time to start the design of the book, beginning with formulating a layout, choosing fonts and deciding on a color pallet.

As the design is taking shape, engage the target group to get feedback on the direction the project is going. Conducting usability studies on the design iterations ensures that the end product meet the needs of the users.

6.3 Gikuyu Riddles 2.0

The next iteration of the book will include narration because intonation plays a key role in how these riddles are understood. Hearing the riddles spoken in the vernacular language makes for a richer reading and learning experience.

Key to understanding these riddles is having a context of where they came from. So the inclusion of an interactive geographical reference would be of help. I would incorporate meta-data in the map just like Al Gore's book, 'Al Gore: Our Choice.' So that when the user activated the content in an area of the map, a

video clip would play with a narrator giving a brief overview of the culture of that area, that would include the landscape, clothing, arts, notable sites.

My younger study participants had mentioned that they would like to see some of the book in color. My first iteration was an attempt to keep the looks of both the printed and electronic books as similar as possible. But it is evident that color would draw more of the younger generation, and so my next iteration will have color in it.

Another possible direction that I can see this project going would be to create an education textbook. It could start out as a travel guide and then with enough content created and organized in a textbook format; a really rich and dynamic textbook could be created. Alongside that, an education documentary could be created to complement the textbook.

The work here is just a small fraction of the cultural heritage material that is available; I do not claim to have exhausted the field as such an exercise would take a very long time. However, the research model and workflow outlined in this document could be used as a template for future investigation, documentation and dissemination of cultural heritage.

I hope, however, that this project points the way for others to follow, so that we might use current-day tools to continue progress toward UNESCO's goal

of "establishing an effective system of collective protection of the cultural and natural heritage of outstanding universal value, organized on a permanent basis and in accordance with modern scientific methods."

There are obviously many other cultures with valuable oral traditions that can be preserved through the use of appropriate digital media. I believe that what I have demonstrated here may provide a model that others could build upon to pursue further efforts related to cultural preservation.

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Appendix A. The Gikuyu Riddles Book

Book Covers
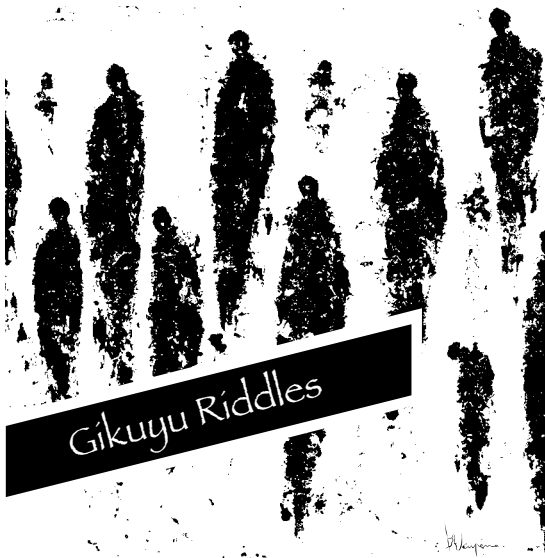
Inside pages

NJOROGE
bundi wa mbaũ
Nding'oing'o

NJOROGE
the carpenter
The beetle
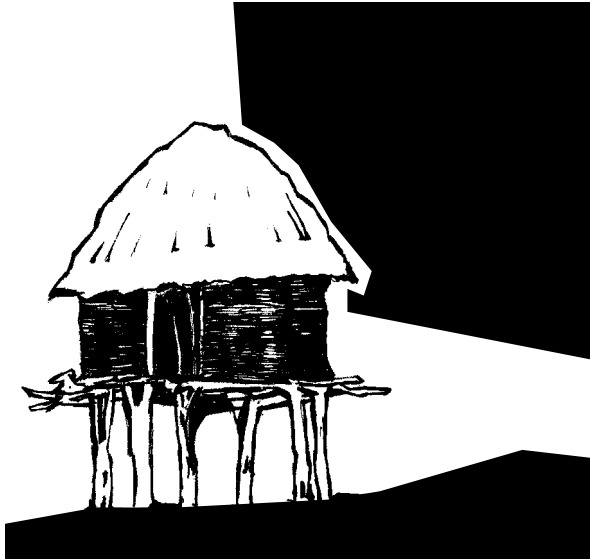
Ndakũona

