HOMING IN: MOTHERS AT THE HEART OF HEALTH AND LITERACY IN COASTAL KENYA

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A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the School of Education.

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ABSTRACT

MARY FAITH MOUNT-CORS: Homing In:
Mothers at the Heart of Health and Literacy in Coastal Kenya
(Under the direction of Catherine Marshall)

An economics-driven discourse about early literacy (Trudell, 2009) in sub-Saharan African settings often includes a list of reasons for poor levels of literacy that remain mired in deficit thinking or a deficiencies model in which the problem lies within the non-literate people themselves. Meanwhile, the established post-colonial educational structure is held largely blameless and unexamined. This study includes a critical inquiry into literacy education that takes into account constraints to literacy such as health; an engagement with mothers as the primary caregivers and literacy models for their children; and guidelines for developing literacy interventions that move beyond entrenched modes of thought to promote additive approaches to forming literacy. This study makes contributions to literatures at the intersection of discipline areas critical to literacy, health and development in sub-Saharan Africa and other parts of the developing world, including development theory, sociolinguistics, reading research, cultural anthropology, cultural psychology, feminist theory, social epidemiology, and research methodology.

In this mixed methods study, quantitative reading data from 800 second graders in 40 schools from the U.S.-funded Early Grade Reading Assessment (EGRA) in coastal Kenya were analyzed, then qualitative data were collected and analyzed by the researcher from mothers in three EGRA treatment schools. Mothers of second grade students involved in the
quantitative portion of the study in coastal Kenya talked with researchers in focus groups and provided demographic data in one-on-one interviews. Interviews were also conducted with the head teacher at each research site and with local education partners.

The disjunctures found between mothers’ realities and development discourses resulted in a foundational critique of the best practices and evidence-based wave of development approaches. Three simple findings from the quantitative and qualitative phases of research came together to support one another and led to theory- and model-building. EGRA reading growth was linked to commonly considered socioeconomic status variables, which were unpacked in the qualitative portion of the research. Reading items, such as letter-sound recognition, which showed growth, suggested the value of the transfer of home language literacy to school literacy learning in the context of Kiswahili and Kigiriana. The disconnection between the two showed up in the qualitative portion of the study. Mothers’ responses informed these salient factors from the EGRA data by demonstrating that health is deeply embedded in the home, that health affects literacy learning at school, and that the same environmentally situated drivers affect both health and literacy. Results reinforced the close relationship between adult literacy and child literacy, and particularly the need to work with mothers when aiming to improve child literacy. Home and school literacies need to be connected so that reading can become an indigenous process. Health improvements were also linked to literacy becoming an indigenous process.
ACKNOWLEDGMENTS

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CHAPTER 1 – INTRODUCTION

Literacy efforts have so far failed to reach the poorest and most marginalized groups of populations. Under the banner “Literacy as Freedom”, UNESCO has taken over the coordination of the Literacy Decade. It is meant to mobilize international agencies and national governments to join forces and dedicate resources to implement successful literacy activities.

(UNESCO, 2010b, para. 2)

As a reflection of the increasing focus on literacy in educational development, the United Nations named the period 2003-2012 the U.N. Literacy Decade while U.S. bilateral development initiatives have also increasingly invested in literacy intervention in an effort to move beyond a focus not only on access to education, but to improve quality in teaching and learning in classrooms. In rationales used by multilateral and bilateral donors focusing on literacy as a key skill without which students will not succeed and stay in school, literacy and education are often conflated as one and the same. Gaining literacy through formal schooling represents the de facto engine for driving economic growth within the prevailing human capital formation theory approach to development. This role of education, and literacy particularly, continues to characterize Western approaches to sustainable development in Africa (Trudell, 2009). Literacy is equated with education and education with literacy in this paradigm without considering literacy’s purposes and contexts. Literacy is seen simply as a key skill needed to keep children in school, passing exams, and later achieving more wealth in the labor market.
Approaches to literacy often do not address health although the prevailing paradigm\(^1\) recognizes health as one of several forces that constrain children’s reading achievement. Poor health status holds children back from achieving basic literacy through a combination of problems that complicate one another (Greaney, 1996). According to the *Kenya Demographic and Health Survey 2003* (DHS)\(^2\), in coastal Kenya, undernutrition and endemic and recurrent diseases such as diarrhea and malaria are common conditions for children (Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], & ORC Macro, 2004). Nonetheless, literacy interventions have not addressed health as a determinant of literacy formation. A post-positivistic paradigm of Western development recognizes these constraints on literacy formation, but these are seldom studied in relation to one another within a population.

Beyond the need to address areas known, but neglected, by the Western development paradigm in regards to literacy intervention (such as health), areas unknown and neglected within the paradigm also need to be considered as they might inform approaches in critical ways. These areas include sociolinguistics, reading research in first and second language acquisition, and cultural anthropological and psychological perspectives. The prevailing paradigm can also engage research methods more fully so that quantitative data can be complemented and explained by qualitative data collected through emic research approaches, which seek out perspectives of cultural insiders and primary actors in children’s lives such as their mothers. Growing interest in global literacy has brought about dialogue among scholars

\(^1\) The definition of paradigm I will use in this study comes from Thomas Kuhn: a paradigm is shared beliefs among a community of researchers or thinkers in a specialty area (Morgan 2008/2007).

\(^2\) The Kenya Demographic and Health Survey 2003 was published by Kenya’s Central Bureau of Statistics, Kenya’s Ministry of Health, and ORC Macro in 2004. It will be referred to as the DHS and cited as CBS, MOH, & ORC Macro, 2004.
and practitioners in literacy in development from anthropology, reading research, and economics backgrounds who need to find overlapping terrain so that one discipline can inform the other rather than shut the other out. In this spirit of borrowing and sharing, this study looks to coastal Kenya to examine a recent literacy intervention’s effectiveness, then considers what can make global literacy efforts both more effective and more meaningful in the diverse contexts in which they are being carried out.

This study uses both quantitative analysis of reading data collected by RTI International\(^3\) in a reading assessment approached from an etic, psycholinguistic point of view and qualitative analysis of focus group and interview data collected by the researcher in an emic, constructivist phase of research. The study emanates from three particular areas of inquiry currently lacking in global literacy scholarship, policy, and practice: (1) a critical inquiry into literacy education in post-colonial settings that takes into account constraints to literacy identified within the Western development paradigm, such as health; (2) an engagement with home actors, primarily mothers, who are the primary caregivers and literacy models for their children; and (3) guidelines for developing literacy interventions that move beyond entrenched modes of thought to promote approaches to forming early literacy within a sociocultural framework.

**Worldview: Pragmatism**

The overarching worldview of this study is pragmatism with an emphasis on “*shared meanings*” and “*joint action*” (Morgan, 2008/2007, p. 53). A pragmatist worldview asks that the theory in use, which for this study is the prevailing paradigm for development shaped by human capital formation theory, be checked by inquiry into the people and conditions it

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\(^3\) RTI International is a global research and development organization headquartered at Research Triangle Park in North Carolina.
affects. The shared meanings of health and literacy should reflect how these terms and ideas are understood and acted on among the people being addressed within the literacy theory and practice employed. The literacy models being used should be built continuously through this kind of shared reflection and tinkering of all involved parties, but especially recipients of literacy interventions, who tend to be acted on by donors and implementers rather than function as actors themselves in building theory and practice. This study’s interests revolve around quantitative and qualitative research methods communicating with one another, instead of standing in opposition to one another. In addition, the viewpoints engaged in each phase of this study – etic and emic - do not set out to stand in opposition, but rather to build one from the other and to answer questions between each another. The overarching research model is explanatory sequential design in which quantitative data analysis is followed by qualitative data collection and analysis that examines causal factors assumed in the paradigm that drove the literacy intervention and quantitative reading dataset (see Figure 4.1 on page 86).

**Purpose of the Study**

This mixed methods dissertation explores the role of health in children’s literacy constraints by talking with mothers of students who received a reading intervention. The use of mixed methods allowed the combining of both quantitative and qualitative traditions so that knowledge and values of this coastal Kenyan population could be studied alongside analysis of the determinants of the reading problem. Creswell and Plano Clark (2007) define mixed methods research as a design and method that combine both quantitative and qualitative data in a single study or series of studies. Its guiding premise is that using both types of inquiry gives a better understanding of the research problem than using either
approach by itself. As a method, its strength is in how it offsets the weaknesses of both quantitative and qualitative research by maintaining data from a group of respondents across a large cross-section of subjects, as in the EGRA data from Malindi District, while also exploring the context and voices from within the research population, as in the mothers of EGRA participants in three treatment schools. From a theoretical perspective, mixed methods research allows the use of multiple worldviews, so that a quantitative phase of research can be enhanced and complemented by an interpretive, qualitative phase.

**Research Questions**

This study asks the following four research questions:

1. From a primary school reading dataset in Malindi District of coastal Kenya (Kenya Early Grade Reading Assessment-EGRA), among second-grade students, what variables are correlated with reading growth from pre- to post-treatment testing and which schools demonstrated high, medium and no growth in reading scores?

2. From qualitative focus groups and interviews, how do mothers’ perspectives on primary students’ health and literacy outcomes inform the salient factors in the EGRA dataset?

3. Given the answers to questions 1 and 2, what are the determinants of literacy formation that are most promising and most modifiable?

4. What are the main components of the literacy intervention model used in coastal Kenya, what is missing, what can be added and what areas of change are recommended for curriculum, teacher training and stakeholder intervention?
Audience and Significance

A diverse audience focused on literacy, health, educational achievement, policy and gender in post-colonial settings and on cross-cultural research more broadly will benefit from the findings of this mixed methods study. As international development practitioners pursue solutions to persistent education problems often without the luxury of time and reflection on paradigmatic flaws and questions or the articulation of new models to be tested, the sociocultural model posited here can serve as a practical counterpoint to current models of improving literacy levels in primary schools. The perspectives of primary school mothers and other stakeholders will provide insight into reading and literacy. In addition, the qualitative findings compared and merged with the quantitative data provide support and structure for a multi-faceted and integrated intervention model and also illustrate the need and value of incorporating mixed methods research into donor-funded development research.

The expression to home in originally came from aeronautics in the 1920s, referring to guiding an aircraft to its destination by radio signal. In the 1940s, the term began to be used in a figurative sense for focusing one’s attention on a specific issue. For this study, the term not only appeals to the previous definition of focusing on an issue, but also expresses core findings. Homing in indicates the critical importance of engaging the home of the child and mother in addressing literacy and health. This study makes contributions to literatures at the intersection of discipline areas critical to literacy, health and development in sub-Saharan Africa and other parts of the developing world, including development theory, sociolinguistics, reading research, cultural anthropology, cultural psychology, feminist theory, social epidemiology, and research methodology. The study reinforces the close relationship between adult literacy and child literacy, and particularly the need to work with
mothers when aiming to improve child literacy. The study also illustrates women’s crucial space within the family and community in tying together health and education. The Mothers’ Perspectives Model on page 222 demonstrates that for health and literacy to advance, the two must be considered together in their grounded nature within mother-child relationships and home environments. The disjunctures found between mothers’ realities and development discourses result in a foundational critique of the best practices and evidence-based wave of development approaches. Instead of importing outside models that may not meaningfully interrogate local contexts, communities, families, mothers, and children need to be the place where development starts so that people develop on their own locally sustainable terms. The economic, social/gender, linguistic, and physical layers of environment within the home determine mothers’ ability to provide basic health and education for their children. By departing from the socioeconomic determinants prism and arriving at a sociocultural processes lens, the study recasts the ways literacy, health and development approaches should move forward.
CHAPTER 2 – CONTEXT OF KENYA

This study was carried out on the coast of Kenya in Malindi District of the Coast Province. Chapter 2 focuses on the sociohistorical context of coastal Kenya, the demographic context of Kenya including education and health sectors, and literacy statistics and policy in Kenya and sub-Saharan Africa. The map below shows Kenya with its neighboring countries indicated; Malindi District is shaded within the Coast Province.

Figure 2.1. Map of Kenya
Sociohistorical Context

The historical context of the coast of Kenya provides a critical perspective for understanding the state of social structures and educational achievement in the present. The coast of Kenya has had contact with foreign traders, merchants, missionaries, and governments for the past 2000 years, with well-established links to the Indian Ocean trading system. Pliny and Greek merchants as early as 110 AD made reference to the coast in their writings. Partly as a result of trade, the coast has experienced a Muslim influence since the 10th century (Atieno-Odhiambo, 1978).

What is now known administratively and politically as the Coast Province of Kenya is made up of several ethnic groups, with the majority of the population being Mijikenda (ethnic group made up of 9 sub-tribes who speak inter-intelligible Giriama languages) or Mswahili, (ethnic group made up of native Swahili language speakers) (Mazrui & Mazrui, 1995). The ethnic mixing of Africans, Arabs, and Shirazi people formed the new cultural group known as the Swahili, which means “people of the coast”. By the 14th century, Kiswahili, which is Bantu in construction, but strongly influenced by Arabic, was also a force in unifying some Africans on the coast (Atieno-Odhiambo, 1978). Historians and sociologists such as Mazrui (2007), Atieno-Odhiambo (1978) and Ogot (1976) write about religious and cultural homogeneity as a strong point for the coast, even as the area was politically fragmented. These accounts of the sociohistorical context reveal the impulse to assume that the coast was homogeneous, which would mean Kiswahili-speaking and Muslim, with coastal people in general of ethnic Swahili origins. This assumed homogeneity added to the marginalization of the coast as Mijikenda Bantu-language speakers in nine sub-
groups on the Coast did not merge with the Swahili identity (Ng’ang’a, 2006) and thus were left ignored in these accounts.

Malindi, which was Mombassa’s archrival and quite prosperous by 1500, not only established strong trade in ivory, gold, and beeswax, but also had large plantations of millet and rice, worked by slaves. Muslim identities and allegiances were shored up with close relationships with Oman, for example. The sultans of Oman took control of the slave trade in 1698 and maintained a strong presence on the coast all the way through the onset of the British colonial era in Kenya. Attempts were made by various countries to control the area prior to the British colonial era, notably by the Portuguese, who were finally expelled by Swahili towns by the end of the 18th century. No sign of Christianity remained after the Portuguese departure, so closely connected was the region’s Islam to lineage and genealogy and thus strongly resistant to Christianity (Ogot, 1976).

With the British colonial administration established in Kenya between 1900 and 1908, the hegemony of the coast came to an end. Interests shifted inland, with European concern with Kenyan people more anthropological rather than historical (Ogot, 1976). Mazrui points out that the hybridity of the Swahili people on the coast was held against them in colonial discourse. The British considered them a mongrel people of African and Arab descent. This status challenged the validity and authenticity of an essentialist cultural identity, so in this manner subverted the colonial norm and was rejected (Mazrui, 2007). In fact, so disinterested were the British in controlling the coast that when the British East Africa Company took over the administration of the interior of Kenya, they nominally considered the coast under the control of the Sultan of Oman.
These historical antecedents have created a legacy of separation and neglect between the interior of the country and the coast, with resources for education and other services under colonial and post-colonial governments flowing less freely to the coast, which has been viewed as a Swahili and Muslim island unto itself. Resources in the Kenyan education system have been allocated according to a political power matrix (Alwy & Schech, 2007). Provinces with the most schools per student, the highest numbers of trained teachers, and the most secondary and tertiary schooling opportunities are those whose dominant ethnic groups have wielded political power\(^4\). The first post-independence president, Jomo Kenyatta, was Kikuyu, as is the current president, Mwai Kibaki. Daniel arap Moi, who succeeded Kenyatta, was Kalenjin. The Luo have tended to be on the margins of power, with roles in government, but never holding the presidency. Meanwhile, Northeastern Province does not wield political power and is marginalized as an unwelcome annex of Somalia. Coast Province politicians have never held political power in Nairobi. Resources for schools fall along these same lines of ethnic power allocations; Kikuyu areas have been considered the most heavily resourced while the Coast Province has arguably been the poorest resourced on a per capita level. Current resource allocation strategies put in place by the government aim to equalize funding across Kenyan provinces (District Development Officer, personal communication, March 20, 2009).

**Language and Ethnicity**

The Swahili language continued to gain in dominance and importance, steadily increasing in political, administrative, and economic usage especially in the post-colonial

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\(^4\) The British colonial government divided Kenya into provinces along ethnic/tribal lines: Nairobi and Central Provinces are dominated by Kikuyus, Nyanza Province by Luos, Rift Valley by Kalenjin, Northeastern Province by Somalis, and the Coast Province by what are often called Waswahili (Alwy & Schech, 2007) although this categorization belies the heterogeneity on the coast.
spirit of nationalism in Kenya and Tanzania. As a result of the growth in the Swahili language’s breadth and its value and power in national and regional unity, non-native speakers now outnumber native speakers of Kiswahili 30 to 1 (Mazrui & Mazrui, 1995). At the same time, native Kiswahili speakers populate the Coast and are generally defined as Waswahili primarily by their common first language (Eastman, 1971). Native Kiswahili speakers tend to be grouped together as Muslim and as one of various sub-groups that are of dual ethnic origin, with Arab and Mijikenda ancestry.

Mijikenda ethnic groups include nine ethnolinguistic sub-groups: Chonyi, Duruma, Digo, Giriama, Kambe, Jibana, Kauma, Rabai, and Ribe (Field notes, March 6, 2009). These sub-groups speak inter-intelligible languages that are variations of what is often referred to by Mijikenda groups as Kigiriama. The majority of the focus group participants in this study were native speakers of Kigiriama. Heterogeneous Mijikenda groups are reflected in coastal electoral politics and, with each sub-group inhabiting different geographical areas, groups have not often agreed on land issues, seeing problems within their group as their own and not universal across the groups. Political elites have been happy to exploit these differences to gain power and control (Kanyinga, 1999). In addition, apart from the Mijikenda ethnic groups, members of other ethnic groups also live on the Kenyan coast.

The relationship of the languages of Kigiriama and Kiswahili in many ways mirrors the relationship of the ethnic groups. Fluidity and fixedness characterize both in that an essentialism about ethnic identity is manifest in coastal residents, with tensions observable over land, economic status, and language. At the same time, the languages are tightly related as are the groups. Kiswahili has the same Bantu structure as Kigiriama, one is built on the other. The Swahili people also came to be an ethnic group out of years of intermarriage.
among Arabs and indigenous coastal residents, the Mijikenda (McIntosh, 2005). In the rural areas around the town of Malindi, informants in this study referred to Kiswahili speakers in as Bajun. When Eastman (1971) defines the various groups that make up the Waswahili, she describes Bajun people: “The Bajun are Muslim, Coastal, of mixed parentage (i.e. generally of Persian and/or Arab plus African descent), with Muslim names and users of the Arabic script” (p. 230). McIntosh (2005) talks about Kibajuni areas as north of Lamu and also in Watamu, which is a neighboring community of Malindi. The linguistic specificity of Bajun Swahili further delimits the ethnic identity and membership of these Malindi-area native Kiswahili speakers.

Demographic Context

Education Resources

Table 2.1

*Development Indicators for Kenya*

<table>
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<tr>
<th>Indicator</th>
<th>Value</th>
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<tbody>
<tr>
<td>GDP per capita income</td>
<td>$772</td>
</tr>
<tr>
<td>Adult literacy rate (% ages &gt; 15)</td>
<td>73.6%</td>
</tr>
<tr>
<td>Net primary enrollment</td>
<td>76%</td>
</tr>
<tr>
<td>Net secondary enrollment</td>
<td>42%</td>
</tr>
<tr>
<td>Life expectancy at birth</td>
<td>54</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>5</td>
</tr>
<tr>
<td>Under-5 mortality rate (per 1000)</td>
<td>128</td>
</tr>
<tr>
<td>Maternal mortality rate (per 100,000)</td>
<td>590</td>
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</tbody>
</table>

Note. Sources are CIA World Factbook, 2009; International Monetary Fund, 2008; World Health Organization, 2008; UNICEF, 2008.

The demographics of the education sector in Kenya tend to follow political resource allocation lines. For example, enrollment nationally is 91% but 83% in the Coast Province. The enrollment rate is notably lower for girls than boys in the Coast Province, with a larger gender gap than other Kenyan provinces. Median education levels are lower for men and
women in the Coast Province. The lowest numbers of schools and teachers to population are reported in the Coast Province as well (CBS, MOH, & ORC Macro, 2004). A telling element of the resource and demographic picture is that no university exists in the province in spite of its having one of the largest Kenyan cities, Mombasa. The secondary school to population ratio is also very high making attaining a secondary school diploma harder than in some parts of Kenya. In addition, in the tiered secondary school system, it is notable that Coast Province does not have a national secondary school, which is reserved for the highest scoring students in the Kenyan primary school completion exam (KCPE)\(^5\). Educational resources and demographics may also be notably low in peri-urban slums around Nairobi, which are multi-ethnic, but NGO and alternative schooling programs are also more available in those heavily populated settlements than in the rural and distant Coast Province.

The cultural dimension of the education system in Kenya demonstrates that certain ethnic groups are perceived as prioritizing education more than others. These cultural perceptions tend to fall once again along political power lines. The Coast Province has, in fact, had functioning schools over a longer history than the rest of Kenya, but is perceived by study informants to neglect the importance of education for its children. The Coast Province has been trading with Arab and Persian traders for thousands of years and has thus been influenced and enculturated by Islam. Quranic schools still maintain a place in coastal culture for Kiswahili-speaking Muslim families. The cultural context also affects the schooling of girls. A preference still exists for boys to attend school driven by the greater demand for girls’ labor in the home (Bennell, 2002; Blum, 2007) and cultural perceptions of girls’ roles.

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\(^5\) The KCPE (Kenya Certificate of Primary Education) and its secondary school equivalent were instituted in 1985. The KCPE exam score determines which secondary school a student is invited to attend.
**Nutrition and Health**

In coastal Kenya, health problems plague children and their parents. Health indicators show the highest undernutrition and stunting rates of any Kenyan province; malaria is endemic with reinfection common throughout childhood (CBS, MOH, & ORC Macro, 2004). Thirty-three percent of the total population of Kenya is undernourished (UNDP, 2005). Over 30% of Kenyan children are stunted (height-for-age index), approximately 5% are wasted (weight-for-height index) and about 20% are underweight (weight-for-height index) (CBS, MOH, & ORC Macro, 2004).

HIV is a concern in Kenya as it relates to education level and to the education system’s teaching force, which has been decimated in East and Southern African countries due to AIDS. HIV may also be affecting girls’ attendance at school depending on the need to care for sick parents or relatives (Yamano & Jayne, 2005) or younger siblings who can no longer be cared for by their parents. Sexually transmitted infections (STIs) are highest in the Coast Province, polygynous marriage is prevalent, and high-risk and paid sex for men show higher rates, all of which put women at a higher risk for HIV infection in the Coast Province although current HIV rates are not higher for Coast women (CBS, MOH, & ORC Macro, 2004). With the mother as the center of the family in sub-Saharan African cultures, children will suffer when women are at increased risks such as these.

Kendall and O’Gara (2007) find that schools are not mobilizing to help AIDS-affected youth, suggesting that a critical and concrete health-education linkage is being missed. In addition, in Kenya, an estimated 1.1 million children have lost one or both parents to AIDS (UNICEF, 2008). In 2004, 11% of children under age 15 did not live with either of their parents and were therefore considered fostered. Additionally, 9% had lost their fathers,
4% their mothers, and 2% had lost both parents (CBS, MOH, & ORC Macro, 2004). In comparison, in the Coast Province 7.8% had lost their father, 3.4% lost their mother, and 1.1% had lost both parents (CBS, MOH, & ORC Macro, 2004).

The context of violence follows from these same resource and demographic inequities, and is exacerbated by the difficult economic context. Domestic violence is quite prevalent in Kenya with 30 to 50% of women reporting abuse after age 15 (CBS, MOH, & ORC Macro, 2004). Transactional sex is also prevalent on the Coast with foreign tourists driving the demand. In addition to domestic and foreign sources of violence, Kenyans and their education system must contend with political violence. After the January 2008 elections in which Kibaki declared victory, international and Kenyan observers disputed the transparency of the voting process. Luo and Kalenjin supporters of Odinga began rallying, rioting, and eventually hurting and killing Kikuyus. Then, Kikuyus began to retaliate against Luos and Kalenjins and Kenya devolved into an unstable political situation for a few weeks. Finally, a U.N.-brokered accord brought a power-sharing agreement between Kibaki and Odinga. This violence fell along politico-ethnic lines and is fueled by the unequal distribution of resources that have come from this matrix of power held by certain groups. Inhabitants of Coast Province did not take part in the rioting, which bespeaks their historical marginalization and disenfranchisement from the political process (Field notes, March, 2009).

**Impact of Contextual Factors on Rural Schooling**

Education in rural areas is underfunded and underresourced. The classic case of this neglect of rural areas is that of the Coast Province. Lower resource levels and lower literacy levels in the province mean that schools are operating with less materials and less space as
well as with a less literate population of parents and caregivers. Since economic indicators and health indicators are low in the province as well, then one could conclude that homes are generally operating with fewer resources to support their children’s educational achievement and literacy. Literacy attainment in sub-Saharan rural areas is just as dependent on the home as it is the school (Zhang, 2006), so children in the Coast Province suffer a priori a double challenge for literacy in their low-resource setting. Zhang (2006) demonstrates that Kenya has an urban advantage in reading scores. It persists even with adjustment for individual SES, age and sex. It further persists when adjusted for school context and resources. Rural students lagged behind urban in reading literacy scores by half a standard deviation at least.

Education reforms in Kenya have been politically driven, sometimes to deal with a contextual challenge, but never with the preparation and support for teachers that would make success of the reform possible. For example, President Moi, instituted a milk policy during his tenure to combat high undernutrition rates in Kenya. The result was greater burdens on teachers and less instructional time due to the logistical challenges of transporting the milk to schools and serving it to students. Other reforms, such as switching from the British sequence of schooling to an American 8-4-4 system, have ignored the preparation for and impact on teachers (without soliciting also the input of teachers) in rolling out the reform. The teaching force is also functioning at a continual point of weak preparation as, for example, in 1987 it was reported that only 30% of teachers had received training and this was 15 years after a policy pronouncement declaring universal primary education in Kenya (Ntarangwi, 2003).

Educational achievement for poor and marginalized children is decidedly lower in Kenya as evidenced by the Coast Province in relation to other Kenyan provinces. The lowest
wealth quintile nationally has much lower levels of education enrollment and completion than the four quintiles above. Transition rates are low in Kenya, with many children dropping out of school between the ages of 11 and 15 (CBS, MOH, & ORC Macro, 2004). These rates are especially high in the Coast Province, where SES, ethnicity, and gender combine to marginalize the population.

**Current National and International Policy Goals**

Then-Kenyan President Moi attended the meeting at which Kenya adopted the Millennium Declaration in September 2000 along with all 191 United Nations member states. The Millennium Development Goals, with their 8 goals, 21 quantifiable targets, and 60 indicators, were seen as complementing ongoing initiatives. Regular reporting required for the MDGs, which for Kenya has meant a progress report in 2003 and another in 2005, has kept the targets at the forefront of political discussions and commitment. This reporting has reinforced the national ownership principle of the MDGs as well as the pledge to capacity development within each country to manage these goals and their reporting.

In an October 2008 interview, Kenyan President Mwai Kibaki pointed to MDG 2 as an achievement already attained in Kenya. He cited a gross enrollment rate in primary schools of 107% brought about by free primary school education and increased resources to primary education. GERs that eclipse 100% usually indicate a large over-age-for-grade population, which poses challenges for the education system. Kibaki acknowledged the pressure that the large student numbers have placed on infrastructure and teachers, and cited the construction of 175 new primary schools from 2006 to 2007 (to bring the total number of primary schools to 26,104 nationwide) as well as the recruitment of 6,500 new primary school teachers in 2007 as evidence of meeting those demands and concerns about quality of
education suffering. Kibaki indicated that total government spending on education
development has ranged from 24% to 30% over the past five years and that primary
education expenditures increased by 63% from 2006-07 to 2007-08 (“Interview: President
Kibaki,” 2008).

In the area of gender empowerment, President Kibaki noted that free and compulsory
primary education available since 2003 was a measure taken to implement CEDAW
(Convention on the Elimination of All Forms of Discrimination against Women) in Kenya.
Also, the Children’s Act passed in 2001 prohibits female genital mutilation and marriages of
minors. These policies are difficult to put into practice and enforce though and it is not clear
how much of a change has occurred in these areas among the Kenyan population.

In terms of MDGs that target health improvements, Kibaki pointed to a free
immunization program for children under five years old. Immunizations have increased to
72% by 2007. In control of malaria, 68% of under-5 children are receiving bed nets. To curb
maternal mortality, the government eliminated user fees in public maternity clinics and
hospitals and the healthcare system is decentralizing to serve local needs more effectively.

While the MDGs represent a global commitment to improving health and education,
in practice, African governments may be unable to infuse the health and education sectors
with additional funding or support, especially given the structural adjustment regimes to
which the countries must align due to donor contingencies (Stiglitz, 2006). To meet the
MDGs, Kenya relies on foreign assistance funds promised by the U.S. and Europe, but these
promises have not been kept (Lumiti, 2008). African national policies parrot the MDGs, but
may not also materially support the policies in practice at district and local schools and health
clinics.
Sub-Saharan African and Kenyan Literacy Statistics and Policies

Improving reading achievement for primary school students in developing countries has proved a popular target of international development efforts funded by the United States, with a renewed emphasis on early literacy. The White House Conference on Global Literacy in 2006 highlighted literacy-focused USAID programs in Latin America, Asia, and Africa, further demonstrating U.S. interest in Africa, programs in Guinea, Ghana and Malawi included teacher training in reading instruction methods and development of reading materials (USAID, 2006a). Meanwhile the U.N. proclaimed 2003-2012 the ‘Literacy Decade’, with a particular emphasis on reaching both adults and children who have not had access to literacy learning through a lifelong learning approach (UNESCO, 2010b).

Low reading levels among primary students and illiteracy among adults persist in developing countries in Africa in comparison to U.S. and other Western countries’ reading levels (Greaney, 1996). National-level assessments conducted in some countries indicate that learning outcomes remain poor in sub-Saharan Africa. For example, since 1999 in Uganda, fewer than half of students in grades 3 through 6 have reached competency levels established for the test in English literacy (UNESCO, 2008).

Unfortunately, education data in general from sub-Saharan Africa are scant (Bennell, 2002) and comparative data in primary school reading achievement for most of sub-Saharan Africa are either unreliable, unclear, or unavailable. Existing data for sub-Saharan Africa suggest wide ranges of achievement and only vaguely defined competency levels. For instance, in data reported by UNESCO in 2005, between 1995 and 1998 in seven southern African countries, 1 to 37 percent of grade six students reached a “desirable” reading level, while 22 to 65 percent posted reading scores at the “minimal” level. At the same time, six
francophone African countries recorded 14 to 43 percent of grade five students at “low” achievement in either French or math (UNESCO, 2005). The Kenya National Examinations Council reported a learner assessment scheduled for 2007 for 9 year olds (UNESCO, 2008). Upcoming large international studies such as Progress in International Reading Literacy Study (PIRLS), coordinated by the International Association for the Evaluation of Educational Achievement (IEA), which will look at reading levels of fourth graders in 49 countries in the third implementation of the study in 2011, will not include sub-Saharan African countries other than South Africa and Nigeria.

On the other hand, adult literacy rates in Africa are more easily located than child reading achievement rates through global monitoring reports, and though a gap persists, the data are not quite as bleak as those for school-aged children. The overall literacy rate in Kenya was placed at 73.6% in the 2007/2008 Human Development Report (UNDP, 2008), while in sub-Saharan Africa regionally, adult literacy rates have risen since the 1970s and gender parity in rates has risen along the way. In the 1970s, the gender parity rate was around 50%, but by 2000-2004, gender parity had reached about 76% in sub-Saharan Africa (UNESCO, 2006). Even with these increases, adult women are still much less likely to be able to read than their male peers. The literacy rate for women has been reported to be 73.6 percent and for men, 90 percent (UNESCO, 2006). Rates vary considerably within countries in sub-Saharan Africa, with rates in Coast Province of Kenya hovering at 57.5 percent for women and 72.2 percent for men (Kenya National Bureau of Statistics [KNBS], 2007). Rural illiteracy rates eclipse urban rates in general in sub-Saharan Africa and rates vary markedly from the wealthiest to poorest households as well (UNESCO, 2005). Rural literacy rates in Kenya are at 55 percent while urban rates are at 80 percent (KNBS, 2007).
The difference between reading scores in primary schools and adult literacy rates on national surveys may be attributed in part to the further development of literacy skills over the course of time both in and out of school. It may also be attributed to differences in assessment instruments in difficulty and consistency from school assessments to national literacy surveys. But, the major factor that makes the difference in low rates of reading outcomes in primary assessments versus higher levels of literacy among adults in national surveys is the language in which the respondents are assessed. The Kenya National Adult Literacy Survey Report (KNBS, 2007, March), conducted their survey in English, Kiswahili and 18 other local languages, which “provided the respondents with the opportunity to respond in a language that they were quite comfortable with” (p. xi). The early grade reading assessment in coastal Kenya, on the other hand, conducted assessments for second-grade students in Kiswahili and English, the two official languages of instruction. Students begin and end their schooling in Coast Province learning in those two languages, but once they complete school or drop out (as almost two thirds do by the beginning of secondary school), students conduct their lives in their communities predominantly in their home languages with very little daily use of Kiswahili or English.

**Literacy learning policy debates.** Numerous African and international declarations have affirmed the desirability of the use of mother tongue in education, especially in primary education in sub-Saharan Africa. Among them are: Organization of African Unity’s *Language Plan for Action* (1986), *Draft Charter for the Promotion of African Languages* (1996), the *Harare Declaration* (1997), and the *Asmara Declaration on African Languages and Literatures* (2000). Dozens of U.N. declarations from 1948 to the present have
reaffirmed the principles of multilingualism in Africa and the use of languages Africans know best in education and media (Djite, 2008).

Meanwhile, Western researchers and developers are recognizing the need to engage the first language (L1) in the teaching of the second language (L2), but also continue to cite multilingualism as a constraint on literacy rather than recognizing the linguistic context of children in diverse countries as mainstream rather than marginal. This Western habit of naming languages that are not the school language as minority marks the deficiencies approach to development in literacy. At an April 2010 conference in Washington, D.C. sponsored by USAID, the Fast Track Initiative (FTI), and the World Bank, Wagner (2010) presented Figure 2.2 below under the heading “multilingualism (and minority languages) also lead to low literacy”. Even though Kenya is not included, Figure 2.2 illustrates the issue of home language and alternating viewpoints between its presence as a hindrance to the child versus being indicative of the richness of contextual givens within the child’s home.

![Figure 2.2. Percent of Selected Language Groups in the Bottom 20% of the Education Distribution, Selected Countries (Adapted from UNESCO, 2010, p. 152).](image-url)
Neither the African-led policy proclamations on the use of home languages in learning to read nor the foundations of bilingual literacy found in Western-led research have resulted in changes in early literacy practices. A push for children to learn official European languages without recourse to their home languages as they learn to read has persisted in the education system as a shortcut to gaining an education that will make Africans competitive in a global labor market. In Coast Province of Kenya, children learn at school in two languages: Kiswahili and English. For the majority of rural Malindi District children in the province, neither of these languages surrounds them in the home. They enter school where they hear these languages for the first time.

The existence of jobs even for those who successfully navigate the education system remains a serious issue. This study, however, focuses on issues regarding children’s reading. In an education system driven by exams for reaching the next level and by the need for significant financial investment for entering secondary school, the barriers to completing a full course of primary and secondary education are multiple. These exist for boys and girls and for urban and rural students although they disproportionately affect girls and rural students.
CHAPTER 3: RETHINKING THEORETICAL FRAMEWORKS FOR LITERACY

International development donors and organizations focus on finding remedies to identified problems, such as, in the case of the Early Grade Reading Assessment, a lack of progress in literacy skills among primary school students in coastal Kenya. Chapter 3 concentrates on a critical analysis of the often-cited reasons for low literacy and interrogates accepted Western development approaches in a quest for incorporating literature that pushes toward new program models and ways of engaging the problem.

The Poststructural Critique

Modernization theory, human capital formation theory and the Western development approaches these theoretical camps inspire tend to wear a cloak of universality and totality that leaves them unquestioned. Poststructuralists and postmodernists suggest that no narrative can totalize and be universal, no matter what data it claims as support. Similarly, feminist theory proclaims that all discourses are partial; they necessarily exclude and select elements and are therefore not complete. Encouraged by these poststructural sensibilities to think beyond accepted narratives that claim to define a problem, the study consults literature in sociolinguistics, second language acquisition and literacy, reading research, cultural psychology and anthropology, and human development to expand and improve the understanding of literacy in post-colonial African contexts. The chapter examines the need to take into account the local context and the effects that ideas incubated within the Western context exert on local African contexts through Western development approaches.
A grounding idea from cultural psychology helps frame this theoretical journey. Jacqueline Goodnow’s (1990) term “socialization of cognition” (p. 259) suggests that the context from here shapes views and perceptions of the context there, meaning that one judges the other from within one’s own contextual reality, that cognition is inherently a socialized and socially situated phenomenon. This study departs from the reading instruction intervention and reading score assessment created by EGRA, the Early Grade Reading Assessment in Kenya, which serves as a starting point for discussing the assumptions implicit in this type of approach. Examination of accepted development approaches to research and intervention may uncover uncontested assumptions, which may “appear to have a particular objective validity and be the least likely to be reflected upon and recognized as being matters of custom and value rather than of nature” (Goodnow, 1990, p. 282). The socialization of cognition concept implies a need for exploring Western development approaches that are conveyed in matter-of-fact ways and are received by developing country governments as conventional wisdom. These assumptions are not often questioned in terms of the origins, values, and contextual realities that created them or those that will receive them (1990). In this sense, both sides, the donor and the recipient, have been socialized to carry out their roles. Their cognitive grasp of their role and actions to be taken are filtered through a social prism. In this sense, the context from here (in this case, U.S.) shapes the views and perceptions of the context there (in this case, Kenya).

Western-led efforts from the colonial era forward have recognized deficits in African contexts and tried to correct them. These deficits have been described as a lack of educational opportunities for children, lack of health care and stable health status, and lack of rule of law
and governance. The Millennium Development Goals\(^6\), which call for access to education for all, gender equity in education, and improvements in maternal and child health reflect the continuing dominance of the prevailing colonial and development era paradigms driven by modernization theory and human capital theory in their focus on getting children in to school, especially girls, as the goal that will result in individual and societal change. Dependency theory, which suggests that recipient countries remain beholden to donor entities and must not question the targets and goals of development aid (Brock-Utne, 2000), is also at play as recipient governments may not have adequate social or financial leeway for creating an education system originating from their own cultural standpoint.

**Critique of Deficit Thinking**

The viewpoint of the development community has arguably hewed in this respect toward a deficit thinking model (Valencia, 1997) with an impetus toward social change that has characterized interventions. Deficit thinking as articulated in the U.S. holds that students, the large majority of those low-SES minority students, who fail in school, “do so because of internal deficits or deficiencies” (Valencia, 1997, p. 2). This model suggests that when one inhabits this mindset the deficits are considered “limited intellectual abilities, linguistic shortcomings, lack of motivation to learn and immoral behavior” (Valencia, 1997, p. 2). While there is not an overt buy-in by Western developers on each element described by Valencia, the latent tendency toward a deficit approach most specifically in “linguistic shortcomings” (Valencia, 1997, p. 2) undergirds Western approaches from the colonial era forward. Much as the deficit thinking model drives educational approaches to low-SES, minority populations in the U.S., the Western aid approach identifies the ‘problem’ and finds remedies to correct the problem, with the problem being inherent in the culture or person in

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which it is located. The discourse of “cultural deprivation” in the U.S. in discussing non-white home socialization and the formation of early cognitive modes (Hess & Shipman, 1965, p. 869) and likewise the whole concept of development of Africans with its “strong deficit connotations” (Trudell, 2009, p. 74) promise to make of the minority or colonized people “what they are not” (Esteva, 2003, p. 10). The term deficiencies model may best describe the Western development paradigm described here as within children’s developmental environment, various sub-par conditions are recognized and acted on in development: school, home, health, and gender being four of the often-cited deficiency areas (Greaney, 1996).

It is important to emphasize that the development community is heterogeneous. While discussing founding ideas and theories that guide Western development, it is critical to recognize that organizations and actors vary widely in approach and practice as well as in theoretical underpinnings. This study argues instead that, given the socialization of cognition of U.S. developers, deficit thinking cannot be discounted as an influence and inquiry must entertain critiques of the prevailing deficiencies model. Chapter 3 focuses on the prevailing development and literacy discourses, the basis for literacy assumptions in the Western development paradigm, the barriers pointed to for attaining literacy in developing countries, and the role of home and health factors within the paradigm. Then, the chapter turns to an examination of what the paradigm ignores and misses, and how language and culture surround literacy, by interrogating indigenous critiques of the Western development paradigm in sociolinguistic and reading research. Finally, Chapter 3 moves to constructing a cultural model for literacy using human development, cultural anthropology and African
feminist arguments. Figure 3.1 below shows how each layer of analysis and various literatures within those layers are embedded within one another in this chapter.

![Diagram of Western Development Paradigm, Indigenous Critiques, Gender Perspective, African Feminisms, and Cross-cultural human development literature. Connects to Etic Approach and Emic Approach.]

*Figure 3.1. Literature Framework.*

**Problematizing Literacy Approaches**

Bartlett (2007a, 2007b) and Street (2001) problematize literacy approaches by questioning motivations and orthodoxies of reading goals. Bartlett employs Street’s discussion of literacy models to initiate arguments about prevailing literacy paradigms. An autonomous model of literacy (Street, 2001) characterizes many literacy interventions. Literacy is viewed as a skill learned gradually as an individual moves through universal stages of cognitive and physical development. Literacy will result in individual rational thought, intellectual development, social development, and economic mobility. This model assumes a homology between the individual and society and predicts literacy at the individual level will result in economic, social and political development at the national level. It tends to isolate literacy as independent variable, and claims to study its
consequences, such as economic take-off or cognitive skills. It understands literacy in narrow terms and ignores diversity of literacy practices. It privileges certain kinds of literacy and ways of using literacy and disregards the arbitrary nature by which some practices are elevated as superior to others. This way of seeing literacy prevails in popular discourse and policy.

An alternative model for literacy becomes what Street (2001) calls an ideological model of literacy. In this model, literacy practices are linked to cultural and power structures in society. This model places literacy in a social context and links literacy to cultural and power structures while questioning who defines literacy and what counts as literacy. It recognizes the variety of practices associated with reading and writing in different contexts.

Bartlett’s article (2007a) on bilingual literacies discusses the deficit model, difference model, and an alternative disabling and enabling model. In that alternative, rather than a deficit or difference, culture is perceived as disabling some and enabling others. Rather than allowing presumptions about learning or cognitive ability to guide, the focus can instead be the processes of schooling made up of social interactions with others, all encircled by the social and cultural structures of the larger community. The idea is that educators are consumed with what students are learning and how well they are doing within the proscribed curriculum, but need to pay attention to the school’s discourses and rituals. These practices are institutionalized within the school and are implicit in producing success and failure (Bartlett, 2007a).

**Development and Literacy Discourses**

Three current discourses on sustainable development (Trudell, 2009) include education and literacy as driving forces for raising incomes and spurring economic and human
development. These three variations move from the first and most economics-focused World Bank stream to the more human-oriented UNDP discourse and finally to the human-driven capabilities approach. A sole focus on economic development reduces across the three while engagement of women increases across the three. Education and literacy importance remain relatively constant across the three. All three are rooted in modernization theory and human capital formation theory with important differences in focus as described.

**Economics-focused discourse.** Trudell (2009) identified three major discourses of development starting with the World Bank stream, which “describes sustainable development in terms of economic reform and indicators, as well as social stability and environmental stability” (p. 75). This first one hews most closely to the colonial-era and post-colonial-era theory, which shared a call for modernizing traditional societies in sub-Saharan Africa through Westernization and a linear process that would take African countries through a series of steps leading to industrialization (Phillips & Schweisfurth, 2006; Nordtveit, 2010). Trudell connects this first discourse to the World Bank and the International Monetary Fund, which grounded their institutional rhetoric and action in an economic view of development. Human capital theory as a corollary of modernization theory specifically sees education as a human capital investment that will yield pay-offs in the labor market and drive economic growth (Phillips & Schweisfurth, 2006).

**Critiques of economics-focused discourse.** A series of assumptions about how development will unfold in Africa underlie dominant Western approaches. These assumptions are embedded deeply in the first discourse discussed above: an economic philosophy toward development that favors the ability of an individual to change the social order through becoming educated in Western-style schools. This paradigm also assumes that
Western-economy-type jobs in sciences and business will be available to graduates and that an economy will arise in the not-too-distant future to mirror those in Europe (Ntarangwi, 2003). Education goals have targeted getting more children into school and improving teacher competence. Again, in this mindset, mass education in Kenyan schools will lead to higher family incomes and better health.

Samoff (2003), in critiquing World Bank approaches to development, argues that education’s main task in Africa is to reproduce the economic, political, and social order – rather than focusing on learning how to learn, as in the transformative and liberating Freirean vein. Governments and educators in Africa continue to articulate their education policy from a human capital formation theory base (Samoff, 2003). Africa’s postcolonial governments maintained their dependence on foreign support by continuing to engage the capitalist economy imposed during colonialism. Continuing on this path, unemployment is attributed to miseducation because the education system did not adequately prepare the student for the labor force. Relevance in this paradigm becomes simply whether or not students do well on national exams, never mind whether they can generate new ideas or build critiques of existing ones (Samoff, 2003; Ntarangwi, 2003).