mara theinie

Ikũmbe rĩtarĩ kĩndũ

When I look at you

**I see you through
to the intestines**

Granary

Ndaathiĩ na ũtanjĩĩra hurũka

Kĩruru gĩakwa

I have travelled with one who never tells me to rest

My shadow

N yũmba ya cũcũ ĩrĩ mũtĩ ũtooma

Njagathi

M y grandmother's house has an undying piece of wood

Lizard

Inside pages

Ndaathiĩ ũũ
ndaathiĩ ũũ

Njĩra cia ategi

I move
zigzagly

Trappers paths

117

Kĩini gitaita

Nyondo ya ng'ombe
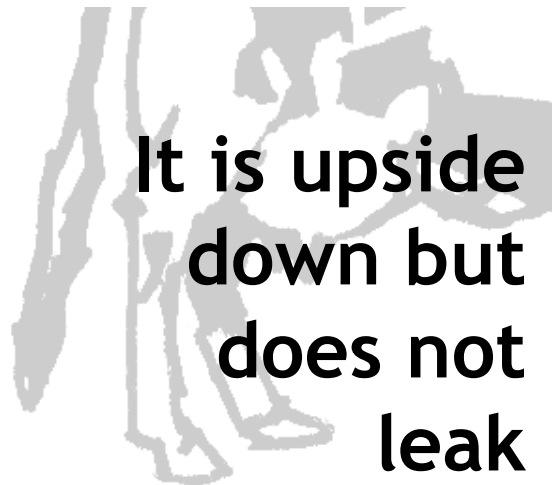
It is upside down but does not leak

A cow's udder

Inside pages

Ndĩ nyũmba yakwa ĩtarĩ mũrango kana ndirisha

Itube

I have a house without a door or a window

An egg

119

Inside pages

Ndatema
mũti ndatiga
ũgĩtoga

Maii

I cut a tree
and left it
smoking

Human excreta (excrement)

120

Muciĩ wakwa wa atumia atheri
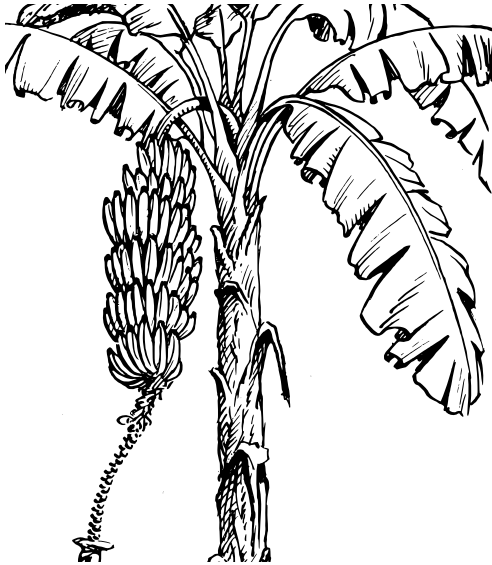
{Mũgũda wa marigo}

I have a home where only women dwell
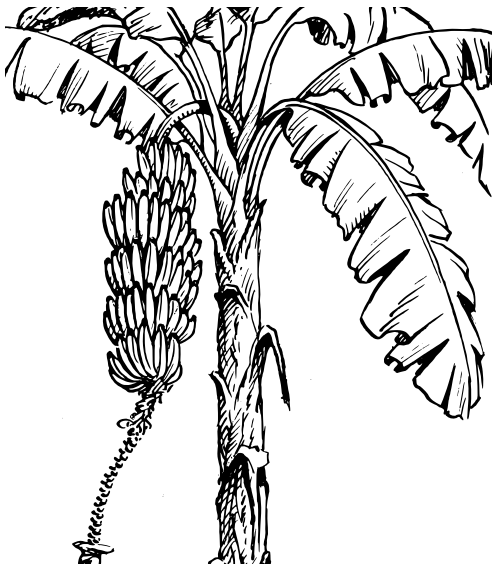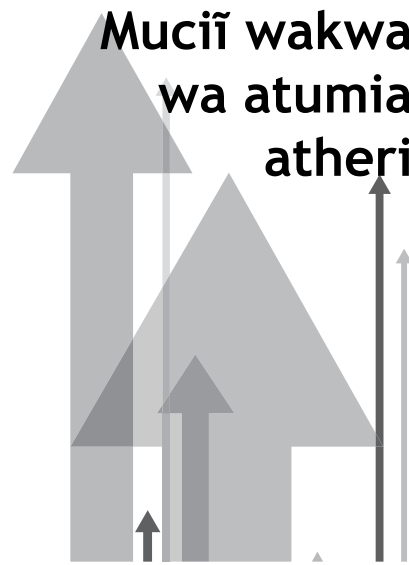
{A banana plantation}