**Human-oriented discourse.** Trudell (2009) attaches a second dominant discourse of development in which “the hegemony of economic parameters of development is vigorously contested” (p. 74) to the United Nations Development Programme. The UNDP denies that average national income can be an adequate measure of human well-being. By the 2007/2008 edition, the UNDP’s Human Development Report was using development indicators of life expectancy, education and literacy levels along with Gross National Product. Trudell (2009) points out that the Millennium Development Goals (MDGs) laid out criteria for development
that included “gender equality, poverty and hunger, control of disease, environmental sustainability and global partnerships for development” (p. 74). The World Bank, notwithstanding its interest in economic indicators, played a role alongside the UNDP in drafting and agreeing to the MDGs.

**Human-driven discourse.** While these first two development discourses aim to “establish measurable criteria” (p. 74) for human well-being, a third line of thinking looks at the “less measurable aspects of development” (p. 74), such as the expansion of human freedom and the removal of impediments to freedom (Trudell, 2009). Out of this perspective, championed by Amartya Sen, the human capabilities approach has emerged. The approach focuses on what a human being is capable of doing and being, given his or her environment, culture, and situation in life. Human agency is a pivotal concept in the human capabilities approach; one’s ability to act and bring about change in one’s life constitutes agency (Trudell, 2009; Sen, 1999; Nussbaum, 2003). The Central Human Functional Capabilities grew out of this third discourse and is discussed in relation specifically to women’s lives in developing countries; it constitutes a list inspired by the capabilities approach that serves as a universal manifesto to be applied in disparate cultural contexts in harmony with local attitudes and conditions. Within the list, Nussbaum makes reference to the language of thought and imagination needing to be cultivated through education and reading: “4. Senses, Imagination, Thought: Being able to use the senses, to imagine, think, and reason – and to do these things in a ‘truly human’ way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training...” (Nussbaum, 2003, p. 352).
Role of Literacy in Development Discourses

In any of these discourses, language and literacy figure prominently. In whatever way sustainable development is defined, “enhanced human learning, communication and critical thinking are key components” (Trudell, 2009, p. 75). In other words, literacy is viewed as a critical tool for development, whether the perception of development hedges more toward economic development or human well-being development. These discourses that Trudell outlines flow from modernization theory even if the second one professes to care more about human well-being than the first and the third focuses on less measurable aspects of one’s well-being. The dominant development paradigm and debates referred to here define and contest discourses that flow from modernization and human capital formation theory. Three modernization theory elements characterize, to varying degrees, these discourses and the approaches that come from them: a faith in individual change bringing societal change regardless of the societal and political-economic structures in place; a view of girls and women as recipients, rather than agents, of development; and a gender-driven discourse on equity that ignores the intersections of gender with socioeconomic status and ethnic group (Phillips & Schweisfurth, 2006).

In a more human-centered discourse, the second of Trudell’s three discourses, increasing access to education and raising literacy levels still receives effort and attention although the educational quality issues surrounding these goals is not confronted. The third discourse, the human capabilities approach associated with Sen and Nussbaum, views education not just as a global fight on behalf of developing world population and women in particular, but as a locally held battle that emanates from within developing world communities and cultures (Nussbaum, 2003; Nussbaum, 2002).
When considering literacy and language within these sustainable development discourses, an unspoken assumption or a major overlooked factor underlies the role and importance of literacy efforts: the languages in which the child learns to read at school. Using non-local languages in the process of development by offering reading instruction from early childhood onward in English, as is the case in Kenya, makes numerous assumptions. First, this practice assumes that an individual learning the European, national language will lead to societal change and increased incomes through activity in the labor market. Second, it also appears to assume that Kenyans learning to read in English would lead to a shift to speaking the national (European) language in the home, so that the reading process would be less cumbersome for the next generation as they would be surrounded by English in the home. Third, these changes would result in improved reading achievement for Kenyan students at school. In the third of Trudell’s discourses, these assumptions are coupled with the idea that human agency will increase as a result of attaining literacy, as will family income, and health and education outcomes will improve.

**Literacy in English**

Speaking in terms of global Englishes, McKay and Bokhorst-Heng (2008) call Kenya an Outer Circle country in that English is an official language used primarily outside the home and serves as the language of instruction in secondary and tertiary education (although in Kenya it is also being used often for instruction in primary). In an Outer Circle country, the society must grapple with the social inequities inherent between those who attain sufficient English for higher education and those who do not and how to distribute time in schooling appropriately among English and local languages to facilitate multilingualism. Ironically, in the colonial British system in the early 20th century, schools were using local
languages so that the African students would remain, theoretically, in menial jobs without access to the colonizer’s language (White, 1996). To correct for this colonial practice, bring Kenyans into global competition, and drive economic growth, post-colonial schooling favored English as the language of instruction rather than any local language. In arguments for the use of the national language as language of instruction, establishing unity among the country’s diverse groups is offered as a reason for primary education in the national language (along with costs) (Holsinger & Jacob, 2001). In Kenya alone, 69 local languages and many ethnic groups exist⁷. The languages used in schooling coastal Kenyan children are the two national languages: English and Kiswahili. Foundationally a Bantu language, Kiswahili is widely spoken in Kenya and across East Africa, but it is a native language for less than one percent of Kenyans.

Furthermore, as introduced in Chapter 2 (pages 22-25), language policy does not reflect the practice in Kenyan schools. The policy does not drive the practice, nor is the practice static from school to school. Commeyras and Inyega (2007) point out that Kenyan language policy specifies “use of mother tongue in primary standards 1-3. This mother tongue could be Kiswahili or another African language of the region. English becomes the language of instruction from standard 4 through university” (p. 265). This policy varies widely in practice from school to school. Often, teachers are not prepared to teach in languages other than Kiswahili and English and may not be conversant in the children’s local languages since the government posts teachers to provinces throughout the country. They are also in need of training in language-teaching methodologies and also particular application of these to specific languages (Kiarie, 2004). Urban-rural variances also underlie differences in educational outcomes as measured by exam results. Urban children usually receive eight

⁷ http://www.ethnologue.com/show_country.asp?name=kenya
years of instruction in English often supported by home experiences in both English and Kiswahili while rural students get an average of five years of instruction in English, but without English or perhaps Kiswahili in their home environments (Mutuku, 2000).

**Barriers to Literacy**

Literacy has been addressed as an area of deficiency and as a critical gateway to further student learning and student permanence in school. Reasons cited for why young people do not learn to read in developing countries: “inadequate health provisions” (p. 10), “adverse home circumstances” (p. 13), “gender inequities” (p. 14), and “adverse school factors” (Greaney, 1996, p. 16) reflect as well the deficiency model underlying the way African contexts are viewed. Studies in industrialized nations have also identified differences in home conditions and school deficiencies as explanatory factors for differences in reading scores. Studies of literacy failure in the U.S. have shifted the blame back and forth between home and school (Snow, Barnes, Chandler, Goodman, & Hemphill, 1991). While application of the results of most of these studies to the situation in sub-Saharan Africa is limited by the studies’ focus on wealthy nations and their exclusion of such factors as health and gender inequality, nevertheless they offer support for our emerging understanding of contributors to poor reading outcomes in the Western development paradigm.

In terms of home factors, in the industrialized world over the last 30 years, socioeconomic status has been documented as a prime factor in reading level differences among primary students (Bowey, 1995; Raz & Bryant, 1990). Studies have looked at SES factors that covary with reading skills (such as the quality of the home literacy environment and the quality of school instruction) and reading-related abilities (such as phonological awareness) that are influenced by SES (Hecht, Burgess, Torgesen, Wagner, & Rashotte,
2000). While health and gender inequality are not considered in these wealthy-country reading studies, the factors identified as influenced by SES mirror issues identified as constraining reading achievement in developing countries, namely home conditions and school deficiencies.

In reference to home-based constraints on children’s learning due to socioeconomic disparity, an argument has ensued in the U.S. and other Western countries about whether or not the school can act as a successful equalizer for all children. Theoretical positions on constraints on academic achievement have spawned debates between reproductionists and the school-as-equalizer camp. Reproductionists hold that schools reinvent the disparities of students’ non-school environments (Condron & Roscigno, 2003; Oakes, 1985; Gamoran & Mare, 1989; Bourdieu & Passeron, 1977), while the school-as-equalizer position holds that schools can help erase home disparities and level the playing field for students (Cremin, 1951).

Due to its appeal and popularity in Western countries, the school-as-equalizer idea has perhaps guided U.S. interventions such as EGRA in Kenya. Addressing the home and community contexts of the child within the intervention itself may be perceived as misplaced and perhaps irrelevant to the intervention’s goals. In the prevailing paradigm, what is viewed as the pervasive and persistent context of poverty can only be changed through increasing formal school adherence and completion, so the intervention focuses on school inputs to the exclusion of any others. The impulse has been to improve the schools in rural areas so that all children everywhere receive an analogous education regardless of which school they attend. In this way, in a deficit mindset or deficiencies model, placing inputs in the school provides a counteraction to the deficient nature of the surrounding culture and thus bypasses the
sociocultural context itself by building students who must in essence overcome their own homes to become educated.

Health Factors

As Greaney (1996) argues, health status and home factors may be adversely affecting children in their literacy attainment. In sub-Saharan Africa, in rural areas, the home has been shown to be as important a factor in children gaining literacy as the school. Previous research pointed to the school as the primary factor of importance for literacy in rural and low SES areas, but these findings have been refuted in sub-Saharan African populations, with the home found to be just as critical. Improving school processes and strengthening home support for children’s academic work are both indispensable for eliminating urban-rural literacy gaps (Zhang, 2006).

In international development literature, socioeconomic status mediates both health and educational outcomes. The health-related poverty trap ties intractable health problems to family SES (Galor & Mayer-Foulkes, 2004). Poor health holds children back from attending and performing in school. The health-related poverty trap describes nutrition and health as playing a causal role in the persistence of socioeconomic inequality and in the effects of this inequality on economic growth. This situation describes poor health status that results in a low level of education and an intergenerational poverty trap difficult to step out of without improvements to household health.

Behrman (1996) and Alderman, Hoddinott, and Kinsey (2006) explored the nutrition-cognition connection to see how undernutrition affects school completion and labor market outcomes, finding that measures of nutritional deficiency can predict difficulties in school and in work in later life. The importance of eating breakfast for learning and for child
development as well as long-term effects of nutritional deficiencies on behavioral
development have been well documented (Simeon & Grantham-McGregor, 1989; Grantham-
McGregor et al., 2007). Poor nutrition leads to poor school attendance, but also is
exacerbated by socioeconomic status, especially among girls (Mukudi, 2003). Enrollment
rates have increased greatly in sub-Saharan Africa, including markedly in Kenya, but
completion rates are still lagging behind. Retention and dropout rates continue to be high
(Bennell, 2002). In addition, health was an important determinant in permanence in school
according to a study in Mexico (Mayer-Foulkes, 2008). Attendance or school permanence
could be affected not only by persistent undernutrition rates, but the co-morbidity of
undernutrition with other diseases. The window for improving health so that it is not a
negative force against attendance and completion at school is the early childhood period
(Galor & Mayer-Foulkes, 2004; Mayer-Foulkes, 2008). In other words, stunting as a result of
nutritional deficiencies and related cognitive impairment and susceptibility to comorbidity
with other diseases has already been established for school-aged children from the preschool
years.

The persistence of undernutrition and the chronic nature of many endemic diseases
keep mothers and children sick in many developing country settings. Malaria is endemic as
well as chronic in coastal Kenya; the disease often recurs several times in children during
their early years. The Coast Province has the second highest percentage of children with
fever and/or convulsions (symptoms linked closely to malaria) who are treated with
antimalarial drugs (CBS, MOH, & ORC Macro, 2004). TB and HIV/AIDS are also prevalent
diseases in Kenya, which can affect children directly as well as indirectly through a sick
relative or parent in the household. Diarrheal disease prevalence is also significant,
particularly in the Coast Province with 22% of children having diarrhea in the two weeks preceding the DHS, which is noticeably higher than the national rate of 16%. Given these rates of diarrheal disease, it is not surprising that approximately 39% of all Kenyans live without access to an improved water source (CBS, MOH, & ORC Macro, 2004), which results in a high incidence of diarrheal disease and other water-borne diseases.

Access to health care in rural areas in Kenya is also markedly lower than in urban areas (CBS, MOH, & ORC Macro, 2004). The choices parents make about when and where to seek treatment for their child prove critical to the child’s survival. Delays in seeking care often make the difference between positive and negative outcomes for mothers and children (Thaddeus & Maine, 1994). Decisions about treatment-seeking are often made by fathers, who may not understand the gravity of the symptoms they are seeing and may also be hindered by assuming that they are unable to pay the cost of care. Molyneux, Mung’ala-Odera, Harpham, and Snow (1999) investigated mothers’ treatment-seeking patterns for children in rural and urban samples in Kilifi District of coastal Kenya. In spite of noted differences between rural and urban contexts in demographics and access to health care, the mothers’ treatment-seeking patterns were similar: shop-bought medicines were sought more often (69%) than government or private health facilities were contacted (49%). The majority of mothers are treating illness with medicines they can purchase themselves rather than consulting the local health care provider. Mothers may view buying medicines in shops as a lower cost alternative to the health center for a chronic disease such as malaria. Mothers may also start and stop the medicine if they do not see improvement rather than complete the course of treatment (Molyneux, et al, 1999).
Djite (2008) points out the importance of communication in medical information with medical speech already difficult to understand in one’s own language. The practice of packaging medical information in ‘simple (European) language’ persists, but can only “further frustrate the best intentions in the world, and continue the wastage of scarce resources” (p. 109). Fifty years after independence, most Africans being served by health campaigns and clinics are not literate in European, national languages and rely on word of mouth from local health workers if one exists.

In addition, the sub-Saharan African home historically functions in an extended family configuration rather than in the Western notion of a nuclear family. Rather than establishing a separate home, the new wife joins the husband’s extended family compound. When she becomes a mother, she is then mothering in the presence of others. The elasticities (Sudarkasa, 2004) of the extended family structure may involve changing constellations of people dwelling in the home, which could change or be disrupted by a sick relative who comes to live where care is available from kin or by a sickness that strikes one of the primary caregivers already residing within the compound. The impact of undernutrition and disease on home care configurations are also mediated by poor access to health care as well as socioeconomic status.

The education level of girls correlates with positive health outcomes for themselves and their future children. Health constraints in the home are also linked to the literacy of the mother. A mother with more education has healthier kids, who are vaccinated, and experience less hunger and disease (UNICEF, 2006; UNICEF, 2003; Fletcher & Artiles, 2005; Gachukia, 2004; Herz & Sperling, 2004; Bellew & King, 1991; World Bank, 2001; Blum, 2007). Part of this improvement may well come from socioeconomic status improving
with mother’s education level, but it also emanates from the mother’s basic literacy skills. She is able to read health messages, signs on buildings, and also function with more confidence in health centers. It is not then surprising to report that the educational level of the mother is negatively correlated with both stunting and underweight in the DHS results; it is important to note that women in the Coast Province have the lowest number of median years of schooling at 5.5 of any province in the country, which is two years less than the national median of 7 years of schooling (CBS, MOH, & ORC Macro, 2004). Mother’s education level also tends to track with her child’s educational achievement as well, with mothers who have completed some primary school more likely to send their children to school.

In summary, international development literature points to SES or poverty as a limitation that spawns entrenched barriers to reading achievement. Escobar (2002) problematizes the term poverty as the totalizing condition in Africa, Asia and Latin America. Mass poverty in these regions was a Western discovery of the post-war era (Escobar, 2002, p. 21) and holds inherent deficit connotations. ‘All of them are poor’ is a stereotypical Western assertion that was also made about the coastal Kenyan sample in Malindi District; its reductionist assumptions ignored the fact that gradations of poverty make an important difference in education and health access and outcomes. This mentality also ignores the multiple meanings and definitions of poverty (Feeny & Boyden, 2003). Informed by these reflections on poverty as a defining concept and term, this study uses the term SES rather than poverty when modeling the relationships between various factors as it finds out what is symbolic of poverty to the mothers in the qualitative phase of the study rather than framing the approach in terms of poverty. DHS data indicates that movement from one quintile to another in SES makes a significant difference in education and health (CBS, MOH, & ORC
Macro, 2004), so the differences may seem insignificant to Western eyes, but are not in the local context. One resource, such as ownership of a cell phone, with all else remaining equal, can bring about immense change within a family at the microeconomic level (Aker & Mbiti, 2010). SES provides for more of a measured look at people and families rather than wrapping all in the same blanket of poverty.

In turn, health deficits prevent increases in SES. The factors that are influenced directly by SES are many: maternal factors such as education level, childrearing practices including by whom and how children are cared for, nutrition and disease (if SES were higher, then children would increase food consumption and reduce disease incidence), and illness control are directly tied to SES. More income would result in access of Kenyan families to health care centers and better prevention of and resolution of sickness. In this model, each of the variables could be tested to see how it affects learning to read. Since SES also has a direct effect on school attendance in the model, the family’s economic situation can be tested against its impact on the child’s presence at school. Since early childhood nutrition is also a determinant of permanence in school, proclaiming a need for a child to attend school so as to overcome a low socioeconomic background does not address the health-related reasons behind the child’s erratic attendance or lack of attendance.

**Connecting Health and Reading Achievement**

With these endemic and chronic health factors that are described as barriers to achieving literacy (Greaney, 1996) and limitations on improving socioeconomic status (Galor & Mayer-Foulkes, 2004), some efforts by international organizations have been made at the school level to mitigate these constraints. These efforts have included school-feeding to improve nutrition and caloric intake and training teachers to act as health agents, to weigh
and measure students, and give deworming pills to students. Aside from programmatic approaches such as those, health and education, while demonstrated to interlink, have remained disconnected in research and programs (Bloom, 2005).

International health and education policy goals are not parallel or interrelated. The two education-related MDGs focus only on access to education, counting enrollment numbers without consideration of what is happening at school: what students are learning, what teachers are teaching, and whether parents are engaged in the process. No MDG targets any aspect of education beyond enrollment. The value of the MDGs at improving literacy is constrained first by the MDGs’ focus solely on access to education (Chabbott, 2007). While MDGs #2 and #3 target increasing access to education only, the health-related goals (MDGs #4, #5, and #6) target specific decreases in disease rates and mortality rates. If education goals were congruent with health goals, then they would target levels of learning for specific groups. Then, knowledge could be used as a meaningful target in addition to completion of a certain school grade. If the education goals were reliable and context specific, more specific goals such as for literacy with a focus on early childhood for building a base for literacy could be used. Chabbott (2007) also argues for understanding cognitive health or the child’s innate readiness for learning. This type of target would address health factors outlined in Figure 3.2 by investigating the child’s history of chronic illness and nutrition status, the childrearing practices associated with the child, the child’s health care access, and the child’s mothers age, education level, literacy status. Chabbott (2007) also advocates for an assessment of what is lost when learning is delayed, especially given the loss of early years of schooling in developing countries when students enter school at a later age.
In an effort to connect the two sectors in problem modeling so that they can be understood and addressed together and engaged simultaneously in programs, such as EGRA, Health and literacy achievement are connected in the following proximate determinants framework. This type of framework is used commonly in public health and population studies, first as a framework for child survival. The Mosley-Chen proximate determinants framework (1984) was used as a starting point to map the health factors for reading achievement as they are discussed in the literature reviewed above. The framework below is consistent with the Western development paradigm described in Chapter 3.

\[\text{Figure 3.2: Proximate Determinants Framework of Health Effects on Literacy Achievement}\]

Given the foregoing description of Western development theoretical underpinnings and viewpoints, reading achievement could be viewed and addressed by current accepted Western development approaches and thinking in this way so as to tie health to literacy. Proximate determinants are intermediate variables that directly influence the risk of learning failure. Social and economic determinants operate through these variables to affect child learning in two major domains in the child’s life: school and home. In EGRA, the school is the domain of assessment and intervention. The school domain includes the location (ethnic and geographic factors) and the school physical and human environment (teachers, instructional methods, instructional time, materials, food, water, etc.). In this study and in Figure 3.2 above, the home is the domain of investigation. The home domain includes maternal factors\(^8\) (maternal language and use in home, maternal education level, maternal reading level, maternal support to child, maternal involvement); childrearing situation (# of siblings, gender of child, presence of co-wives, parenting practices, child development factors); nutrition and disease (undernutrition, malaria, TB, HIV, diarrhea, and comorbidity); attendance at school (student’s absence related to home factors); personal illness control (preventative measures: sanitation, quality of care, immunizations, malaria prophylaxis; medical treatment: measures taken to cure disease).

This model is not just focusing on dropouts. The rate of dropouts from primary school is a symptom of these processes identified in the framework. The framework and this study are interested in the health status of surviving, continuing students that leads to low learning outcomes and failure to succeed in school. The idea contained in this adaptation of the Mosley-Chen proximate determinants framework is that in an optimal setting some greater

\(^8\) Maternal factors are included to the exclusion of paternal factors because mothers are the primary child care providers in the home and the mother’s education level has been shown to have a larger impact on the child’s learning and health than the father’s.
percentage of children than is currently the case would be reading with fluency on various measures at grade two. Social, economic, biological and environmental forces operate thus on learning outcomes. In the dominant Western development paradigm, socioeconomic determinants operate through more basic proximate determinants that influence attendance, support, in-home health, risk of learning failure and outcomes of faltering learning. Specific diseases and nutrient deficiencies are, for example, biological indicators of the operation of proximate determinants. The independent variable is SES and the dependent variable is reading outcomes and educational failure or success. These are the cumulative consequences of multiple contextual processes. The child’s reading failure is not the result of a single isolated factor, such as a teacher, a parent, or one event in the child’s life.

The next section considers what is missing from the proximate determinants framework and the Western development paradigm it represents. Figure 3.2 represents an example of what Robinson-Pant has termed a technicist framework (2004) as it breaks down a child’s literacy formation into measurable bits and conveys a view of literacy and its relationship to health as autonomous and neutral. The framework could be transported to any place in the world, and thus, perhaps necessarily, does not incorporate the cultural context. At the same time, starting with a Western development-immersed framework is important. Rather than dispensing with all modernization-inspired models because of their years of use or our years of seeing problems and doing research in this way, the study uses this framework to map, then adapt. It is important to inhabit the prevailing Western mindset to understand it and then make the argument for a shift and what that shift offers. The final section of this chapter begins constructing an alternative framework for understanding home and health factors in reading achievement.
Language and Culture surround Literacy and Health

Both health and home circumstances are pointed to as constraints on gaining early school literacy in developing countries (Greaney, 1996). These two areas of health and home cannot be separated since health constraints come about as a function of the home circumstances. Home and health factors also exist within a particular physical environment and a specific cultural setting. EGRA is an example of a Western-led intervention in which health and home are not included in the reading intervention. EGRA focuses solely on school factors, another area Greaney points to as a reason for low reading skills. The impulse to look at one area of the education system to cure a specific problem is a common development approach that Klees critiques. Education in development interventions need to address the moving parts of the child’s life, not just make finite inputs into one area and expect outcomes to change as a result (S. Klees, CIES conference comments, March 1, 2007). Figure 3.2 above attempts to model health and reading achievement within the Western development paradigm. The model shows how factors identified within the Western paradigm, namely health and home deficits, can be engaged in a literacy framework.

This section moves beyond tinkering within the proximate determinants framework and within the confines of the Western development paradigm. The framework does not address root issues as it is itself entrenched in the Western set of assumptions about literacy in development. What is lacking in this Western development paradigm and the health and literacy framework? An analysis of language and culture and how they are linked to health and literacy is missing. The paradigm in place simply assumes and/or ignores that initial and ongoing reading skills will be achieved in second and third languages, that illiteracy contributes to poor health, and that poor health is a constraint on building literacy. This study
is interested in how health holds children back, but is also aware of the need for a proliferation of viewpoints beyond the accepted paradigm. It engages language and culture, forgotten givens in the child’s life. The literacy of the last generation’s pupils, who are now mothers, holds back the health of the child and also holds back the child’s progress in reading. This cycle is rooted in development approaches blind to the givens of the culture, including linguistic and other environmental layers. Investigating the health of the child necessitates investigating the home and the home-school relationship as well. The health and home conditions are determined by inherent cultural givens in the place in which the child lives, which can and must be understood and engaged in new ways.

Theoretical approaches to children’s educational progress need to take into account culture and its role in parenting practices and home handling of health and education of the child. Geertz’s classic definition of culture still offers a sound starting point for understanding how culture is understood in this study: “an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men [and women] communicate, perpetuate, and develop their knowledge about and attitudes toward life” (1973, p. 89). The Geertz definition does not sufficiently address the perspective of the person observing or viewing the culture though. For this angle, it is necessary to engage critiques of colonial discourse from feminist theory. Minh-ha reminds us that, “culture has never been monolithic and is always more or less in relation to a judging subject. Differences do not only exist between outsider and insider – two entities. They are also at work within the outsider herself, or the insider herself – a single entity” (1990, p. 375). With these definitions of culture in mind, the exploration and discussion of culture and sociocultural processes in this study aims to be grounded in the
specificities that mothers describe from their daily lives and the attitudes and perspectives they articulate.

**Sociolinguistic Contestation of the Literacy in Development Model**

Thus far in this chapter the terms reading and literacy have been used interchangeably. At this point, it is important to define the differences between the two as described by Snow et al. (1991): “literacy is not just a cognitive achievement on the part of the child; it is also participation in culturally defined structures of knowledge and communication” while reading is “successfully mastering a curriculum” (p. 175). Snow et al. (1991) suggest a crucial aspect of literacy; literacy is a lifespan issue and is developed when done sustainably over the course of life. Literacy is the “recognition of complex relationships among reading, writing, ways of talking, ways of learning, and ways of knowing” (Snow et al, 1991, p.175). Snow et al. (1991) also describe becoming literate as “achieving membership in a culture” (p. 175), which can elicit debate since people are members of cultures without reading in any language, but, at the same time, literacy brings a person necessarily into another culture within a culture in which reading and writing are possible. This concept of becoming a member of a culture of literacy will be important in building a cultural model for literacy in development later in this chapter.

Literacy and the assumptions about how it is achieved do not tend to be critically viewed in commonly accepted development theories or approaches. Post-colonial assumptions about schooling are not questioned at a practical level or tempered by alternatives, either theoretical or practical. Part of this blindness to critical issues of literacy education may come from the lack of comprehensive knowledge about what is really happening in classrooms, what the policy is, how it matches or does not match practice, and
how children develop their literacy skills. Not much attention has been given to other elements beyond the socioeconomic differences of children in their reading achievement. Other cultural and localized issues, such as the child’s home language being different than the school language, and what this language difference means for children in light of reading and literacy research, have been mentioned but not sufficiently addressed among development scholars, donors, and practitioners.

For example, AED’s *Success in First Grade* report (2009) focuses on how to achieve better reading skills among first-graders. The report mentions oral language and its importance in building reading skills, saying that it is easier to become a reader in one’s home language and suggesting that when a child learns in the home language for the first six to eight years, the child does better on test scores and has higher self-esteem. The report also mentions that once one can read in the first language, then those skills are transferred to other languages. Parents also are more likely to talk with the teacher and participate in the child’s schooling process when the home language is used. At the same time, in the report, “To speak a home language that is not the mainstream language” (p. 10) is named as an impediment to learning to read at school in the “mainstream language” (p. 10), meaning the official language of the country. The idea of the national European language being mainstream suggests an undercurrent the deficiencies model described in the first section of Chapter 3. The mindset underpinning this assertion is that children and their home language are not mainstream in their own homeland. By referring to the national language as the mainstream language, the assumption seems to be that it is not normal, perhaps even unusual, to speak one’s native language in the home. It is not acknowledged that the home language is the mainstream language for the child, not the other way around. The report does not offer a
broader or deeper critique or set of suggestions for how to accommodate for the research findings on first and second language literacy. Ultimately, the issue of home and school language differences is instead grouped in with poverty and illiteracy as a deficit or deficiency the child needs to overcome through attending school regularly.

The general assumption of sustainable development currents of thought is that the current system of language use in the teaching of reading can work. To achieve success in primary school reading improvement and start them on a trajectory that supports literacy formation, this assertion assumes that the cultural context will be transformed by schooling at the most foundational level: that of the language used in the home. Students and families will eventually become “mainstream” (AED, 2009, p. 10) language speakers, their income and health will improve and the economy will grow. The approach discounts a body of literature about early language learning and learning to read, which will be considered in the following section.

Western feminists have also glossed over the language issue within reading. In their quest for universalism in feminism, Western feminists do not address this issue of language in literacy. For example, Phillips’ gender perspective does not engage language in her call for women to learn to read (Phillips, 2002). Nussbaum (2003) also does not address the language of literacy in her argument that non-Western women are demanding education for themselves and are not unwitting subjects of Western women’s arguments for education on their behalf.
African and Alternative Narratives

Critiques of the dominant development paradigm of modernization theory have been offered from a neo-marxist and dependency theory perspective and from a post-foundational theory standpoint. These critiques point out that change at the individual level does not mean that society at large will make a shift. In other words, individual-level change cannot alter the givens of a culture, such as the politico-economic situation or languages spoken in homes. In the Kenyan schooling approaches, Ntarangwi (2003) sees the breakdown of modernization theory as students prepare for jobs that do not exist and learn to lead a schizophrenic life as a Kenyan hoping for a Western transformation. Ntarangwi’s cultural critique dovetails with Samoff’s (1999; 2003) call for focusing on the how in African education systems. Both scholars suggest looking at how students are learning, how teachers are teaching and how the system is set up rather than continuing to crunch the enrollment and retention numbers and lament the lack of education for a large number of children without making changes to the system’s ‘how’ aspects.

Bunyi (1999) calls for a look at liberation theory for the Kenyan education system. She suggests that this Freirian pedagogical model would buoy literacy rates in Kenya if employed to engage Kenyans in their own oppression, to give voice to their own context, instead of ingesting the ‘banking education’ model of the Western education system. Bunyi also addresses language of instruction as a marginalizing force for Kenyans with most Kenyans not staying in school long enough to gain fluent literacy in English, but then leaving school to spend a lifetime trying to be participants in the development process in their indigenous languages in which they do not have formal educational preparation. Ntarangwi’s (2003) reflection on the Kenyan education system has connections to Bunyi’s (1999)
liberation theory critique, but demands primarily a culturally oriented education system. The Western diagnosis of what Kenyans need to learn does not reflect the context in Kenya or Africa as a whole. Ntarangwi (2003) and Omolewa (2007) suggest incorporating indigenous methods of education such as story-telling and indigenous knowledge bases through inviting community members to class and creating lessons relevant to the local context.

Recognizing value in local practice is a first step to realizing that the Western stance toward cultural practices does not need to be eradication or change, but rather understanding and engagement. Breast-feeding provides a good example of an indigenous African practice that has been strongly embraced anew since the 1970s in the United States and other industrialized countries (Super & Harkness, 1992). The three-generation household, still very strong in rural Kenya and across Africa, with its social support attributes, has been pointed to as a critical loss for U.S. culture in which detachment has become a norm for grandparents from their grandchildren (Kilbride & Kilbride, 1997). Understanding and embracing indigenous health practices creates opportunities to capitalize on them for improving skills like literacy, to think outside of the ‘fix-it’ box and explore an emic and internal viewpoint. The embrace of home language in teaching literacy is an evidence-based literacy approach that the Western paradigm has not recognized adequately or embraced theoretically or programmatically. Literacy efforts have continued in the colonial and post-colonial mindset of teaching official languages as if no other languages existed in the child or in the home. Embracing the songs and sayings in the home languages gives the child his or her home literacy back and provides a kicking-off point for forming school literacy in second and third languages (Serpell, 1992).
Djite (2008) discusses the issue of why the African child must learn to read and write in a foreign language and the many effects these language practices have on people’s lives and on the development process, including in the health care system. Trudell (2009) points to the dismal status quo in education quality and progress toward international goals. Trudell calls for local-language literacy as a tool in improving all of these outcomes. Brock-Utne (2000) calls into question the education for all movement in Africa saying that using the European language for schooling recolonizes the African mind and makes Africans more, instead of less, dependent on the West through the use of foreign languages in schooling. The Asmara Declaration of 2000, issued by a conference of writers and scholars from all over Africa, “proclaimed that all African children have the unalienable [sic] right to attend school and learn their mother tongues and that every effort should be made to develop African languages at all levels of education” (Commeyras & Inyega, 2007, p. 262). This suggestion echoes longstanding critiques of Western activity in Africa, such as that of Wober who asks that African social scientists consider becoming “more modern by not being just western” (Wober, 1975, p. 215). At the least, Western approaches and U.S.-led literacy efforts need to recognize and employ, even if the endpoint is expected to be literacy in Kiswahili and English, research and approaches for language minority groups within the U.S. to start to build a new model for Kenya and other African countries.

The language of reading instruction has deeper societal effects that reach beyond simply poor reading outcomes for students at school. Literacy education in Kenya remains far from providing for the formation of a critical literacy in which the student is able to reflect on social issues in the home language (Biraimah, 2003; McLaren & Farahmandpur, 2001). The goal is instead submission to and use of two non-home languages in learning to
read. At the onset of colonialism and as formal schooling became more and more widespread, English and school became synonymous with one another. English has not become separated from school or more integrated into home life for most Kenyans in rural areas, nor has it become separated from the colonizer who brought it. An English teacher the research team met during field work referred to the language I was speaking as Kizungu, which is Kiswahili for language of white or European people, rather than Kiingereza, which is Kiswahili for English (Field notes, March 2009). The state of mind of colonizer and colonized is implicit in this comment by an English teacher in Kenya. This is the state of mind that Edward Said talks about that reaches beyond economic and political power imbalance (Said, 1993).

Trudell argues that sustainable development, defined in any of the three most prevalent ways, including Sen’s human capabilities framework in which development equals freedom to pursue a full life rather than to serve as an instrument of economic production, cannot occur without attention to the language choice in literacy efforts (2009). She provides examples of local language literacy programs that have successfully integrated failed students back into the school system once they achieved a level of literacy in their own home language. She cites field evidence of the link between home language literacy and school language literacy (Trudell, 2009). Connecting school literacy to adult literacy programs would be a sound step to take in order to enter a sustainable literacy paradigm.

The quandary of whether to use first person or avoid its use by employing passive construction intensifies in a mixed methods study as quantitative findings are traditionally reported using passive construction while qualitative research encourages the use of “I” as an important part of the research. Chapter 5 contains limited use of passive construction in reporting quantitative findings. Chapters 6, 7, and selected sentences such as this one use “I” or “We” since the researcher and research team as a unit interact with the research sites in instructive ways.
Reading Research and Bilingual Education Research

Bilingual education research in the U.S. rests fundamentally on the argument that children should first learn to read in the language they know best. Since reading is a process of making meaning out of text, it is a barrier to begin this process with words the child does not know. Also inherent in the bilingual education argument is that literacy skills from the first language will transfer to the second language once the child has reached a level of oral proficiency in the second language and can begin to know enough words to start reading (Collier & Thomas, 1989). Emergent literacy is defined as the literate ways of behavior of very young children: pretend reading, pretend writing, oral storytelling, beliefs about literacy, and the recognition of labels. Home literacy is a related concept; it refers to parents’ literacy behaviors and preferences and how they are providing literacy to the child. (Snow et al, 1991). Identifying these emergent literacy elements and home literacy practices in the child helps inform the teacher about the child’s readiness to learn to read.

A three-year-old child has already acquired the range of tenses available to them in their home language. They are already able to use these tenses appropriately to retell a story (Slobin, 1990). Students lose the benefit of this ability when the teaching of reading at school shuts out the home language from the school. Grammatical structures available to the child in his or her home languages will not only affect what he or she is able to tell about in a story, as in how much agency or definiteness he or she can attribute to actions of characters, but will also affect how his or her understanding of Kiswahili and English evolve. Recourse to the home language in song and story will enhance the learning of those school languages.

Tabors and Snow (2004) use the term ‘at-risk’ to describe language minority children while making clear assertions about what elements a child needs in order to learn to read in a
language. The authors recognize the risk involved in teaching children to read first in a language they do not know. They insist that children need phonemic awareness and phonological representation, which they will access when deciphering print in the target language. They also need comprehensible and pleasurable texts in the target language that will keep them reading so they can continue developing reading skills. Tabors and Snow (2004) echo the National Research Council report finding that learning to read in a second language in which one is not yet proficient brings with it the hazard of reading problems (Snow, Burns & Griffin, 1998). Tabors and Snow (2004) point out that while Snow, Burns and Griffin (1998) warn of reading difficulties in the second language, they do not suggest that it will never work. The questions the authors engage are multiple: “How early in the process of first-language literacy development is it risk free to introduce second-language reading? …How much proficiency in a language is needed to safely introduce initial literacy instruction in that language?... “ (Tabors & Snow, 2004, p. 262). Using the U.S. situation as a reference point, Tabors and Snow (2004) ask questions about students whose first language is less common, such as Hmong or Haitian Kweyol, versus larger language groups, such as Spanish-speaking children. Literacy materials may not be as available for Hmong and Haitian Kweyol, and, if the parents of these children are literate, their literacy would more likely be in another language, such as Vietnamese or French.

The trajectory a language-minority child takes in a U.S. setting when thrust into an English early childhood school setting is viewed as the following: use of home language only; realization that a new language is being used, then moving into a nonverbal period in the new language; use of telegraphic (naming people and objects, alphabet, counting) and formulaic language (catch phrases such a hello, good-bye, I don’t know); finally moving into
productive language use in which they are trying sentence structure themselves (Tabors, 1997). Kenyan students would be going through a similar transition when arriving at preschool or elementary school classes. Essentially, in this model, all Kenyan students become language-minority children since they come to school to learn to read in a “mainstream language” (AED, 2009, p. 10) that none of them speak at home. Immigrant children in the U.S. are in an English as a second language (ESL) situation, which means that they are learning English while living in an English-speaking society. Kenyan children are not immigrants in Kenya, but are learning to read in English in a local-language-speaking society, so English as a foreign language (EFL) fits their situation. They are not immersed in an English-speaking society as are language minority students in the U.S. and this differences makes for disparate school and home inputs.

Tabors and Snow (2004) conclude that multiple pathways exist for supporting literacy in a second language. Some involve ongoing support for the child’s bilingualism and some focus only on literacy in English. The authors make three recommendations regardless of the literacy model used as school: Parents should be encouraged to maintain their first language for literacy activities at home. Teachers need to find out more about the language histories of the children, their home literacy experiences and the language(s) associated with those activities. Teachers need to assess children’s early literacy skills through formal and informal means. Children are bringing some skills to the process of learning to read and teachers need to know what they are and how to capitalize on them.

Cultural anthropology, cultural psychology, and child development literatures set alongside reading research and bilingual education findings about mother tongue in literacy development further buttress the need to engage mothers in research on issues around early
literacy formation. Cummins (2000) argues against assimilationist policies in North America that discourage students from maintaining their mother tongues. The message children get is that if they want to be accepted by the teacher and the society beyond their home, they must turn away from their home language and culture and take on sociocultural and linguistic parameters of the culture and language claiming majority or mainstream status. Cummins (2000) points out that any sound educator would and should build on the experience and knowledge children bring to the classroom and instruction would and should encourage children’s abilities and talents. When children’s language is ignored and disallowed, children are disconnected from parents and grandparents. This disconnection also ignores basic tenets of cognitivist instructional theory in which the child’s cognitive structure must be able to take in new knowledge. In short, learning to read first in a language one already knows will accelerate literacy in English because the ability to read transfers rapidly across languages (Krashen, 2003, 2004). Ignoring the home language in literacy learning not only disconnects children from their home contexts and early educators, but also contradicts cognitivist and constructivist instructional theory.

In addition, looking further into instructional theory specifically targeted at reading and bilingual literacy specifically, it is clear that reading is much more than a psycholinguistic set of steps. Reading is part of language, a situated action within the language (Gee, 2004). Early literacy is a socioculturally situated practice. Mothers, whether teachers, schools or curriculum recognize it or not, are integral in the sociocultural situation of language and literacy. Reading is a sociocognitive process that draws in oral vocabulary and early language abilities, which come directly from interaction with one’s mother in the primary languages of the home. So, this study engages with mothers for all of these reasons.
woven together: because women have been ignored by development approaches, because women have been ignored in their seminal role within African culture, which is that of motherhood, and because mothers are critical links for the child to both health and literacy.

How can this study move beyond the dichotomizing of mainstream versus marginal, and the resulting marginalization of learners within their own home country? The next section begins to construct a cultural model that will expand the current paradigm and accommodate critical sociocultural and sociolinguistic elements.

**Building a Cultural Model**

The Western development paradigm as described above and as illustrated in Western literacy intervention Neglects the culture that surrounds literacy and health. Culture is critically important as it structures the environment for a child’s development (Super & Harkness, 2002). Human development is a cultural process. Human development can only be understood within the cultural practices and circumstances of the child’s communities (Rogoff, 2003). The person-environment fit tells us that researchers and developers must understand the child’s context to be able to consider how to intervene in the child’s life (Lewin, 1951/1997). Culture is not only connected to language, it is language at some level as the cultural process unfolds around the child in the home language. The appropriate rate of reading is based on Western notions of which languages are needed in the early grades for learning to read and on a Western standard of speed that comes from children learning to read in their native language that they hear all around them. A cultural model for literacy would incorporate the cultural and linguistic processes of the child’s life. Instead of ignoring these given of culture and language in the child’s life, practitioners would build a model that engages them.
Resistance, Relevance, and Reading

Goodnow (1990) observes that aboriginal children in Australia resist literacy in English out of a conflict with their indigenous identity. Beyond the linguistic difficulty in the EFL setting Kenyan children are in, this type of resistance could be operating as well at a latent level in Kenya. Kenyan children are identified by literacy experts as struggling and deficient in reading levels according to international standards without recognizing that Kenyan children must shed the early development of a cognitive socialization and cultural identity formed at home with their mother to become steeped in school literacy from which their unschooled mother feels and is functionally separated. The reading delay is then cultural as well as linguistic and will persist if not recognized and addressed through a cultural model. By way of more mundane explanation and using terminology that educators employ readily: current literacy approaches are not culturally relevant. They result in a loss for the child because of the ways in which social identity affect what a child will or will not notice, learn or remember (Giles, 1977; Turner, 1987; Turner & Oakes, 1986).

Post-colonial Heritage and Minoritization

Ogbu’s (1990) contrasting of voluntary and involuntary minorities in the U.S. and their cultural models brought to school literacy suggests that, if applied to the Kenyan context, the involuntary nature of colonization and historical antecedents of the school system would contribute to lower literacy acquisition. In essence, the schools established in Kenya are creations of the British colonial government and however much ownership assumed by the Kenyan government with reforms made since independence, the fact remains that English was brought in by the British and Kiswahili, while structurally a Bantu language, is at the same time a foreign language for over 95% of Kenyans. The majority of parents,
especially mothers, do not have access to the child’s process of learning to read because they don’t have access to these languages. Kenyan children and parents interpret their school experiences through this cultural model. As seen in the previous section, the bilingual language debates in the U.S. also tell us that early grade children will not thrive in reading if cut off from their home language and if their parents are not able to take a role in their learning.

In the Western framework, the child is decontextualized. In addition, when the Western paradigm considers the parental situation, it is solely through the lens of socioeconomic status driving involvement and legitimates the modernization and human capital formation theories. The idea is that if SES could improve through education, then parents would be able to help and connect to the child’s education. This burden could be partially lifted and must at least be contested by recognizing that the parents’ ability to help the child learn to read and to be part of the child’s process of learning are what is critical. The child and parent need to be re-contextualized – Kenyan families’ culture and language are not factors that will disappear or be permanently changed into an English-based or European background through schooling.

Multilingual Contexts and Cultural Mediation

Multilingual, multiethnic contexts have to be not only recognized, but also viewed and used as strengths in interventions. Literature on reading instruction points to the need to build on home literacy skills when building school literacy. Comprehensive approaches that include “youth and family literacy, early child development (ECD), as well as health and nutrition interventions, could help to break a cycle of poverty that is fundamentally intergenerational in nature” (Nordtveit, 2008, p. 405). Using a cultural model as Ogbu
described that takes into account the historical antecedents of the condition of poverty takes Nordtveit’s programmatic model a step further. In Ogbu’s model, Kenyans have become (involuntary) immigrants into their own education system and are temporarily African, only waiting through their schooling to become European or Western. Kenyans live in their own birth country, but do not have home languages taught to them in their schools. The implicit idea is that Kenyans will become citizens of the colonizing language if they stay in school long enough. Bartlett’s (2007b) work on what literacy is and what literacy does requires instead that indigenous literacy practices and an ideological model of literacy be recognized and pursued.

**Language socialization and language education.** LeVine’s (2003) concept of studying the socialization of the child and what he calls the anthropology of educational processes gives further depth to the cultural model. LeVine makes a distinction between language socialization, which is learning that occurs at home and in social contexts before, outside of, or beyond the curriculum at school, and language education, which is learning through the curriculum in the classroom at school. This distinction is important to make in a setting in which language socialization occurs in a different language (home language) than does language education (school language). To recognize this distinction is to understand the elimination of the mother’s critical role in the child’s school literacy building and the disconnection between the literacy socialization from home and the literacy education at school. LeVine’s concept of cultural mediation refers to how parents filter and select the actions they choose to take on social and economic code-teaching through “culturally formulated goals” (LeVine, 2003, p. 73). Culture, therefore, determines parental investment
in their children. Parents do what they deem necessary to advance their children’s lives according to the “standards of their communities” (p. 73).