Inside pages

N

Njogu
ĩgũtũ
kũmwe

Gĩkobe

A

An
elephant
with
one ear.
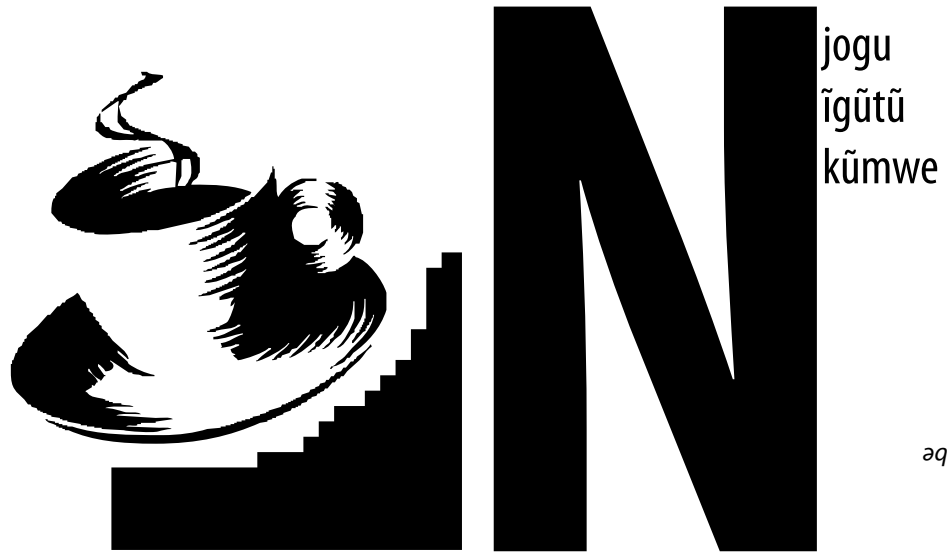
A tea cup

Colophon

This book contains riddles told by Dorothy Wacheke Njau, Richard's dear mother.

The design is by Richard Wanjema, April 2011.

Appendix B. Recruitment Material & Experiment Questionnaires

Recruitment material

Email:

Would you like to participate in a study of Gikuyu and English electronic books?
(**title font size = 14 pt**)

The sessions will happen from Jan, __ to Feb, __ at _____

_____

Go to _____ to schedule your appointment.

If you have questions email: wanjema.2@osu.edu.

Please invite family & friends to join our study!

Thank you,

Richard Wanjema

(**body font size = 12 pt**)

Recruitment material

Pastors Script:

As part of the church announcements.

I would like to announce that a friend of our church, Richard Wanjema will be holding research study on the favourability of iPad books over the paperback books in this building**,** any public space that you agree on and even residences . The study is open to all members of the Gikuyu community here in Fort Wayne.

The information you share with Richard will of great value in helping him to complete this research project, the results of which could significantly enhance the understanding of which book mediums are most preferred.

The dates for the study are:_____. Various times will be avalable and a confirmation email will be sent once the appointment is set.

Sign up sheets are located on the informational table.

Email after scheduling an appointment:

GIKUYU/ENGLISH ELECTRONIC BOOKS
(**title font size = 14 pt**)

Your appointment has been scheduled.

Dear   ,
This is to confirm that your appointment with RICHARD WANJEMA for GIKUYU/
ENGLISH ELECTRONIC STUDY has been scheduled for Sat, Jan 28, 2012 at 11:00 AM
EST.

Address:-
_____
_____

To cancel your appointment before the scheduled time, please click here.

(**body font size = 12 pt**)

Script:

Before the participant comes into the room, it is necessary to have the book closed and reset the iPad App/Book to the first page. Set camera and audio recorders.

1. Introduce the investigator.

2. Thank the participant to show up/come to the experiment.

3. Explain in details the experiment: "The first thing you will do is to answer a brief questionnaire about your background. After that, I will present to you the printed Gikuyu/English riddles book for you to read through. You can take as much time as you want. After you are done with that, I will then give you the iPad for you to read the digital version of the book you just read. Again, take as much time as you need to read it. There is no preferred way of interacting with this books, the study will help understand what people think about the two different mediums (printed books and digital books). Are you comfor able with the experiment?"

If yes: "Before we start I need you to sign this consent form. Read it carefully and let me know if you have any questions, and if you agree with the terms, please sign it here."

4. Hand the consent form in, and wait for the signature. If the participant decides not to participate, he/she will be able to leave.

5. Turn the camera and audio recorder on.

6. Give the questionnaire for the participant to fill out.

7. Start the experiment. Investigator: "Please read this book just like you would normally."

8. Answer any questions to clarify words or phrases. When they are done with the book: "Okay now here is the iPad with the same book, read it in any way you want"

9. One he/she is done with the iPad App, start the post-session conversation.

12. Thank them again for the participation, and escort them out of the room

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Interactive Media & Cultural Heritage:
Interpreting Oral History in a Digital Environment.

The Ohio State University
Institutional Review Board

Questionnaire – 1:

Name: _____

E-mail: _____

Age: ☐5–8 ☐9–12 ☐12–17 ☐18–25

☐26–30 ☐31–35 ☐36–40 ☐40 +

Gender: ☐Male ☐Female

Where were you born?
Country:_____

Where did you grow up?
☐ Same country as the one in which I was born.
Country:_____

What tribe do you most identify with?
_____

How many Gikuyu/Kikuyu riddles do you know? _____

What do Gikuyu/Kikuyu riddles teach us?

Could an electronic book help in learning about cultures?
☐ Yes   ☐ No   ☐ Maybe

Would you use an electronic book to talk about and connect with your culture?
☐ Yes   ☐ No   ☐ Maybe

Select all the items you think make up a culture. (select all that apply)
☐ Art   ☐ Artifacts   ☐ Stories   ☐ Literature   ☐ Poems   ☐ Songs
☐ Redorded speech   ☐ Maps

What languages would you like cultural materials presented in?
☐ Native languages only   ☐ English only   ☐ Both native languages and english

Questionnaire – 2:

How many Gikuyu/Kikuyu riddles do you know? _____

What do Gikuyu/Kikuyu riddles teach us?

Overall, how was the experience?

Do you feel that the information in the electronic book is authentic (real)? Why?

How do you inform yourself about culture now? (select all that apply)
☐ Books   ☐ Movies   ☐ Oral stories   ☐ Other_____

What are your attitudes towards this electronic book? Why?

What design changes are required to make your attitude towards this electronic book more positive?

For children in the United States which medium is best for educating about culture?
(select all that apply)

☐ **Electronic Book**   ☐ **Oral Tradition**   ☐ **Paper Book**   ☐ **Other_____**

For children in the United States which medium is best for passing on culture?
(select all that apply)

☐ **Electronic Book**   ☐ **Paper Book**   ☐ **Other_____**

For children in the United States which medium is best for educating or passing on a culture?
(select all that apply)

☐ **Paper Book**   ☐ **Electronic Book**   ☐ **Other_____**

Questionnaire – 2:

Was it too long, too short or just right?

Did you have any difficulties during the experiment?

If yes, in what part of the task?

Would you purchase this book as an electronic book?

☐ Yes   ☐ No   ☐ Maybe

If you answered NO or MAYBE what factors could make it a YES?

How much would you spend to buy this Electronic book?

☐ 0.99¢   ☐ $1.99   ☐ $3.99   ☐ $6.99   ☐ $14.99   ☐ $24.99

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Consent Forms- part 1

The Ohio State University Consent to Participate in Research

Study Title: Interactive Media & Cultural Heritage: Interpreting Oral History in a Digital Environment.

Researcher: Richard Wanjema

This is a consent form for research participation. It contains important information about this study and what to expect if you decide to participate.

Your participation is voluntary.

Please consider the information carefully. Feel free to ask questions before making your decision whether or not to participate. If you decide to participate, you will be asked to sign this form and will receive a copy of the form.