**Environments of the child.** LeVine’s (2003) cultural mediation principle is closely tied to environmental factors, which he sees as driving cultural formulas. This study considers the environment to refer to the home environment broadly, including the physical or natural environment. Indulgence in infancy and obedience in child rearing represent two adaptive behaviors designed to either ensure the survival of the child physically or economically (LeVine, 2003). For this study, LeVine’s research encourages me to seek out “folk wisdom” (p. 99) from within a given culture, not only to understand the childrearing practices better, but also to learn from these practices and avoid simply purveying middle-class American practices.

Bronfenbrenner (1989) examines the series of systems surrounding the child in context. The ecology of a child’s life is the series of systems within the culture the child is growing up in. The microcontext of the home represents the first layer of context to unpack in order to understand the child in context. The mesocontext of how the school and home interact, two sites of importance in the child’s life that have interactions with one another, is the second layer to address. Neither of these contexts can be studied without building a cultural model within which the child and microcontext and mesocontext exist. The exploration of culture would fall into the exosystem in the child’s ecology, while it also undergirds micro and mesocontexts. The global culture of development and the ways in which it dictates and determines the child’s experience would form the macrosystem. The investigation of the home-school connection comes with this set of systems in mind and Bronfenbrenner’s exhortation to consider the child’s development in context. This ecological
sensibility contests the Western development approach at the ground level. Ignoring the contexts in which the child functions and the culture that surrounds and makes up the givens of the child’s life is impossible when one’s goal is to engage the child’s literacy formation.

Figure 3.3: Child within Series of Contexts (Adapted from Bronfenbrenner, 1989).

**Child in family environments.** Goldenberg, Gallimore and Reese (2005) use “ecocultural niche” (p. 25) to describe the influences on a child’s development that are rooted in family life routines, which are in turn set in a surrounding ecological and cultural niche. The routines of family life in sub-Saharan Africa necessarily encompass certain environmentally driven practices, such as finding and fetching water and firewood, sweeping the adobe floor in a rural household, cooking on a fire, and going to a “bush toilet” (going to the bathroom under a tree). All of these elements of family life have health ramifications and
the ways in which mothers handle these and how they describe keeping a healthy home and a healthy child inform the understanding of home-based health impacts on children’s schooling and education.

**Examining the Role of the Mother**

As discussed above, investigating health involves the home and thus, in turn, the child’s mother. Health in the home, namely nutrition and disease, care of children, and illness control involve many processes and tasks held by mothers in African settings. Food, water, cooking fuel, bednets, immunizations, cleanliness of the home and the child: these are all preoccupations and responsibilities of the African mother. Since mothers are responsible for the tasks related to primary health practices in the home, it makes sense to talk with mothers to find out more. As discussed on pages 31-33 and pages 77-78, development discourse has increasingly targeted and prioritized the engagement of women. Western development policy has stressed women’s empowerment as critical for incomes increasing and lives improving (SIDA, 2009; USAID, 2006b). Gender analyses are now required for USAID strategic plans and assistance objectives (USAID, 2010). Nevertheless, engagement of women on literacy has not recognized the deep educational dilemma that literacy poses for child, teacher and mother. First, if homes are not engaged on the issue of health for literacy, women’s challenges in raising healthy children who can attend and learn at school are not being addressed. Second, if homes are not engaged on the issue of learning to read for literacy, women’s challenges in raising literate children who can read in two non-home languages are not being addressed.

Because of the primacy of the mother in an African child’s life, the exploration of cultural practices as voiced by mothers drives the theoretical approach to a greater depth and
uncovers what is seen and unseen. What is seen may be the appearance of the child and the quantifiable scores and outcomes. What is unseen is a whole system of living and rearing that happens in the home and unfolds from the African mother’s conception of childrearing and what is important in the child’s life. The mother is the caregiver from birth with constant physical attachment to the infant, with perhaps an older child sometimes taking on a caregiver role as well. The mother’s role of providing food is central in the culture. She cultivates, harvests and prepares the food. Women are the “day-to-day heads of household” (Super & Harkness, 1992, p. 445) as fathers tend to keep a physical distance from the mother and children in sleeping and eating, and may acquire more wives who will share time with him. The father often works away from the home while the mother marshals the children in their daily tasks. The father may then spend his evenings drinking palm wine or another drink with friends (Super & Harkness, 1992).

Reversing the way the Western paradigm views mothers by getting out of the deficit thinking model (Valencia, 1997) that characterizes Western readings of third world women (Mohanty, 1991) and shapes the way educational reformists view children’s homes would help us build dialogue and improve interventions. Deficit thinking does not allow us to see the sources of power and the elements on which to build. While the gender structure (Risman, 2004) in developing countries may be imbalanced in observable ways, literature also points to the power of motherhood as the primary source of recognizable power and authority for women (Nzegwu, 2004). Mothers provide care for children and their presence and role in the child’s life is central to the child’s survival and upbringing. African feminist descriptors of motherhood illustrate the lifeblood that is the mother in the African family. They are working moms fulfilling both reproductive and productive roles, an element
ignored by Western development approaches until the 1970s and 80s saw the beginning of the women in development discourse. The child-mother relationship within the family is primary and more culturally unbreakable than the husband-wife relationship (Oyewumi, 2003). The bond with mother is also what ties the siblings together. The familial connections are inculcated in the children as a value greater than financial wealth (Nzegwu, 2004). The importance of the family and its work as a functioning unit replace the drive for capitalist gain in African feminist theory. In fact, the point of the argument is that the colonial drive for capitalism and labor arrangements to support it disrupted the most important construct in African society, which was the family unit with its value on motherhood and its function as an economic force in which all members participated.

In this area, the study approach is inspired by the ways in which African feminist perspectives differ from Western feminist viewpoints on women’s issues and women in third world contexts and how this critique can inform development approaches. Western feminism has focused on the woman as an individual and advocated the need for women to be viewed aside from their wife and mother roles in developing country settings. Because “marriage is universal” (Super & Harkness, 1992, p. 444), the insistence on seeing a woman as an individual through a Western prism ignores the power that comes to women through this critical aspect of their lives: marrying and bearing children. The exploration of women’s roles and perspectives will also consider human development frameworks on human capabilities (Sen, 1999; Nussbaum, 2003; Nussbaum, 2002) that ask questions about women’s lives in sub-Saharan contexts.
Mothering, Literacy, and Health

In children’s literacy, deficit model thinking leads to flawed conclusions. Schooling and literacy interventions often do not look at literacies that are created in the home language, but rather only the literacies the schools require in second and third languages. Donors and implementing organizations ask again and again how to improve the child’s literacy levels in those official languages without looking at what the child brings from his or her home language proficiency and how to recognize and build on it. These two points of strength within the culture – mothers and home literacy – are linked. Parental literacy is critical to children’s literacy (Chudgar, 2009). More educated parents make greater investments in their children’s education. The mother’s education level has a bigger effect than the father’s (Brown, 2006; Kong, 2008; Zhang, Kao & Hannum, 2007). Maternal language and childrearing have an impact on bilingual children’s vocabulary and emergent literacy (Hammer, Davison, Lawrence & Miccio, 2009). Mothers, as the primary caregivers to the children, provide the child with linguistic interaction that builds the child’s receptive and productive vocabularies in the home language. Mothers who are illiterate in the official languages are still fully conversant in their own home languages. Tapping into home literacy skills can inform school literacy practices. Mothers also can be brought into the equation at school so that they continue to be actors in their child’s languages formation and not cut off from it.

The mother as the primary caregiver is the critical literacy link for the child. Children gain early literacy from their mothers through their formation of receptive vocabulary in the home language and then productive language in the home language. At the same time, the educational impact that literacy has on women shows that becoming proficient in a register of
speech that is different from daily conversation and in which written discourse is involved (Snow, 1990; Valdes & Geoffrion-Vinci, 1998) benefits women and their children. Literacy has increased child survival by enabling women to comprehend public health messages (LeVine, LeVine & Schnell, 2001). Schooling and classroom interaction have inculcated an engagement in a teaching role with her children and student role with authoritative figures, such as doctors or nurses (Heath, 1986; Cazden, 1988; LeVine, 2003).

Investigations into the home and the home-school connections lead to the mother’s literacy. Parental involvement in their child’s process of learning to read leads to reading success. Latino children’s literacy was reinforced by building on the home connection to the school to improve reading progress (Goldenberg, Gallimore and Reese, 2005). In the study, the mother taking classes correlated with kindergarten achievement of her child. Parent involvement is critical to children’s literacy achievement, but this training must be done in a sustained way. A cultural model of literacy development must be elaborated with reading proficiency shown to emerge with continued contact with texts, an activity that children partake in each day rather than an exhortation to read aloud to children. Adult literacy is critical for formation of children’s literacy (Chudgar, 2009)

Since mothers are often considered illiterate by school-based measures in African contexts, their education of the child in the home is bifurcated from the school’s education of the child. A mother who speaks the home language and does not speak the languages used at school will not be able to speak with the child in the school language and if she is not literate in either of the school languages, she will not be able to read to or with the child in either language. Eliminating these skills by ignoring them in the child and the mother’s role since she is illiterate (in the school languages) does a disservice to the child and the mother. Egbo
(2000) notes that unschooled mothers report being just as interested in their children getting an education, but are less effective in providing support to their children in their education. Robinson-Pant (2004) points out that in literacy discourse and policy emanating from Western sensibilities, the main reason given for promoting women’s literacy is to improve her role as a mother, so that mothers are able to follow their children’s school work and may become able to help their children. Literacy programs for women as a human right and for individual development is rarely heard, argues Robinson-Pant. She also cites studies commissioned by the World Bank to justify their direction on women’s education and warns against this set of arguments, which do not question the type of education or whether the illiterate woman could be a cause rather than a symptom of underdevelopment.

From a childrearing angle, LeVine contrasts Kenyan (Gusii ethnic group) and American (Boston middle-class) mother-infant communication, noting the differences in how much talking to the infant occurs and how much time the infant spends isolated and connected physically to her mother (LeVine, 2003, p. 220). These observations pertain to our interest in mothering and literacy in that patterns of childrearing make a difference in the creation of receptive and productive vocabulary (Heath, 1983). Since this study’s interest is in literacy creation of primary school students, it is not enough to make this observation and move on. As mothers’ expectations of their child and convictions about what the child needs to know to succeed economically change and shift, her childrearing practices adapt (LeVine, 2003). This is how LeVine argues they were created in the first place. This study sets out to discover how her childrearing and her understanding of health risks inherent in the child’s environment are best dealt with. How does she understand her role in creating a healthy environment, a secure and safe home for the child, and one in which literacy skills can grow?
Also, if she becomes integral to the literacy processes for the child and is drawn into the school efforts for reading, how will her home literacy behaviors take on a renewed importance to her?

**Western Feminism and Western Development**

Historically, first-wave feminism was just beginning as the colonial era emerged. The onset of colonialism in Africa in the late 19th and early 20th centuries coincided with the women’s suffrage movement in Europe. What these simultaneous actions in history created for women and cultures in African contexts proved critical to understanding the ways in which Western development and feminist theory approach women and development. The colonial project was a Western, masculine exercise in which the European powers encountered cultures in which they instituted economic systems, legal systems, and family structures that would mimic and mirror European systems. In East Africa, while British officials were undertaking this colonial task, in England, police were arresting and force-feeding suffragists and the government was turning a deaf ear to fervent calls for women’s right to vote. Against the backdrop of these culture wars in Britain, the androcentric and ethnocentric aspects of the colonial era take on a cross-cultural depth.

The impulse to keep women within certain constraints and roles conveyed from Europe to the colonial reading of African family structures. The assumption was that the European nuclear family unit was the norm, to which African families should aspire, or to which Africans would be told and made to aspire through manipulation of the legal and economic systems. When colonists looked at African family units, they saw women bearing and caring for children, working in the home, cooking, and doing many types of domestic labor associated with female tasks in Europe. From this reading, the colonial mindset would
find it logical to encourage this separation of women’s tasks and roles from men’s and build even more authority into the male position in the family so that African families could attain this ethnocentric and androcentric norm of the European nuclear family. As European governments were confining women’s rights within historical ‘norms’ in Europe, colonial governments were reinforcing the authority and primacy of the man of the house through their legal systems, which were laid atop often already patriarchal local systems. Divorce and family law instituted in colonial courts reflected double standards for women in most African colonies; women often could be punished by divorce or imprisonment for adultery, while a husband’s adultery was not even grounds for divorce.

What was unseen to or misread by European, colonial eyes was the African extended family structure and its productive as well as reproductive capacity. The colonial era disrupted the labor arrangements linked to the African family structure in which women generally lived in extended family units with their husband’s family, raising children and running their household, while also taking a large role in agricultural production (Courville, 1993). In a polygynous household, wives controlled their own income generation often not only through their agricultural activity within the family, but in market commodity selling and cottage industries out of their homes. The European nuclear family of husband-wife and children did not square with the reproductive and productive aspects of the African family unit. Increasingly, under the colonial regimes, men would travel to find labor outside the home while women were left to shoulder increasing burdens at home with the disruption of family labor arrangements (Bailey, Leo-Rhynie, & Morris, 2000). Women received no opportunity for even the minimal formal education men were offered and the economic and
familial unit’s break-up under capitalism brought increasing pressure on women to fulfill all roles in the absence of the men.

Second-wave liberal feminism has likewise been shaped by its ties to modernization theory. Its approaches and theorizing dovetail with modernization theory and the two have reinforced one another in development. The 1970s brought an awakening to the lack of inclusion of women in development projects. There was alarm that women’s lives were not improving due to development efforts and a call for including women in development. The liberal feminist movement in the U.S., begun in earnest with Friedan in the 50s and Steinem in the 60s, focused on the state as a place to exert pressure and gain rights for women. The Percy Amendment in 1973 in the U.S. Congress required that gender sensitivity be included in development projects. An important parallel with modernization theory is the importance of the individual in liberal feminism. This aspect has led many theorists to call for a recognition of women as individuals separate from their mother and wife roles. Liberal feminists continue to see this element as a prerequisite for achieving full human rights for women in developing countries. The ‘generic human’ thesis has promoted a sense of playing a man’s game like a man without needing to express one’s uniquely female capabilities, such as pregnancy and childbirth (de Beauvoir, 1949/2009; Arnfred, 2002). Liberal feminism has sprung from a Western, white, middle class perspective with close ties to the hegemonic Western masculine approaches that it came of age fighting. Strongly tied to its standpoint, liberal feminism has historically overlooked the intersections of gender with race and class in social problems.

Three overarching trends have characterized development approaches for women. The first one, WID (Women in Development), is closely tied to modernization theory and to
liberal feminist readings of women in developing countries. The second trend, WAD (Women and Development), came from a neo-marxist response to WID and to liberal feminist orthodoxy. The third trend, GAD (Gender and Development), could be termed a post-structuralist response to WID and WAD (Rathgeber, 1989). It is post-structuralist in its admonition to look at the deeper structures underlying women’s condition. GAD holds that it is not enough to make gains on an individual level or even on a group level, but that if deeper structures of politics and social institutions are not also addressed, then the prevailing gender structure will continue to dominate in spite of gains some women make. GAD advocates examining and acting on women’s material conditions and patriarchal structures so as to achieve greater gains for women and for development overall. Unlike WID, which is largely aligned with liberal feminist thought, GAD has links to radical feminism and socialist feminism in its call for examining and acting to address gender structures within societies.

**African Feminisms and Gender Perspectives**

Gender roles in Africa in the 21st century as described by Oheneba-Sakyi and Takyi (2006) represent a distribution of labor in which men, as head of household, are expected to provide shelter and financial support, and women are responsible for household needs, such as cleaning, washing, cooking, and taking care of dependents. African women are also employed often in farming, fishing, weaving, pottery, and trading either on their own or with others. Women need to secure sources of income when money does not come in due to husbands’ death, illness, divorce or unexpected polygyny. Segregated gender roles date to pre-colonial days, but colonialism and Islam and Christianity reinforced the segregation as well as unequal access to schooling. Some argue that modernization and urbanization in Africa have led to an increase in marriage dissolution. Female-headed households have
increased. Already their cultural role was defined in carrying out the critical duties around food and child care in the household, but with a decrease in husbands carrying out their cultural role, women bear the brunt of providing all support and daily sustenance to their child.

African feminist perspectives depart from Western liberal feminism in key areas. Rather than needing to fight for the right to work, African feminists assert that they have always worked and that their agricultural labor is the mainstay of the African economy. They advocate for recognition of their work and its integral role in local and national economies. As for the right to education, Nussbaum (2003) makes the point that women in developing countries fight for the right for basic education themselves, that this struggle does not just get thrust upon them from Western women. African feminists may agree with her assertion about sharing the struggle for education, but would be interested in examining the goals and principles of education and how the system and schooling environments are set up, what the curriculum is preparing children to do and how it is delivered in the classroom, and how girls will be prepared to be mothers and take on other occupations. The education system itself is a Western construct and needs to be examined and altered for African contexts (Bunyi, 1999).

African feminists, who take pride in their unique contributions to family and community, primarily as mothers but also as members of kinship networks and community groups, depart from the individualism of Western feminism. Women are not separate from the institutions they nurture in African feminist thought and this location within familial roles is precisely where African women claim their human rights. While some feminisms may advocate women’s rights as individuals separate from their socioculturally and biologically determined roles (Arnfred, 2002, Beauvoir, 1949/2009, Stromquist, 1990), African feminists
do not tend to call for a separation of women from their roles as mother and wife in order to claim full status as human beings and to be accorded human rights. African women instead claim human rights from within those roles as mother and wife. Women should not have to shed their particularities as human beings in order to claim their humanity. African feminists thus claim women’s humanness and humanity precisely from their womanhood, not in spite of it.

This point is related to the African feminist refusal of the ‘generic human’ thesis. Rather than calling for an unburdening of female bodily capabilities such as pregnancy and childbirth (Beauvoir, 1949/2009, Arnfred, 2002), African feminists embrace uniquely female capacities and the specific responsibilities of being a woman, such as pregnancy and mothering. African women do not want to be like men, but rather be like women in order to claim their own human experience, which holds status and reverence in African societies. An African feminist perspective prioritizes the essential importance of children and their intertwining with mothers, embodying the pro-natal aspect of African cultures (Zeitlin, 1996).

Finally, Western liberal feminists have assumed the predominance of gender as the instrument of domination in society - both in Western societies and in non-Western societies (Arnfred, 2002; Oyewumi, 2002, 2003). African feminists question this principle, pointing out that intersections with class and race and variations of categories of difference complicate or perhaps predominate above gender in the forces of marginalization and oppression. African feminists can point to the colonial project as an example of racial and ethnic marginalization just as much as gender marginalization. The parameters of these categories
and how they intersect and interact needs to be addressed according to African feminist thought.

**Synthesis of the Literature**

By categorizing positions on literacy acquisition in developing country settings into prevailing paradigm and indigenous, contesting or alternative viewpoints such as those of Ntarangwi (2003), Bunyi (1999), Djite (2008), Trudell (2009), Bartlett (2007a; 2007b), Robinson-Pant (2004), Street (2001), Goodnow (1990), Levine (2003), Ogbu (1990), and others, the study is able to consider these positions, with their areas of overlap and difference, before examining the reading data and exploring the focus group and interview data. The methods and analysis of the EGRA data are necessarily steeped in the Western position, but the study also unpacks the problems inherent in only viewing data and populations using a post-positivistic approach. For example, suggesting that the home and the school are deficient as a result of testing reading using only a psycholinguistic measure presents problems. Packaged variables (Whiting, 1976) employed in or ignored by such measures can be investigated further by seeking to unpack the processes that underlie variables such as socioeconomic status and gender.

A study such as EGRA gives us indicators, but does not give us all the indicators needed. The results from the data do not tell how students function in their own home language. If students are participating fully in their maternal language in their homes, then their homes cannot be considered deficient, for example. This study utilizes traditional Western indicators and pursues statistical analysis techniques, while also asking questions about orthodoxies and alternatives in regards to education systems and measures. The study advocates a proliferation of narratives and uses qualitative research methods to expand on
and explain the quantitative reading data by exploring the lives of mothers and their reflections on their children’s health and literacy. In critiquing the Western development paradigm, the concept of socialization of cognition describes how the Western context-embedded perspective is implanted on the Kenyan context and can result in the negation of the Kenyan child’s socialization of cognition, which leads to schooling that demands a rupture with cultural and linguistic identity.

The framework for collecting and analyzing data was generated from a synthesis of the models and critiques outlined in Chapter 3. This approach restores what is missing from the Western paradigm without discarding the paradigm, advocating a shift toward a more complete paradigm that accommodates critical, ignored elements, unpacks loaded assumptions, and investigates the processes that underlie packaged variables such as socioeconomic status and gender (Whiting, 1976). Kuhn’s paradigm theory says that you never get it right, but remain always open to rethinking (Morgan 2007/2008). A flaw in a paradigm is when it is a non-moving theory; it is used across time, across place and across sector. Instead, the paradigm needs to emanate from within the population’s culture. This chapter has offered a critique of the current model with implications for a new approach. For the qualitative research, grounded theory (Charmaz, 2006; Hennink, 2007; Kearney, 2010) is used, which means that rather than knowing the answers going in, the answers emerged as the research unfolded. The research moves toward a definition of literacy that goes beyond learning the mechanics of reading. Literacy reaches into language, culture, health, and intersects the child’s life within every context from home to school and beyond. The next chapter focuses on the methodologies that propel this research agenda forward. Chapters 5, 6,
and 7 then display findings and discussion. Chapter 8 contains new theoretical models and practical implications for policy and practice.
CHAPTER 4: RESEARCH METHODS

The overarching worldview of this study is pragmatism with an emphasis on "shared meanings" and "joint action" (Morgan, 2008/2007, p. 53). A pragmatist worldview asks that the theory in use, which in this study is the prevailing paradigm for literacy development shaped by human capital formation theory, be checked by inquiry into the people and conditions it affects. The shared meanings of health and literacy should reflect how these terms and ideas are understood and acted on among the people being addressed within the literacy theory and practice.

The literacy models being used should be built continuously through this kind of shared reflection and tinkering of all involved parties, but especially recipients of literacy interventions, who tend to be acted on by donors and implementers rather than be actors themselves in building theory and practice. Thus, this study’s interests revolve around quantitative and qualitative research methods communicating with one another, instead of standing in opposition to one another. In addition, the worldviews engaged in each phase of this study – etic and emic - also do not set out to stand in opposition, but rather to build one from the other and to answer questions between one another. The overarching research design is explanatory sequential design in which quantitative data analysis is followed by qualitative data collection and analysis that examines causal factors assumed in the paradigm that drove the literacy intervention and quantitative reading dataset.
The definition of paradigm used in this study was preferred first by Thomas Kuhn: a paradigm is shared beliefs among a community of researchers or thinkers in a specialty area (Morgan, 2008/2007). The paradigm shift within the study not only encompasses research methods, but also reaches deeply into the paradigms of education in development entrenched in interventions and programs, which tend to contain a research element, often in evaluation of the program’s effectiveness.

The first phase of the study drew from an accessible pre-collected quantitative dataset. That phase was characterized by an etic approach in which outsider inquiry occurred through a quasi-experimental design and data collection was done by outside assessors. While this approach is critiqued in this study, it is important to highlight that the dataset was useful for framing the literacy situation in Malindi District and testing basic health and student background questions in relation to reading achievement variables. This type of postpositivistic research approach (Phillips & Burbules, 2000) characterizes a paradigm termed the dominant Western development paradigm. Not only are etic research approaches consistent with this paradigm, but a system of beliefs and knowledge described in Chapter 3 underlie the paradigm (see pages 25 to 37).

The issue of early literacy is the topic within the dominant Western development paradigm taken up in this study. An orthodoxy about early literacy in sub-Saharan settings is inspired by the first discourse Trudell (2009) describes, which is an economics-driven or ‘World Bank’ discourse. It may include a list of reasons for poor levels of literacy that remain mired in deficit thinking or a deficiencies model in which the problem lies within the non-literate people themselves. Meanwhile, structural inequality and, in this case, the established post-colonial educational structure, is held largely blameless and unexamined.
The dominant Western development paradigm maintains an orthodoxy, thought to be contested, but still enveloped in the paradigmatic constraints, about women in development. The role of women in the development process has evolved since the 1970s, but the level of participation and connection by women to their children’s literacy has not improved significantly as a result of this evolution in thought about women as participants in their own economic and social development. Robinson-Pant (2008) addresses the need for mixed methods in literacy studies and policy-making, pointing out that the dominant economics-driven development paradigm is well served by the questions broached within a qualitative research pursuit.

Thus, to follow up on the data analyzed from the reading assessment, the second phase of the study was designed as a qualitative, interpretive inquiry, which took an emic approach. Inhabitants of the study sites, who were mothers of second grade students involved in the quantitative portion of the study, talked with researchers in focus groups. The research team also collected demographic data from each focus group participant in one-on-one interviews. This phase included interviews between the head teacher at each research site and me, the lead researcher for the study. Field notes were recorded during visits to the research sites and interviews were conducted with local government ministry officers, a quasi-governmental organization, and a non-governmental organization involved in the initial EGRA study. Figure 4.1 contains a visual model of the study design.
The qualitative phase took a constructivist approach (Creswell & Plano Clark, 2007) with a post-foundational/African feminist sensibility. The “subjective” and emic nature of this phase of the research called on local inhabitants of the research population to reflect on the issues involved in the research problem.

The overarching research questions for the mixed methods study included:

1. From a primary school reading dataset in Malindi District of coastal Kenya (Kenya Early Grade Reading Assessment-EGRA), among second-grade students, what
variables are correlated with reading growth from pre- to post-treatment testing and which schools demonstrated high, medium and no growth in reading scores?

2. From qualitative focus groups and interviews, how do mothers’ perspectives on primary students’ health and literacy outcomes inform the salient factors in the EGRA dataset?

3. Given the answers to questions 1 and 2, what are the determinants of literacy formation that are most promising and most modifiable?

4. What are the main components of the literacy intervention model used in coastal Kenya, what is missing, what can be added and what areas of change are recommended for curriculum, teacher training and stakeholder intervention?

**Study Sites**

Chapter 2 provides an overview of Kenyan context while Chapter 6 discusses the study sites in detail. This section of Chapter 4 provides a map (Figure 4.2 below) and brief introduction to the study sites for the qualitative phase of research in Malindi District of the Coast Province of Kenya. The quantitative data was collected in 40 schools in 5 geographic zones of Malindi District while qualitative data was collected in three schools, which were all treatment schools in the EGRA study. The first site was in a coastal town north of Malindi town on the Indian Ocean, which showed no growth in reading scores. Over an hour northwest of Malindi town, the second site demonstrated significant growth in reading scores. The third site, west of Malindi town and to the west of the Jilore Forest, showed moderate growth on reading scores.
Methods

This study examined reading scores in 40 primary schools in Malindi District in coastal Kenya, then explored health factors that affect school literacy formation for early primary students in three of those Malindi District schools. Using an explanatory mixed methods design, I collected qualitative data after analysis of quantitative reading data in order to explore health as a literacy constraint. The reading assessment data had been collected from 400 primary school students pre-treatment and 400 post-treatment in both treatment and control schools in Malindi District, Kenya through a USAID-funded initiative that was carried out by RTI International and local partners in Kenya. The treatment was teacher training in reading instruction practices for first and second grade teachers. The student assessment tested reading achievement growth at each school. Because health factors were not considered in the reading assessment, but are commonly cited as constraints on literacy
formation in developing country contexts (Greaney, 1996), the qualitative phase was conducted to explore health and how mothers described its role and impact in the home, on the child, and on the child’s schooling and reading. In this explanatory follow-up, health factors were explored with mothers of EGRA students at three EGRA treatment primary school sites. The reason for the explanatory follow-up was to help explain and build upon initial quantitative results. Exploration of health factors included health issues in the community for both children and adults, actions taken by mothers about health issues including perceived access to health care, meanings of health, and the impact of health issues on their second grade child’s schooling including attendance, cognition, and literacy learning.

**Quantitative Methods Used in USAID’s EGRA Study**

USAID funded a study that was implemented by RTI and local partners in Malindi District on the coast of Kenya in 20 treatment schools and 20 control schools for a total of 800 cases in pre- and post-treatment samples collected in July 2007 and November 2008. The treatment consisted of teacher training that included a set of lessons in reading, focusing on phonological awareness (pre-reading skills, including listening and sound sensitivity), alphabetic principle (relationship of print to sound), vocabulary, fluency, and comprehension. Teachers received specific, lesson-by-lesson, week-by-week, lesson plans in a scope and sequence for the school year in both Kiswahili and English, the two languages used in schooling in coastal Kenya. Grade 1 and 2 teachers attended a five-day training on how to use these lessons. Teachers agreed to teach three reading lessons per subject each week in place of language instruction. The treatment school teachers received training, lesson plans, and visits from supervisors and teacher trainers. For pre and post assessment of students, only
second grade teachers’ students were tested even though Grade 1 teachers also received the training.

**Assessment instruments.** Kenyan assessors identified by RTI’s local partners sampled 10 students randomly at each school site in June 2007 for the pre-treatment assessment and again in November 2008 for the post-treatment assessment. The assessment instruments included sections on background information about the child, letter recognition, word recognition, passage reading, comprehension, and phoneme segmentation. The post-treatment tests contained a different text passage so as to avoid repeating the same passage from pre to post, but the instruments followed the same format and order of components at both test periods. Appendix A contains instruments used for the pre-treatment assessment in English and Kiswahili.

**Quantitative Methods Used in Secondary Data Analysis**

Part 1 of the mixed methods study involved secondary data analysis of the reading achievement data described above. Questions posed in Part 2 of the study, which was field-based qualitative research, were informed by the analysis done during Part 1. The basic health questions included in the November 2008 data collection included: Did you eat breakfast this morning?; How many meals do you usually eat a day?; Do you usually wash your hands before eating a meal?; Does your stomach or head hurt most days, some days, very few days or never?; Is anyone in your household ill most or all of the time?; Do you feel that you have learned to read at school?; and Do you read books or magazines at home most days, some days, very few days or never?. These questions were added to the post-treatment assessment to test whether these basic health-related questions would provide early clues about health profiles of the student sample.
Quantitative Research Questions

The secondary data analysis was guided by several research questions that would provide depth in viewing the reading dataset and focus in entering the qualitative phase. Part 1 of the study focused on the following three tasks:

1. To test whether a series of independent variables affected reading outcomes, regresional analyses were conducted.

2. To evaluate reading progress and whether the teacher training intervention had an effect, exact sample matching was used so that a student from the baseline could be matched on the covariates with a student in the post-intervention sample. Since the samples of students in the EGRA baseline and post-intervention were different groups of students, sample matching was needed to correct this sampling error.

3. To identify schools in which to sample mothers of second grade students for the qualitative portion of the study to come after this secondary data analysis, the schools were rank-ordered according to growth from baseline to post-intervention and chose a high-growth, moderate-growth and low- or no-growth primary school for a total of three primary school sites from the treatment schools for the qualitative study.

Qualitative Methods and Research Questions

Part 2 of the mixed methods study involved face-to-face, on-site data collection through focus groups and one-on-one demographic interviews with mothers of students in Malindi District schools as well as observations at study sites, field notes, photographs, and interviews with head teachers and local stakeholders. Part 1 findings informed the questions posed during Part 2’s focus groups. The purpose of Part 2 was to explore health themes as they influenced reading achievement with mothers from three primary schools in Malindi.
District of Kenya. The participants included 36 mothers chosen through purposive random sampling from three schools in the Malindi District EGRA reading study. In light of the findings in the Part 1, all three schools chosen for Part 2 were treatment schools. Given that an effect was found from the teacher training intervention as well as the limited amount of time for field research, three treatment schools and no control schools were chosen for the qualitative phase in order to explore how health may have constrained the treatment effect. The qualitative phase used focus groups to pose open-ended questions about health and perceptions of health to mothers about their second graders in the home and how mothers perceived their second graders’ reading achievement in relation to health factors. A demographic questionnaire was also used in one-on-one interview format with focus group participants. The research literature and themes arising in the initial focus group informed the questions included in the questionnaire. The responses rounded out information that may not have emerged in the focus groups, such as health indicators, an asset index, level of education, and maternal reading status.

This qualitative focus group approach brought mothers into the data collection process. Bloom (2005) suggests considering whose health is critical in children’s educational outcomes and offers that the mother’s physical and mental health should be examined before, during and after pregnancy as well as the young child’s nutrition and overall health. Bloom also states that qualitative studies that elicit more information on why and how people act represent useful complements to quantitative studies (2005). Furthermore, mothers are critical for the building of a child’s literacy skills, especially bilingual children (Hammer, Davison, Lawrence & Miccio, 2009). Mothers are the builders of health practices in the home for the child, from growing and preparing the food to cleaning and washing the home
and the child (LeVine, 2003; Omolewa, 2007). Especially in rural areas of developing countries, mothers have been shown to be critical factors in increasing the child’s health and reading outcomes depending on how much education they have achieved (Brown, 2006; Kong, 2008; Zhang, Kao & Hannum, 2007). Strengthening home support for literacy also proves critical for reducing the urban-rural literacy gap in Africa (Zhang, 2006). In short, when wanting to uncover and expand on health status as it affects a child’s reading achievement, the child’s mother is the key source of information.

Scholars of African contexts have made the case for the applicability and usefulness of qualitative research methods in Africa (Brock-Utne, 1996; Vulliamy, 2004). In addition, quantitative data already exists on reading and discrete educational outcomes as seen in the RTI/USAID dataset used in Part 1 of this study. Another quantitative survey research effort would duplicate results rather than deepen understanding of what lies beneath the quantitative findings. A mixed methods approach was employed, using quantitative data as an initial frame, but embarking on qualitative discovery as well so that the research can “explain the world more from the bottom up and less from the top down” (Weber, 2007, p. 298) by investigating contextually specific social constructions of health. Qualitative methods allowed for exploration of perceptions about health in the home and how these critical factors in a child’s life affect the schooling experience and literacy outcomes.

The research questions that guided Part 2 of the study included:

1. How might health factors in the home influence school attendance and school achievement?
2. How do mothers perceive their role in the child’s health?
3. How do mothers perceive the school’s role in the child’s health?
4. How might sickness in the home affect the child’s care structure in the home?

5. What do mothers prioritize in the home for health and education? 5.a. What do they perceive to be the health issues in the home and how do they deal with them? 5.b. What do they perceive to be educational issues in the home and how do they deal with them?

6. How do mothers of early primary students perceive reading?

Data

For the secondary data analysis contained in phase 1 of this study, the sample included 800 second-grade students across 40 schools in Malindi District of the Coast Province of Kenya. Half of the sample was made up of students from schools that received a teacher training program to improve reading instruction methods while half of these schools did not receive the treatment. The students were split evenly male and female and indicated a variety of home languages. The students’ socioeconomic status was not investigated in the data, but considered low a priori, and the majority of the sample did not speak either school language at home: Kiswahili or English. As a result, most of the students were learning to read in second and third languages at school.

The quantitative data included: questionnaire ID, division, zone and school name, school type (control or treatment), student age, student gender, pre-school attendance, home language, homework assistance, availability of reading material at home, radio listening at home, and TV watching at home. The data also include 9 reading scores in Kiswahili and English: # of correct letters in Kiswahili per minute, # of correct words in Kiswahili in a disconnected text per minute, # of correct words in Kiswahili in a connected text per minute, # of correct answers to comprehension questions in Kiswahili, # of correct letters in English
per minute, # of correct words in English in disconnected text per minute, # of correct words in English in a connected text per minute, # of correct answers to comprehension questions in English, and # of correctly identified phonemes in English.

For phase 2, the sample of volunteer mothers represented the student population of each school. Mothers’ ages generally spanned from 18 to 40, but were not recorded with participant data. Participants were only required to be mothers of an early grade student at one of the three schools that agreed to be in the study. Participants’ students were in second grade. Mothers were generally from one of two ethnolinguistic groups, either Mijikenda/Kigiriama native speakers or Swahili/Kiswahili native speakers. Eight respondents reported having some English reading skills. The level of Kiswahili was low among non-Swahili mothers, with only five of those 25 respondents reporting having some Kiswahili reading skills. Only six respondents reported being able to read in Kigiriama. To accommodate the language diversity, the handouts for focus group participants and recruitment scripts were provided in English and Kiswahili. If participants took the form home after the session, then a literate household member could read the handout in Kiswahili or English and share it with the participant if she wished to review it. The facilitator also read the consent form in Kiswahili and Kigiriama to gain oral consent from the participants. Demographic questionnaires were prepared in Kiswahili and Kigiriama, with all questions posed orally in a one-on-one format in Kigiriama or Kiswahili depending on the participant.

**Existing Data Sources**

Part 1 relied on a large dataset of student reading scores across 40 schools in Malindi District to ask various questions about reading achievement related to a series of variables in the child’s life. Part 2 included a review of school data sources, primarily attendance records
to investigate student permanence in school during the reading study period and after. After a
lengthy, costly and time-intensive application process, the Kenyan government issued a
research permit to carry out the study. The Kenya Ministry of Education and the school
principals at the three study sites agreed to permit review of attendance records. No
information was recorded about specific individuals. Instead, patterns of attendance of
second graders in the three schools were noted. Reviewing attendance records was an
unobtrusive method (Marshall & Rossman, 2006) of triangulating with varied forms of data
collection. The research team learned, for example, that there had been a school strike by
reviewing the attendance records.

As described on pages 93 to 94, EGRA data included division, zone and school name,
school type, student age, student gender, pre-school attendance, home language, homework
assistance, availability of reading material at home, radio listening and TV watching at home.
The data also included nine reading scores in Kiswahili and English: # of correct letters in
Kiswahili per minute, # of correct words in Kiswahili in a disconnected text per minute, # of
correct words in Kiswahili in a connected text per minute, # of correct answers to
comprehension questions in Kiswahili, # of correct letters in English per minute, # of correct
words in English in disconnected text per minute, # of correct words in English in a
connected text per minute, # of correct answers to comprehension questions in English, and #
of correctly identified phonemes in English.

**Limitations of EGRA Data**

In developing a methodology for this study that included both quantitative reading
data (on children in treatment and control schools) and qualitative data (from students’
mothers at three treatment schools), the study’s approach was constrained by the sampling
and data collection methodology of the USAID EGRA project. Firstly, the data did not include school, teacher or peer effects. This study could not consider possible mitigating variables like teacher experience or credentials, second grade and within-classroom characteristics, and size, number of grades, and number of students in each class because those data were not collected by EGRA. Teacher effect variables would arguably make a difference since the treatment was teacher training and not direct student instruction, but no data on teachers were available. Student baseline characteristics were collected, but not teacher baseline characteristics. RTI considered that the measures and assessment design tested the teacher rather than the students. If the assessment tested the teacher rather than the student, it was unfortunate not to be able to test teacher variables. Furthermore, with the sample switch, the quantitative reading data was not longitudinal by student and so could only be interpreted at the school level. The data did not measure students’ growth over time as the pre and post groups sampled two different groups of students. In order to determine the effect of the intervention with more precision, a matching strategy was chosen to match pre- and post-treatment cases with one another.

Also, in terms of sampling, 25 of the 40 treatment schools selected for EGRA were in the EMACK II program. EMACK II is the Education for Marginalized Children in Kenya program funded by USAID. These schools were thus already receiving a treatment of another type and isolating which treatment led to any change in teaching or reading at the site would be difficult. In addition, an effort to select treatment and control schools that had some geographic distance separating them so as to avoid sharing of instructional approaches and materials meant that treatment and control schools were not always selected from the same
geographic zone, so were not a match in terms of key variables later correlated with reading growth.

In terms of assessment of students, analysis of the assessment instruments indicated that the most prevalent local language common to the sampled population, Kigiriama, was not used to give oral directions, which demonstrated a potential confound with oral comprehension of what the child was being asked to do. Often, in early stages of language instruction, students hear or read directions for a reading or writing task in their native language so that the task is clear and the instrument is not testing oral comprehension of the school language rather than reading skills in the school languages.

The reading passages themselves can be questioned in terms of their relevance to the environment. (See Appendix A on page 250 for reading passages). For example, is the topic of the English reading relevant to a child in this setting? Does a typical Malindi District child have a dog that he or she plays with and gives a bone to? Is this a typical activity in this setting? Also, is the topic used in the Kiswahili reading one that would occur in this setting? The passage talks about a boy and his sisters going to the beach. Would a Malindi District child take public transport and go to the beach for a pleasure outing? These are relevance questions that could be raised about the reading passages used in the study and point to testing error with regard to the reading process, such as possessing schemata for the topic, prior knowledge to connect to the text, and motivation related to text reading and comprehension.

Data Collection

Several types of data sources and data collection strategies were included in the study: existing datasets, focus group transcripts, mothers’ one-on-one interviews, stakeholder
The research team. I recruited two research assistants while in Nairobi before entering the Coast Province. A Kenyan consultant who shepherded my permit application through the required government offices recommended the person I interviewed and hired. This mother of three, who had experience working for several U.S.-based development organizations on field research in Kenya, became my focus group facilitator. She pointed me to another consultant, a Nairobi University undergraduate anthropology student, who became my focus group notetaker. Both research assistants translated qualitative research tools and transcribed and translated focus group data. Both women were born and raised on the coast of Kenya in the greater Malindi area.

The research team included two native speakers of Kigiriamu who had grown up on the Coast and professed the Christian faith. While these two research assistants maintained a polite and accommodating welcome for all participants in the focus groups, they also privately espoused stereotyped views about Muslim, Kiswahili-speaking coastal women. The notetaker told me in our initial interview that she preferred that the women in the focus groups not be Muslim. She said, “Muslim women are very difficult to deal with”. She described how with Muslim women, “you talk and talk and go around and around and at the end, you have nothing”. She preferred that the mothers in the group be from the “same same group”. A homogeneous group would make the task easier, she thought (Field notes, March 6, 2010). I immediately discussed with her the requirement for a non-biased entrance into the field and she appeared a bit chastened but agreed to follow that admonition.
The facilitator talked with me about “jinns\(^{10}\) that Muslims believe in”, which suggested that she positioned herself as a cultural outsider to coastal Muslims and had preconceived theories about their beliefs and practices. She identified herself with each focus group as Giriama. At the Noanini focus group, where most women were Kiswahili native speakers and thus members of the Swahili ethnic group, she identified herself as “Giriama pure” when encouraging the three Giriama mothers in the group to respond. At the Vikidi focus group, she immediately identified herself as “Jibana”, which is one of the nine sub-groups of Mijikenda or Giriama people. She then said, “We are all Giriama”, which was not accurate given the group make-up. She was making overt an aspect of herself that was perhaps assumed given her speech and her appearance, but unspoken until she herself proclaimed it. This open claiming of her ethnicity, language, and thus religion may have served to make her accepted and an insider to the group, but also served to set herself apart from those who did not fit the same description because it cut the area’s groups into separate entities instead of aligning according to a category that fits all, such as Malindi District or Coast Province residents. Nevertheless, in the Noanini focus group, our facilitator added at one point, “We are all Africans”, so her aligning with the group in that instance was inclusive.

The facilitator crossed over between Kigiriama and Kiswahili throughout the focus group sessions as needed. The two research assistants, while proclaiming a shared membership in the Giriama culture, also called out one another’s linguistic differences, such as once when we stopped to ask directions and our notetaker jokingly commented that our facilitator had brought out her Jibana language accent and vocabulary to communicate with

\(^{10}\) Jinns are spirits or invisible non-human beings referred to in the Qur’an and discussed in some areas as related to the Muslim faith and belief system.
the woman beside the road. The research team also discussed the Kiswahili accents of various group members, saying of some Noanini participants that they spoke “Bajun Swahili” with certain letter-sound differences and intonation differences from their own Kiswahili.

I entered the field having had a year of Kiswahili study followed by nine months without any contact with the language. Since my research assistants spoke Kigiriama together, our hours and days of transit, translation, and transcription did not include conversation in Kiswahili. I was frustrated by not being able to speak with mothers easily and not practicing my Kiswahili with my research assistants since I studied it in preparation for my field work. Nevertheless, I also embraced the need to stay in the background and observe the focus groups as a ‘fly on the wall’ rather than an involved participant. My Kiswahili reading skills helped in that I was able to administer (with periodic checking with a research assistant to make sure I fully understood the response) some of the one-on-one questionnaires with mothers in both Kiswahili and Kigiriama, which allowed me to connect directly with some research participants. Because Kiswahili is derived from Kigiriama and Arabic, I was able to also read the questions in Kigiriama, and this effort especially pleased research participants. My own language struggles helped inform me in some measure about the various situations the research participants find themselves in their daily lives. See pages 110 to 111 for further reflection on my positioning within the field research.

**Qualitative sample selection.** In choosing schools for the qualitative phase, I used criterion sampling. Reading growth scenario, geographic location, and availability and cooperation of the head teacher were factors for selection. In selecting mothers at each of the school sites, I used purposive random sampling in an attempt to find mothers whose children
had irregular attendance and some who had regular attendance, variation on reading skills, and variation on health issues in the home through conversations with second grade teachers and head teachers.

Head teachers’ cooperation eased access to our sample. At Noanini, the research team reviewed attendance records with the head teacher and second grade teachers. From looking at the records, the research team learned that during the third and fourth weeks of the term, the teachers were on strike and school was not held. The fifth and sixth weeks showed significant absenteeism. The head teacher suggested a few students with irregular attendance and a few with better attendance. The mothers of these students received a letter from the head teacher asking them to attend the focus group session. Three of the mothers targeted during this process came and took part in the focus group session. The remaining nine mothers in our focus group had come to the school grounds for a PTA meeting. The head teacher requested that mothers of second grade students raise their hands, then asked nine of them to come to our session in the classroom instead of staying at the PTA meeting outside under the tree. At Shadakunu, a similar process was followed and the twelve mothers selected came for the first session. At the second site, all of the mothers in attendance were those to whom the head teacher had sent notice to come. At Vikidi, mothers were notified according to the head teacher, but only three arrived the day of our first session. The next day, more than twelve mothers came and some had to be turned away. Some of the mothers in the group may not have been those the head teacher sent letters to about the focus group, but rather arrived because they had heard about the group meeting or seen us assembling.