Purpose
My project will seek to document the favorability of an iPad App over the paperback books in telling riddles among the Gikuyu community from Central Kenya in Fort Wayne, Indiana. I will observe and record as permitted the sessions and interviews using audio and video recording devices. The data will inform the further development of the mobile App.

Procedures/Tasks:
1. Provide answers to the questions in the pre-session questionnaire.

2. Interact with the physical riddles book and then with the riddles book on the iPad.

3. Discuss the experiment, difficulties encountered in a post-session conversation.

There are no right or wrong answers. The experiment has the purpose of understanding how people feel about each one of the samples being presented, and not test you in any way.

Confidentiality:
Efforts will be made to keep your study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law. Also, your records may be reviewed by the following groups (as applicable to the research):
• Office for Human Research Protections or other federal, state, or international regulatory agencies;
• The Ohio State University Institutional Review Board or Office of Responsible Research Practices;
• The sponsor, if any, or agency (including the Food and Drug Administration for FDA-regulated research) supporting the study.

Incentives
No, the study is voluntary.

Richard Wanjema
Interactive Media & Cultural Heritage:
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Consent Forms- part 2

The Ohio State University Consent to Participate in Research

Participant Rights:
You may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled. If you are a student or employee at Ohio State, your decision will not affect your grades or employment status.

If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights you may have as a participant in this study.

An Institutional Review Board responsible for human subjects research at The Ohio State University reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

Contacts and Questions
For questions about the study you may contact Richard Wanjema (wanjema.2@osu.edu).

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

If you are injured as a result of participating in this study or for questions about a study-related injury, you may contact Richard Wanjema (wanjema.2@osu.edu)

Richard Wanjema
Interactive Media & Cultural Heritage:
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The Ohio State University
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Consent Forms- part 3

The Ohio State University Consent to Participate in Research

Signing the consent form

Please indicate in the appropriate box below if you give permission to have the participant data added to the data repositoryfor use in future research projects.

☐ Yes ☐ No

I have read (or someone has read to me) this form and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study.

_____
Printed name of subject

_____
Signature of subject

_____ AM/PM
Date and time

_____
Printed name of person authorized to consent for subject (when applicable)

_____
Signature of person authorized to consent for subject (when applicable)

_____ AM/PM
Relationship to the subject   Date and time

Investigator/Research Staff

I have explained the research to the participant or his/her representative before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

_____
Printed name of person obtaining consent

_____
Signature of person obtaining consent

_____ AM/PM
Date and time

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Ascent Forms- part 1

The Ohio State University Assent to Participate in Research

Study Title: Interactive Media & Cultural Heritage: Interpreting Oral History in a Digital Environment.

Researcher: Richard Wanjema

- You are being asked to be in a research study. Studies are done to find better ways to treat people or to understand things better.
- This form will tell you about the study to help you decide whether or not you want to participate.
- You should ask any questions you have before making up your mind. You can think about it and discuss it with your family or friends before you decide.
- It is okay to say "No" if you don't want to be in the study. If you say "Yes" you can change your mind and quit being in the study at any time without getting in trouble.
- If you decide you want to be in the study, an adult (usually a parent) will also need to give permission for you to be in the study.

What is this study about?
My project will seek to document the favorability of an iPad App over the paperback books in telling riddles among the Gikuyu community from Central Kenya in Fort Wayne, Indiana. I will observe and record as permitted the sessions and interviews using audio and video recording devices. The data will inform the further development of the mobile App.

What will I need to do if I am in this study?
1. Provide answers to the questions in the pre-session questionnaire.

2. Interact with the physical riddles book and then with the riddles book on the iPad.

3. Discuss the experiment, difficulties encountered in a post-session conversation.

There are no right or wrong answers. The experiment has the purpose of understanding how people feel about each one of the samples being presented, and not test you in any way.

How long will I be in the study?
The experiment is expected to last for 30-45 minutes depending on the time participants spend interacting with the material.

Can I stop being in the study?
You may stop being in the study at any time.

What bad things might happen to me if I am in the study?
There are minimal risks related to this study.

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Ascent Forms- part 2

The Ohio State University Assent to Participate in Research

What good things might happen to me if I am in the study?
You will be helping ascertain whether the iPad environment is a much better medium of reading and sharing Gikuyu riddles in todays digital age. The results of the study may have implications for positive and useful applications in the future.