**Constraints in focus group sampling.** Controlling the balance and diversity (Stewart & Shamdasani, 1990) of each focus group of mothers was not possible. In order to
differentiate and achieve a heterogeneous group, the research team reviewed the daily register for attendance patterns, questioned the Class 2 teacher about children’s reading progress, and also checked on the gender and religion of the students in the interest of diversity. Each site resulted in different outcomes in terms of which mothers showed up for the sessions. Those mothers who attended may or may not have been the mothers who were identified and contacted. Sometimes, mothers may have spread the word to others who may have then attended. At one site, only three of the original 12 identified participated while at another site, the head teacher confirmed that the group at our session was the group he had requested through letters sent home.

**Focus groups.** A qualitative approach was employed using focus groups to gain deeper insights into the why and how of students’ health status in the home and how those factors affect the child’s educational experience and achievement, specifically in regards to reading. Focus groups were indicated due to the relatively short amount of time for the field research and also because the themes in question did not require individual interviews for privacy and may be more deeply considered and discussed in a group rather than alone for participants.

As Marshall and Rossman (2006) suggest, the focus groups included 12 people each and capitalized on the idea that people’s thoughts and opinions do not form in a vacuum. The questions were quite simple by design. The hope was that a supportive environment would be created where participants commented on one another’s responses and more pertinent discussion ensued by virtue of the conversational scenario. The focus group approach allowed for discovering cultural foundations for health status and shed light on how health barriers were constructed within the culture and affected the attainment of education. The
group conversation more closely mimicked a collegial discussion than a research
environment and evoked more depth of response than a one-on-one interview.

A focus group facilitator and a notetaker were identified through Nairobi-based
Kenyan consultants. I conducted training for these research assistants on the interview
protocol as well as ethics training, including information on privacy rights. The curriculum
for this training was adapted from the FHI (Family Health International) ethics curriculum. As well as ethics, the focus group moderators needed to be attuned to power dynamics
(Marshall & Rossman, 2006). Sound facilitation skills were critical for the focus group
facilitator and needed to unfold naturally within a conversational setting.

Focus groups started with mothers introducing themselves and telling about their
children and their ages or grades in school. Then, the interview protocol began with a grand
tour question (Glesne, 2006), which allowed for a wide range of responses. It was hoped that
mothers would provide more information about the political and economic landscape and
how it influences their child’s life or broach areas of religion, ethnicity, gender, and SES not
able to be investigated in depth within quantitative surveys. Disease history questions
included questions aimed at exploring perceptions of the impact of malaria, fever, and
convulsions in the second grade child over his or her lifespan. Health care access was another
question so that the mother could inform about where and how often she seeks a health
facility of some type and under what circumstances she has gone to the health center. In
terms of education questions, mothers discussed how much help their child needs or wants at
home with school work, whether or not the child is able to read at home, and perceptions of
reading in the home. Appendix B contains the focus group interview protocol for sessions
one and two in English, Kiswahili, and Kigiriana.

The first focus group served as a pilot for the rest of the study. The field workplan was set up to allow for immediate transcription of the data in order to feed analysis into the discussion guides through targeted revisions. The research team streamlined the focus group protocol and eliminated some redundancy by focusing questions on a sequence about health in the home the first session and moving into its effect on education in the second session. I learned about the language of illnesses in the area during the pilot, how much time it took for my two research assistants to transcribe and translate simultaneously, and the nature of language use and ethnic identity that the moderator would need to navigate in both Kiswahili and Kigiriama.

**One-on-one interviews with focus group participants.** A questionnaire was used at the second focus group session at the first site using themes arising in the first focus group session to inform the questions. Three mothers did not return, so, at the first site, only nine questionnaires were collected. At the second and third sites, the questionnaire was given at the end of the first session so that potential loss of participants at the second session would not result in loss of questionnaire data. Researchers using mixed methods approaches cite the use of questionnaires alongside qualitative interviewing to enrich their data (Glazer-Zikuda & Jarvela, 2008; Hascher, 2008). Appendix C contains the one-on-one questionnaire for focus group participants in English, Kiswahili, and Kigiriama.

Brief interviews were relatively easy to conduct (Marshall & Rossman, 2006) since the sample was already present for the focus group sessions and was also comfortable answering additional questions in a familiar setting. The interview filled in information, such as mother’s education level, socioeconomic index, religion, ethnic group, home language,
and # of siblings in the home, but also probed on questions about what the respondent enjoys doing and how she handles stress.

The Kenyan research assistants, as Hennink (2007) suggests, validated the research measures themselves for feedback on rephrasing and reordering of questions prior to initiating focus group sessions. As a next step, we held the first focus group at the low-growth scenario school where the head teacher had expressed significant interest in the study. This step allowed for retooling the questions as needed before running the full battery of focus group sessions. Changes were relatively minor, such as the inclusion of a question about age at marriage and questions about how mothers cope with stress. I also learned that the questionnaire took one hour to administer and required that each respondent sit with a team member in order to hear and respond to each question. While wanting to make the questionnaire responsive to each focus group’s remarks, it was more feasible to incorporate changes given responses from the first site rather than continuing to revise the questionnaire after each focus group session.

**Stakeholder interviews.** I conducted interviews in English with each head teacher, or principal, at each of the three school study sites. The head teachers were forthcoming with information about their school sites although some had more time or were more available than others. The lengthiest interview was with the head teacher at Noanini. At Shadakunu and Vikidi, interview time was cut shorter because the head teachers were called away to meetings either about sexual harassment policy or examination protocol with the District Education Officer in Malindi during one of my visits to the school. Chapter 6 draws heavily on head teacher interview data to describe the study sites (see pages 132 to 158). I also conducted interviews in English with key governmental and nongovernmental officials. The
Malindi District Education Officer met with me at length at the close of the field research period. A list of stakeholder interviews are contained in Appendix D, the governmental/nongovernmental interview protocol is contained in Appendix E, and the head teacher interview protocol appears in Appendix F.

**Field notes.** I took field notes at each study site and during the four weeks of field research. These notes included observations of the school study sites and villages, and conversations with research assistants. I inhabited the role of participant observer (Richards, 2005) during the course of the field research. At times, my participation was quite heavy as in the first focus group session at Shadakuunu where I spent time transporting a primary school girl, two of her friends and two teachers to the health clinic up the road. Later, I wrote down impressions about the visit to the health clinic and returned to the clinic to take pictures of the facility and inquire about the girl’s status. At other times, I stayed almost completely in an observer role during the focus group session, watching body language, reactions, and listening. My goal was to expect the participant observer role to be fluid and dependent on the surroundings and serendipity rather than maintaining a proscribed manner in which to carry out my role. When I had conversations with my research assistants while at a site, I was anxious to record notes before I lost the richness of their reflections on family, culture, and history. I wrote or filled in notes in the evening if I had not been able to do so while at a site. Later, upon return to the U.S., I typed up my field notes. Chapter 6 descriptions of study sites (see pages 132 to 158) make use of field notes as well as head teacher interview data.

**Limitations of qualitative data.** Not all health issues could be engaged in depth, especially stigmatized diseases such as HIV and AIDS. The presence or absence of HIV/AIDS in the household, while potentially disruptive to the home, was not a primary
focus in this study, but was mentioned as one of many sicknesses and also arose within groups of mothers whose families were affected in some way. In terms of nutritional and other physical health questions about the mother herself, the information in the DHS about women’s nutrition is less informative than for children. The DHS found that Coast Province women show the shortest stature of all the provinces, but further probing and data are not included (CBS, MOH, & ORC Macro, 2004). The same basic health questions that had been asked of the EGRA student sample allowed for a small insight into mothers’ daily meal intake and presence of headaches/stomachaches, etc. in this study.

Time in the field was limited to four weeks due to school schedules and funding. The dates of entry into the field were framed by a school strike before and a school break that started at the end of the field research period. Our research team had to act very quickly and keep to a tight schedule in order to carry out the study at three school sites that were at least one hour apart by car. The qualitative phase concentrated on focus group sessions, one-on-one interviews and collecting information at the school site. Home observations or visits with mothers outside of school could not be included given the timeframe. Spending more time seeking out and interviewing the nongovernmental organization community would also have yielded additional useful information on what is currently happening with mothers in adult literacy programs, school involvement and other programs that may exist at various study sites. Also, more information on EGRA teachers, their experience level, and their classroom practices would have shed more light on what the child’s school experience looks like.

My appearance and status as a white, Western female also could be cited as a limitation since I was clearly an outsider and certain assumptions may have been made about
what I wanted to hear and what was proper and improper to share with me. See the Field Relations section on page 110 for more reflection on my identity within the research.

**Ethical considerations.** Participants shared perceptions about health in a focus group setting. Risk of psychosocial harm was extremely low to non-existent—participants were not asked questions directly, but instead questions were posed to the group. Participants were reminded of the confidentiality of the sessions and that they were free to share in each response information that they were comfortable sharing. The facilitator, notetaker, and I were well aware that if a participant were to share a private health experience of an intimate nature and then later find out that another group member had broken confidence, then this could potentially cause the subject embarrassment or distress. The facilitator reiterated at several points that participants remain aware of the limited protection that the research team could provide. No names were used during the focus group sessions; instead each participant was given a number. The consent form was clear that all research field notes and transcripts of interviews would have no identifiers (such as real names). For reporting about the data, each focus group participant was given a pseudonym.

**Reciprocity.** Food and water scarcity were affecting the lives of the participants (Ityeng, Kapua & Maingi, 2008). Local education consultants discussed with me the deprivation of sufficient food and water that characterized the lives of Malindi District mothers. After considering the situation, I decided that, given the time commitment requested from focus group participants, which was time away from income generating, farming, and finding water for themselves and their families, some small type of reciprocation in recognition of their gift of time should be supplied. Each participant was offered a refreshment (a drink and a few crackers) at the first session, then received a two-kilogram
bag of corn flour to take home at the second session. Participants were encouraged to avoid missing a session because of another commitment or employment obligation, but at the same time, mothers could choose to come to only one of the sessions and could leave early as needed or desired.

**Consent and confidentiality.** The focus group participants were invited by the head teacher after consultation with the second grade teachers and the research team. The women in the groups gave informed consent through an oral process in which the form was read and explained in Kiswahili and Kigiriama by the focus group facilitator. The research team entered each site to explain the study and also met with EGRA teachers and ministry officials prior to school visits to describe the study at a teacher award ceremony for those that completed the EGRA training. At one site, familial relations were uncovered with a group member once the first session was completed. This focus group participant’s interest in acting more like friends or family than researchers and participants was concerning because it could suggest to group members an imbalance of power and connection associated with the research team. After the first session, I discussed with the research team the inappropriateness of this situation. The participant attended the second session, but was relatively unresponsive. Because the research team travelled in and out of the villages of each study site, the relationships with research subjects did not become any more difficult than the previously described case.

The consent form asked that participants not repeat what the group discussed during the sessions outside the group. An inherent and understood code exists, according to our facilitator, which dictates that mothers do not talk about “bad things or bad luck”, which governed responses to questions about health and family. Mothers do not generally want to
open up to questions about miscarriages, stillbirth or children who died, for example. The study protocols did not ask particularly for this type of information, nor specifically about stigmatized conditions, such as HIV and AIDS. However, some participants divulged various pieces of information, such as a daughter who died of AIDS and whose baby the participant was now raising, which may or may not have been widely known or confirmed in the village. The risk of repercussions within the village if this information was repeated unduly could not be fully mitigated in spite of reminders of confidentiality within the group.

Field relations. As Mbilinyi (1998) suggests, I searched myself as I researched others. By doing so, I stayed open to involvements and turnabouts and was attuned to juggling cultural contradictions between my own culture and my subjects’ cultures. Mbilinyi calls feminist research political practice. My research is intentionally feminist first in its commitment to talking with women, but also in its situatedness in African feminist departures from liberal Western feminism. The analysis kept these sensibilities close.

Throughout field work and analysis, I was keenly aware of my position outside the culture in which I conducted research. No amount of study or experience can place me inside the culture. As a researcher, I was conscious of the advantages and disadvantages of my outsider status. Some awkwardness of language, address, and approach were forgiven by research participants. At the same time, apprehension and annoyance with who I was and why I was posing questions and making assumptions about an environment I did not come from were ready pitfalls, but were mediated and mitigated by the involvement of my insider research assistants. Mothers may have also hoped for future help of some kind from their attendance and participation. At the third study site, I asked our facilitator to ask the group
what question the participants were not asked that needs to be addressed. The response came from one participant, “for those who are not doing well, how will you help them?”

Milner (2007) warns of various “dangers” (p. 288) in researching people of color in the U.S. Although I was not conducting research in the U.S., the critical race theory approach he invokes can be brought to bear on my role as a researcher in Kenya. Milner introduces a racial and cultural consciousness framework for conducting education research. I worked on “disrupting” (p. 389) some of the same elements of thought that Milner investigates: “notions of normality”, “deficit discourses and beliefs”, and “socioeconomic status rationale” (p. 389).

A white, Western researcher such as myself learns and unlearns theories and perceptions of African populations throughout her life just by virtue of coming of age in a culturally hegemonic development mindset. Milner suggests the need to not only be enlightened as I may imagine myself to be academically and professionally, but endarkened, which I address by engaging indigenous literatures from multiple disciplinary perspectives, including African feminist perspectives, and seeking out contextually grounded maternal attitudes. I must undertake the research while remembering the colonial legacy I carry with me as a white, Western researcher (p. 389). I needed to constantly strip the layers of my own cultural perceptions and received understandings about the way things are and should be to be able to stand within this research. Milner’s framework encouraged me to research myself as well as my self in relation to others throughout the research process (p. 395).
Data Analysis

The study included analysis of a range of data, such as secondary data analysis (conducted prior to field research), document review of school records in order to aid in sampling of mothers, focus group transcripts, mothers’ demographic questionnaires, head teacher and other stakeholder interviews, and field notes. All of these data sources were triangulated in a sequential quantitative-qualitative multi-stage study design, with direct data collection during Part 2 of the qualitative portion. I listened for the multiple registers of experience (Sylvester, 2001) that subjects brought to this project. The places and positions of our subjects were not fixed, which I kept in mind as I analyzed their various voices to see what themes emerged.

Quantitative Data Analysis

SPSS 17.0 was used for secondary data analysis and SAS 9.2 was used for hierarchical linear modeling. Descriptive statistics and a multivariate analysis of variance with the outcome variables are described below. The main objective in using MANOVA was to determine if reading achievement was altered by the manipulation of independent variables. Main effects of the independent variables and interactions among the independent variables were investigated, and variables that possibly led to the growth and may have confounded the effects of treatment were searched. The continuous outcome variables used in the MANOVA were: letter recognition in Kiswahili, word recognition in Kiswahili, words in Kiswahili passage, letter recognition in English, word recognition in English, and words in English passage. Independent variables tested included: basic health questions (e.g. meals eaten in day, breakfast eaten or not, hands washed before meals, presence of headaches, stomachaches), gender, home language, presence of TV in home, radio in home, pupil’s age,
parental help on homework, and reading material in the home. Through regressive analyses, the number of covariates was reduced to three as the others did not have an impact on the outcome variables. Further inquiry was done into who provided homework help and the student’s reading achievement through a Tukey’s B, which showed that help from fathers correlated with low reading scores and was worse than having no help while sisters’ and mothers’ help correlated with higher reading scores.

Preliminary analyses (prior to sample matching) had indicated an arguably small effect on reading scores from the teacher training intervention. Table 5.1 contains descriptive statistics prior to secondary data analysis. In order to look more closely at effect size, a sample matching technique was used. The sample matching methodology began by listing all students in the early grade reading baseline sample. A random sample of 100 students was taken from this sample. Post-treatment students were matched with baseline control or treatment students. For each student in this smaller sample, a match was selected from the post-intervention sample on the three covariates.

As mentioned previously, the students in the baseline data were a completely different set of students from those in the post-treatment data. The exact sample matching offered a method for matching students according to like variables. This method aimed to eliminate the issue of two different samples by matching the two sample groups on like variables (Felton & Wood, 1992). Exact sample matching was chosen because no further error is introduced as in propensity score matching. Also, the sample was not large enough for propensity score matching once schools were eliminated due to the lack of match on geographic zone (see pages 126 to 127 for more information on geographic zone issue in EGRA sample).
Preliminary analyses indicated that, while effect sizes were low, there was growth between the unmatched pre- and post-treatment groups. Exact sample matching results indicated greater effect sizes. In light of these findings, the limited time in the field was focused on treatment schools instead of including a control school in the qualitative phase of the study. Schools to select for the qualitative study were treatment schools with highest growth, medium growth and low growth to explore health factors that may have constrained the treatment effect. The reading scores contained in Table 4.1 demonstrate the amount of negative or positive change that was recorded in assessment scores at each school of the three schools included in the qualitative phase of the study.

Table 4.1

*Reading Growth in Three Selected Study Sites*

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<td>14.0</td>
<td>8.9</td>
<td>6.8</td>
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<tr>
<td>recognition</td>
<td>2 3.8</td>
<td>22.9</td>
<td>1.6</td>
<td>19.1</td>
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<tr>
<td>Passage reading</td>
<td>3 11.8</td>
<td>22.6</td>
<td>8.9</td>
<td>18.6</td>
</tr>
<tr>
<td></td>
<td>1 11.9</td>
<td>11.3</td>
<td>10.6</td>
<td>7.2</td>
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<td></td>
<td>2 2.3</td>
<td>22.0</td>
<td>2.1</td>
<td>22.9</td>
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<tr>
<td></td>
<td>3 9.3</td>
<td>22.8</td>
<td>12.4</td>
<td>27.1</td>
</tr>
</tbody>
</table>

Note: Table adapted from Crouch, Korda, & Mumo, 2009. 1 is Noanini Primary School, 2 is Shadakunu Primary School, and 3 is Vikidi Primary School.
Qualitative Data Analysis

Kenyan research assistants served as the focus group moderator and note taker. The research assistants transcribed the focus group data within one to three days depending on the work schedule for each focus group session. The research team decided to transcribe from Kiswahili and Kigiriama, the two languages mothers spoke during the focus group sessions, directly into English. The research assistants, having been educated in the Kenyan system, expressed more comfort and precision in transcribing the oral data while at the same time translating from those two languages into English because they were most accustomed to writing in English rather than in their home language or Kiswahili. Hennink (2007) suggested that this strategy fits the circumstances often inherent in developing countries where the first language is often not the language commonly used for writing and schooling.

Data collection and analysis are co-mingled and ongoing in qualitative research. I reviewed the first focus group transcription in order to make changes in the protocol for the second session as well as for future sites. I attended focus groups and read focus group interview notes immediately after each focus group session ended. This initial review was where themes began to emerge. Categories then emerged as I went back over the notes a second time and then a third. My process was patterned after Creswell’s approach (2009) of moving from reading and memoing to describing, classifying and interpreting.

This study aimed to investigate mothers’ perceptions of their children’s health and its consequences on their educational achievement. Generalization was not the goal of this study, but rather gaining an understanding of mothers’ knowledges and perceptions about their child’s health and its effects on learning. Instead, the goal of building grounded theory (Hennink, 2007) guided the process of drafting and revising the focus group and one-on-one
interview protocols from the first study site to the second study site and then to the third study site depending on group responses and how the questions flowed. Grounded theory also drove the focus group analysis, with coding, then linking, then connecting the storyline as described by Daly (2007) as the Diamond Approach. Using this model of analysis, I moved through several stages, from open coding, to fracturing the data, to a middle period when the data is at “maximum complexity” (p. 239) and seems to blind the researcher. Then, I broke through the “blinding dazzle” (p. 239) of the data to a phase of reducing the categories and entering the axial coding stage. I made linkages between codes and determined themes that were rising out of the proliferation of codes. Then, the selective storyline began to emerge.

I used Atlasti 6.0 software for analysis of the focus group transcripts. I coded, then reduced the number of codes by collapsing some categories before completing the coding of the final focus group transcripts from the third study site. During the coding I was memoing as well with some webbing of codes and theory-building of mega-themes I was seeing and co-constructing with the voices in the data along the way. I was also linking codes together in groups and across groups using the software as well as hand-drawn maps. The selective storyline began to emerge. Kearney’s (2010) understanding of grounded theory inspired and supported my quest for seeing propensities, themes, and seeking out saturation in the data while also attending to variation. Her confidence in the researcher’s critical role in interacting with the data and my role’s importance not just in the background of the data as it talks, but on equal footing alongside it, reinforced my resolve in analyzing the data. Logic is a critical part of grounded theory, which includes not just the verbatim transcript, but what I as the researcher thought while listening and going through the process of conducting the research.
The literature was a guide throughout the coding and analysis process. To report and display findings, I grouped coded excerpts of focus groups discussions under four headings in my text. As I continued with analysis, I also reviewed mothers’ demographic data, head teacher interview data, local stakeholder interviews data as well as field notes to enrich and reinforce findings. I organized my data in Chapter 6 according to the questionnaires I used with head teachers. The categories I developed in talking with them framed how I wrote about the study sites. Chapter 7 flowed from the coding then mapping then collapsing codes then returning to maps and so on until I settled on depicting four interacting quadrants of mothers’ lives that contained overlapping elements. In Chapter 8, I took these codes and engaged in “conceptual bootstrapping” (M. Kearney, personal communication, May 20, 2010) to look at what moderates what and how this web of codes could emerge as a grounded theory that explains the full range of variation in the context.

Chapter 5 will focus on my analysis of the quantitative reading data while Chapters 6 and 7 explore the participating school sites and women, analyzing and synthesizing field notes, focus group discussions and observations that begin to form a storyline about women’s lives and the intertwining of those perspectives with their children’s health and literacy. In Chapter 8, I build new theory grounded in these realities and also propose a new literacy intervention model both of which balance the multi-faceted nature of the environments of mothers and children in this Kenyan context.
CHAPTER 5: DID INTERVENTION MAKE A DIFFERENCE?

As described in Chapter 2, the research setting was a historically marginalized part of Kenya, separated geographically, culturally, ethnically, and religiously from the seat of political power in the Kenyan capital of Nairobi (Mazrui & Mazrui, 1995). Education indicators lag behind most of the country while health indicators show the highest undernutrition and stunting rates of any Kenyan province. Resource allocations from the Kenyan government to the Coast Province are also lower with a higher student to school ratio and higher student to teacher ratios. School completion and primary to secondary transition rates are also low (CBS, MOH, & ORC Macro, 2004).