Will I be given anything for being in this study?
No, the study is voluntary.

Who can I talk to about the study?
For questions about the study you may contact Richard Wanjema (wanjema.2@osu.edu)

To discuss other study-related questions with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251

Richard Wanjema
Interactive Media & Cultural Heritage:
Interpreting Oral History in a Digital Environment.

The Ohio State University
Institutional Review Board

Ascent Forms- part 3

The Ohio State University Assent to Participate in Research

Signing the assent form

Please indicate in the appropriate box below if you give permission to have the participant data added to the data repository for use in future research projects.

☐ Yes   ☐ No

I have read (or someone has read to me) this form. I have had a chance to ask questions before making up my mind. I want to be in this research study.

_____   _____ AM/PM

Signature or printed name of subject   Date and time

Investigator/Research Staff

I have explained the research to the participant before requesting the signature above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

_____   _____

Printed name of person obtaining assent   Signature of person obtaining assent

_____ AM/PM

Date and time

This form must be accompanied by an IRB approved parental permission form signed by a parent/guardian.

Verbal Ascent Form

The Ohio State University Verbal Assent to Participate in Research

Study Title: Interactive Media & Cultural Heritage: Interpreting Oral History in a Digital Environment.

Researcher: Richard Wanjema

<u>**Children 5-9**</u>

Hello, my name is Richard Wanjema. I am a graduate student at The Ohio State University in the Department of Design, and I am in Fort Wayne Indiana undertaking research that will be used in my thesis.

I am studying the use of an iPad App over the paperback books in telling Gikuyu riddles. I would like you to interact with the two books and then I will ask you some questions about the whole activity

The study will take less that 45 minutes and will not be painful. You can stop at any time and that will be okay.

For questions about the study you may contact Richard Wanjema (wanjema.2@osu.edu).

I will be recording the study to help me study later. Do you have any questions about this research? Do you agree to participate and may I record our discussion?

If so, let's begin . . . ."

<u>**Children 10-13**</u>

Hello, my name is Richard Wanjema. I am a graduate student at The Ohio State University in the Department of Design, and I am in Fort Wayne Indiana undertaking research that will be used in my thesis

I am studying the favorability of an iPad App over the paperback books in telling riddles among the Gikuyu community from Central Kenya. I would like you to interact with the two books and then I will ask you some questions about the whole activity.

The study will take less that 45 minutes and will not be painful. You can stop at any time and that will be okay.

For questions about the study you may contact Richard Wanjema (wanjema.2@osu.edu).

I will be recording the study to help me study and write later. Do you have any questions about this research? Do you agree to participate and may I record our discussion?

If so, let's begin . . . ."

Appendix C. Selection of Participant Quotes

What do Gikuyu/Kikuyu riddles teach us?

Participant F2, "How to behave or act"

Participant F6, "Way of life"

Participant M5, "They are proverbial teachings that teach us to be careful in

handling our staff at all times."

Participant M7, "That Kikuyu's had a set of rules, systems of knowledge and

wisdom preserved through narratives and oratory methods.

These involved do's and dont's, skills, activities, culture among

many others"

Do you feel that the information in the electronic book is authentic (real)? Why?

Participant F1, "Yes it gives us the real feeling on what's written and also the

cultural feeling."

Participant F2, "Yes, it has more of the cultural look."

Participant M2, "Vey authentic and made me feel like I am in the village again."

Participant M6, "Yes, because they relate very well to what I know about Gikuyu culture."

How do you feel about this electronic book? Why?

Participant F1, "Positive, because it gives out important cultural information."

Participant M2, "I think it will influence our children who did not get to live in the village and learn things orally."

Participant M3, "I enjoyed it because I learnt about Vicky more. I didn't like electronic as well."

Participant F1, "It's great, it reminds you of some of teachings and stories taught when young"

Participant F3, "Very excited. I believe cultural riddles should be captured and preserved, this book does that."

Participant M5, "Positive attitude, because it reminds me of my true roots, my humble beginnings and where I have come from."

Participant F9, "I loved it because it will transfer out heritage over thousands of

generations."

Participant M7, "Positive, because it enhances the ability to preserve traditional

knowledge through modern technology."

How do you feel about this electronic book? Why?

Participant F1, "Positive, because it gives out important cultural information."