In the Malindi District of Kenya’s Coast Province, the Early Grade Reading Assessment (EGRA) provided teacher training to improve the teaching of reading to elementary school children. The project, funded by the U.S. Agency for International Development and implemented by RTI, used an experimental design, randomly assigning schools to treatment or control groups, and measured the effectiveness of the teacher training intervention through the collection and analysis of student reading data. Examining the design and effectiveness of this intervention allowed for an analysis of contemporary efforts to improve early literacy, offered an opportunity for accounting for local perspectives on schools’ educational reform efforts, and served as a starting place for this research.

Chapter 3 described prevailing and alternative literacy and development theories. Chapter 4 explained the mixed methods research design. A goal of the overall study was to
offer a novel way for non-local agencies to frame, and respond to, local literacy and family health challenges in coastal Kenya and other African contexts. This chapter presents the quantitative analysis that contributes to the broader mixed methods study aimed at exploring maternal home and health attitudes as they relate to children’s reading development.

This chapter entails an examination of a set of pre-existing reading data using a statistical matching technique. The EGRA reading data is used to identify factors that correlate with reading progress from baseline to post-treatment, and to identify which schools experienced low, moderate, and high growth in three outcome variables in Kiswahili and English: letter recognition, word recognition, and correct words read in a passage. The hope is that this mixed methods study will demonstrate how quick development research, such as EGRA, can become more useful when its limitations are recognized and accounted for statistically and quantitative data is augmented with explanatory qualitative research to make more sense of the quantitative results. Klees (2008) suggests that inspecting the veracity of quantitative studies involves questioning their structure and assumptions. Chapter 5 begins that process by exploring this quantitative data, its shortcomings in design and results, and offering some statistical remedies for quantitative methods and findings.

Given evidence from the literature cited in Chapter 3, student background information illustrates critical aspects of the child’s context that influence literacy formation. Any student background data that EGRA captured was analyzed to consider those contextual factors. The literature led me to take note of variables in the EGRA data that could be considered proxy variables for SES since no explicit measure or index was made of SES for study participants. The basic health questions added in the post-treatment assessment were also analyzed to the fullest extent possible with statistical methods. The context the child is functioning in, with
the home being one major domain and the school another, provides invaluable insight into the child’s positioning for literacy learning at school. Health and home conditions in relation to reading outcomes were examined in this phase of the research to the fullest extent possible given the EGRA dataset and what it contained.

**Insights from Analysis of Reading Assessment Data**

The early grade reading assessment data were gathered in Malindi District, Kenya by RTI in 40 schools (20 treatment/20 control) for a total of 800 cases in baseline and post-treatment samples. The treatment was a teacher training given with the aim of improving reading instruction practices. Table 5.1 contains descriptive statistics from the EGRA study.

Table 5.1

*Descriptive Statistics from EGRA Data*

<table>
<thead>
<tr>
<th></th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kiswahili</td>
<td>Kiswahili</td>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td><strong>Letter recognition</strong></td>
<td><strong>T 4.8</strong></td>
<td><strong>20.9</strong></td>
<td><strong>21.6</strong></td>
<td><strong>29.6</strong></td>
</tr>
<tr>
<td></td>
<td><strong>C 4.5</strong></td>
<td><strong>20.3</strong></td>
<td><strong>23.8</strong></td>
<td><strong>20.4</strong></td>
</tr>
<tr>
<td><strong>Word recognition</strong></td>
<td><strong>T 10.0</strong></td>
<td><strong>19.6</strong></td>
<td><strong>5.8</strong></td>
<td><strong>13.6</strong></td>
</tr>
<tr>
<td></td>
<td><strong>C 13.3</strong></td>
<td><strong>20.0</strong></td>
<td><strong>9.1</strong></td>
<td><strong>18.4</strong></td>
</tr>
<tr>
<td><strong>Passage reading</strong></td>
<td><strong>T 8.7</strong></td>
<td><strong>17.4</strong></td>
<td><strong>9.3</strong></td>
<td><strong>18.3</strong></td>
</tr>
<tr>
<td></td>
<td><strong>C 11.8</strong></td>
<td><strong>20.4</strong></td>
<td><strong>13.4</strong></td>
<td><strong>23.4</strong></td>
</tr>
</tbody>
</table>

Note: Adapted from Crouch, Korda & Mumo, 2009.

The table includes performance on three tasks by control and treatment schools. Scores are very similar between pre- and post-treatment and are statistically not significantly different. The question remained about whether the treatment, which was teacher training in reading instruction, brought about significant change in reading achievement in treatment schools.
Three Variables Correlated with Higher Reading Growth

Descriptive statistics and a MANOVA with the outcome variables were conducted. The main objective in using MANOVA was to determine if reading achievement was altered by the manipulation of independent variables. The main effects of the independent variables and interactions among the independent variables were investigated. Variables that possibly led to the growth that may have confounded the effects of treatment were sought as well. The continuous outcome variables used in the MANOVA were: letter recognition in Kiswahili, word recognition in Kiswahili, words in Kiswahili passage, letter recognition in English, word recognition in English, and words in English passage. Independent variables tested included: basic health questions (e.g. meals eaten in day, breakfast eaten or not, hands washed before meals, presence of headaches, stomachaches), gender, home language, presence of TV in home, radio in home, pupil’s age, parental help on homework, and reading material in the home.

Through regressional analyses, the number of covariates was reduced to three as the others did not have an impact on the outcome variables. Three variables were found to be covariates: geographic zone, who helped with homework, and whether the child watched TV or not. Table 5.2 contains a correlation matrix and Table 5.3 shows regressions with these three covariates. Those three variables contributed to reading growth, with TV and geographic zone acting as a proxy for socioeconomic status. The presence of a TV in a home or in a community indicates a significant level of wealth compared to peers. Similarly, geographic zones closer to the city showed better growth than those further into the rural areas of the district. The homework help variable suggested that having family members with some level of school literacy was critical for the child. Fathers were most often cited when
homework help was available for the child, but those students performed poorly on the assessment. Mothers were cited half as frequently as fathers, but provided a boost to children while fathers did not. Help from sisters, which appeared in a smaller section of the sample, correlated with the highest achievement.

Table 5.2

*Pearson Correlation Matrix*

<table>
<thead>
<tr>
<th></th>
<th>Kiswahili</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Letter</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>recognition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HW Help</td>
<td>.281**</td>
<td>.080**</td>
</tr>
<tr>
<td>TV</td>
<td>.057*</td>
<td>.044</td>
</tr>
<tr>
<td>Zone</td>
<td>-.048*</td>
<td>-.069</td>
</tr>
<tr>
<td><strong>Word</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>recognition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HW Help</td>
<td>.152**</td>
<td>.162**</td>
</tr>
<tr>
<td>TV</td>
<td>.065*</td>
<td>.075**</td>
</tr>
<tr>
<td>Zone</td>
<td>-.073**</td>
<td>-.103**</td>
</tr>
<tr>
<td><strong>Passage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HW Help</td>
<td>.157**</td>
<td>.135**</td>
</tr>
<tr>
<td>TV</td>
<td>.061*</td>
<td>.089**</td>
</tr>
<tr>
<td>Zone</td>
<td>-.076**</td>
<td>-.109**</td>
</tr>
</tbody>
</table>

significance p<.05 is represented by *, p<.01 by **.
Table 5.3

Regression with Three Covariates

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>t</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kiswahili</td>
<td>Kiswahili</td>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>Letter recognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>zone</td>
<td>-.034</td>
<td>-1.395</td>
<td>-.062</td>
<td>-2.462</td>
</tr>
<tr>
<td>TV</td>
<td>.059</td>
<td>2.424</td>
<td>.037</td>
<td>1.481</td>
</tr>
<tr>
<td>HW</td>
<td>.282**</td>
<td>11.749</td>
<td>.080**</td>
<td>3.219</td>
</tr>
<tr>
<td>Word recognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>zone</td>
<td>-.061</td>
<td>-2.449</td>
<td>-.090**</td>
<td>-3.634</td>
</tr>
<tr>
<td>TV</td>
<td>.060</td>
<td>2.388</td>
<td>.065**</td>
<td>2.635</td>
</tr>
<tr>
<td>HW</td>
<td>.152**</td>
<td>6.140</td>
<td>.162**</td>
<td>6.601</td>
</tr>
<tr>
<td>Passage reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>zone</td>
<td>-.065*</td>
<td>-2.590</td>
<td>-.095**</td>
<td>-3.800</td>
</tr>
<tr>
<td>TV</td>
<td>.055</td>
<td>2.211</td>
<td>.079**</td>
<td>3.158</td>
</tr>
<tr>
<td>HW</td>
<td>.157**</td>
<td>6.376</td>
<td>.135**</td>
<td>5.488</td>
</tr>
</tbody>
</table>

significance p<.05 represented with *, p<.01 **

Initially, pupil’s age was a factor, but, then controlling for age in the general linear model, it was not significant. SES and mother’s education level could not be checked as confounders or modifiers because those variables were not included in EGRA data collection. EMACK, the USAID project that had been working in many of the treatment schools, and World Food Programme, which was providing school lunches at some sites, were tested as covariates but neither was found to correlate significantly with reading growth. Among the basic health variables, the number of meals at home, stomachache and frequency of stomachache, headache and frequency of headache correlated with English reading outcome variables. Also, whether the student felt he or she had learned to read at school correlated with English letter recognition outcomes.

Further analysis with hierarchical linear modeling (HLM) demonstrated that the number of meals explained a significant part of the variance and thus has a strong effect
above and beyond the covariates discussed above. As seen in Table 5.4, the basic health variables of number of meals per day had its own independent effect. Mixed results were found from the HLM on impact of the treatment, so the exact sample match reported in the next section supplied a further test on the effect of the treatment.

Table 5.4

**HLM Results**

<table>
<thead>
<tr>
<th>Condition</th>
<th>tv</th>
<th>Homework</th>
<th>Zone</th>
<th>Meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiswahili letter estimate</td>
<td>6.6549</td>
<td>3.2617</td>
<td>-0.8812</td>
<td>-1.3215</td>
</tr>
<tr>
<td>Kiswahili letter SE</td>
<td>2.4750</td>
<td>2.7596</td>
<td>0.6494</td>
<td>0.7784</td>
</tr>
<tr>
<td>Kiswahili letter t value</td>
<td>2.69</td>
<td>1.18</td>
<td>-1.36</td>
<td>-1.70</td>
</tr>
<tr>
<td>Kiswahili word estimate</td>
<td>-0.1520</td>
<td>-0.5735</td>
<td>-1.0422</td>
<td>-0.7559</td>
</tr>
<tr>
<td>Kiswahili word SE</td>
<td>1.8815</td>
<td>2.0979</td>
<td>0.4937</td>
<td>0.5918</td>
</tr>
<tr>
<td>Kiswahili word t value</td>
<td>-0.08</td>
<td>-0.27</td>
<td>-2.11</td>
<td>-1.28</td>
</tr>
<tr>
<td>Kiswahili passage estimate</td>
<td>-2.1588</td>
<td>-1.1251</td>
<td>-0.2557</td>
<td>0.02556</td>
</tr>
<tr>
<td>Kiswahili passage SE</td>
<td>1.5761</td>
<td>1.7573</td>
<td>0.4135</td>
<td>0.4957</td>
</tr>
<tr>
<td>Kiswahili passage t value</td>
<td>-1.37</td>
<td>-0.64</td>
<td>-0.62</td>
<td>0.05</td>
</tr>
<tr>
<td>English letter estimate</td>
<td>-6.8037</td>
<td>0.5886</td>
<td>-0.2163</td>
<td>-0.3184</td>
</tr>
<tr>
<td>English letter SE</td>
<td>2.7494</td>
<td>3.0801</td>
<td>0.7218</td>
<td>0.8637</td>
</tr>
<tr>
<td>English letter t value</td>
<td>-2.47</td>
<td>0.19</td>
<td>-0.30</td>
<td>-0.37</td>
</tr>
<tr>
<td>English word estimate</td>
<td>-6.8037</td>
<td>0.5886</td>
<td>-0.2163</td>
<td>-0.3184</td>
</tr>
<tr>
<td>English word SE</td>
<td>2.7494</td>
<td>3.0801</td>
<td>0.7218</td>
<td>0.8637</td>
</tr>
<tr>
<td>English word t value</td>
<td>-2.47</td>
<td>0.19</td>
<td>-0.30</td>
<td>-0.37</td>
</tr>
<tr>
<td>English passage estimate</td>
<td>-4.1842</td>
<td>3.7174</td>
<td>-0.9580</td>
<td>-0.4877</td>
</tr>
<tr>
<td>English passage SE</td>
<td>2.3930</td>
<td>2.6682</td>
<td>0.6279</td>
<td>0.7526</td>
</tr>
<tr>
<td>English passage t value</td>
<td>-1.75</td>
<td>1.39</td>
<td>-1.53</td>
<td>-0.65</td>
</tr>
</tbody>
</table>

Note: Significant at p=.01 level

**Exact Sample Matching Uncovered Treatment Effect**

Preliminary analyses (prior to sample matching) had indicated an arguably small effect on reading scores from the teacher training intervention (see Table 5.1 for descriptive
statistics). In order to look more closely at effect size, a sample matching technique was employed. The sample matching methodology began by listing all students in the early grade reading baseline sample. A random sample of 100 students was taken from this sample. For each student in this smaller sample, a match was selected from the post-intervention sample on the three covariates. These three covariates were presence of TV, geographic zone, and help with homework at home. To remove these confounds, the pre and post groups were sample matched on these covariates. If multiple matches were found, the subjects were randomly assigned. Subjects could be from different schools because schools did not matter in the MANOVA analyses. Other variables did not correlate with higher reading scores according to the regresional analyses, so they were not considered.

As mentioned previously, the students in the baseline data were a completely different set of students from those in the post-treatment data. The exact sample matching offered a method for matching students according to like variables. This method was employed to counteract the issue of two different samples by matching the two sample groups on like variables (Felton & Wood, 1992). Exact sample matching was chosen because no further error is introduced as in propensity score matching. Also, the sample was not large enough for propensity score matching once schools were eliminated due to the lack of match on geographic zone. Control schools were in zones 1 (Central) with 5 schools, 2 (Magarini) with 5 schools, 3 (Kakoneni) with 5 schools, and 4 (Watamu) with 5 schools. Treatment schools were in zones 2 (Magarini) with 7 schools, 3 (Kakoneni) with 6 schools, and 5 (Marafa) with 7 schools. This mismatch on geographic zone of control and treatment schools eliminated 100 subjects from both control and treatment samples since the exact sample match included geographic zone as one of the three covariates. This elimination left just 200
of the 400 subjects available for matching. As Dehejia and Wahba (2002) point out, when the
control or comparison group is a poor comparison then finding a match in order to use
sample matching becomes even more difficult. In this case, schools that had a direct match
by geographic zone were used and schools that did not have a match in their geographic zone
were eliminated. Since geographic zone was one of three covariates that made a difference in
reading growth, the treatment and comparison school sampling potentially led to greater
weakness in the effect sizes and results. Originally, the sample contained (n=200) control and
(n=200) treatment subjects. After exact sample matching, the sample sizes were reduced to
(n=65) for the treatment group and (n=56) for the control group.

Once completed, pair-wise t-tests were conducted and demonstrated significant
(p<.05) group differences for the three outcome variables in both English and Kiswahili. The
exact sampling matching yielded stronger effect sizes for the 6 outcomes variables used.
Appendix G contains four tables. Table G.1 shows descriptive statistics for exact sample
matched control schools, Table G.2 shows paired t-test results for control schools, Table G.3
shows descriptive statistics for exact sample matched treatment schools, and Table G.4
paired t-test results for treatment schools. Table 5.5 below contains a bar graph of
significance of effect sizes among treatment schools.
Table 5.5

*Effect Sizes among Treatment Subjects when Comparing Control with Treatment*

<table>
<thead>
<tr>
<th></th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eng passage</td>
<td></td>
</tr>
<tr>
<td>Eng word</td>
<td></td>
</tr>
<tr>
<td>Eng letter</td>
<td></td>
</tr>
<tr>
<td>Swa passage</td>
<td></td>
</tr>
<tr>
<td>Swa word</td>
<td></td>
</tr>
<tr>
<td>Swa letter</td>
<td></td>
</tr>
</tbody>
</table>

Note: .20 is small, .50 is moderate, and .80 is large (Howell, 2007).

The table shows the difference in effect size between control and treatment students after the exact sample matching was done. English letter-sound recognition showed a moderate effect size. Kiswahili letter-sound recognition demonstrated between a small and moderate effect size. The treatment was effective in these areas when controlling for the three covariates that confounded initial results. If these covariates were considered in the literacy intervention model, then effect of the treatment would arguably improve among students who were affected by those covariates. The effectiveness of the treatment was hidden statistically before the sample match and lessened by the intervention’s lack of attention to SES and family factors.
Implications for Qualitative Phase of the Mixed Methods Study

Preliminary analyses indicated that, while effect sizes were low, there was growth between the unmatched pre- and post-treatment groups. (See Table 5.1.). Exact sample matching results indicated greater effect sizes (See Table 5.5). Homework help served as a proxy for maternal education level and maternal involvement in schooling. Results showed that the mother’s involvement was critical in terms of which family member, if any, helped with homework. In the qualitative phase of the study, mothers of second graders in treatment schools were sampled using focus groups and one-on-one interviews to determine what other effects made a difference other than the treatment, with an emphasis on health factors as a possible moderator for literacy achievement.

Since the treatment did result in an effect, the limited time in the field was focused on treatment schools instead of including a control school in the qualitative phase of the study. Schools to select for the qualitative study were treatment schools with highest growth, medium growth and low growth to explore health factors that may have constrained the treatment effect. Schools were categorized into three groups with three selections in each category, but final selections of schools were made in the field in consultation with my Kenyan research team and Ministry of Education staff through criterion sampling. In addition to schools’ reading growth scenarios, attention to diversity in geographic zone and cooperation of the head teacher (school principal) were criteria for selection.

The three covariates associated with reading growth - geographic zone, watching TV, and homework help - reinforced the importance of maternal involvement as experienced through the mother’s role in the child’s schooling and the importance of SES in children’s reading progress. These findings supported the need to engage the home and mothers
particularly in literacy interventions and to explore in more depth proxy variables for SES, such as TV and geographic zone with in the district. SES was not directly addressed or collected in student background data with an implicit assumption that poverty across the district made all the students the same. This glossing over of the many components and complexities of home environment implicit in SES served to weaken not only the data collection, but the intervention itself. Student background data from pre and post groups also indicated, for example, that home language differed significantly in the pre and post samples, which was also a factor to consider when assessing reading growth at each school site. These assumptions, loaded with nuance and complexity, were interrogated and unpacked in the next phase of research.

These findings provided insight also into how to deepen statistical methods given the constraints of research designs in development projects and served as a point of departure for theoretical questioning of Western and indigenous viewpoints on literacy, literacy policy, and literacy intervention in developing countries. The basic health variable of number of meals per day, collected from students during the post-treatment assessment, accounted for a significant portion of the variance in reading scores when using hierarchical linear modeling. That finding pointed to the deep connection between health and literacy through one of the principal processes of home life: preparation and eating of food.

The qualitative phase was an exploratory endeavor in which these variables and their moderator status on the salient factors found in the quantitative phase could be tested. Given the identification of health, SES, and gender inequality as constraints on literacy achievement in the literature, perhaps these findings simply confirmed what was already indicated by scholars and practitioners, but is not acted on in literacy interventions in this type of setting.
The treatment’s success was marked when SES and homework help were controlled for, which pointed to the critical need to bring mothers, particularly, into the school reading process using a family literacy approach. In Chapter 6, the study sites are discussed and, in Chapter 7, perceptions of mothers about child health and literacy are considered and discussed as well in relation to the salient factors of the EGRA dataset discussed in Chapter 5.
CHAPTER 6: EXPLORING THREE SCHOOL SITES

This chapter presents an impressionistic description of the study sites in the qualitative phase from site observations, field notes and head teacher interview data. I explore and describe the three sites because of the importance of the context in which the mothers, who will be the focus of Chapter 7, are grounded. The qualitative phase of the study, in essence, has two different units of analysis: the school site and the focus group participants. Since longitudinal data on students were not collected in the quantitative data, the schools were also the unit of analysis in determining reading growth.

As described in Chapter 5, the quantitative data were collected in 40 schools in 5 geographic zones of Malindi District while qualitative data were collected in three schools, which were all treatment schools in the EGRA study. The first site was in a coastal town north of Malindi town on the Indian Ocean, which showed no growth in reading scores. Over an hour northwest of Malindi town, the second site demonstrated significant growth in reading scores. The third site, west of Malindi town and to the west of the Jilore Forest, showed moderate growth on reading scores (see Figure 4.2 on page 88 for a map of the three sites). In Chapter 7, the reporting on the qualitative data will become increasingly analytic as the mothers who took part in the focus groups will become the focus.

Sites were chosen for the qualitative phase of the study based on reading growth determined in the quantitative data, with attention to geographic diversity in the choice of the three schools. After categorizing schools into high, medium, and low growth in reading, I
discussed school sites with staff members at the Aga Khan Foundation and the Ministry of Education who worked on EGRA, and with my research assistants. These discussions narrowed the choices to the three schools selected and each head teacher agreed for their school to participate. Each site received at least four visits during the four weeks of fieldwork. One visit was for introductions and to explain the study. Two visits were for focus group discussions. Follow-up trips were conducted if needed to complete an interview with the head teacher or to visit a community location mentioned in the focus groups, but not seen on previous visits.

**First Study Site: Noanini Primary School**

Noanini Primary School was chosen as the low-growth school. The school showed the lowest growth in reading scores among the 20 treatment schools from pre- to post-treatment assessment scores; in fact, the school’s results showed negative growth: the students scored lower on the post-treatment assessment than the pre. This village was the closest to Malindi town of the three qualitative study sites, but had negative growth in reading scores, so its results at some level went against the rural-urban findings in the quantitative data analysis. Thus, the site was ever more worthy of exploration.

Noanini was about 40 minutes by car from the town of Malindi. The village is on the coast of the Indian Ocean, north of Malindi town, with open sea only a kilometer away from the primary school. The population of the village is about 1,000 to 1,500 according to the head teacher. The primary school has 659 students, 14 government-supported teachers, and 1 early childhood teacher and 2 primary teachers employed by the community. Two of the school’s teachers participated in the EGRA training. One was on maternity leave and was to resume teaching the next term. The other was currently teaching second grade.
Religion and Ethnicity

The head teacher reported that the village consisted of more Muslims than Christians. He explained that, among the Mijikenda, some are Muslim and some are Christian. The Swahili people in this area are referred to as Bajun and this group is generally Muslim. There are a few Wasanya, which is a small group of Cushitic tribes, and a few Somalis. The head teacher said that students often go to nursery school at the madrassa, then start at the primary school in first grade. The madrassa has classes for nursery school up to secondary level. Some children go to the madrassa every morning, then return to the madrassa after the morning session at the primary school. The primary school also has religious education and students attend the course that is in keeping with their own religious tradition. Kenyan curricular policy dictates that first through third grade students go to either Islamic, Christian, or Hindu religious education classes for four periods per week. Religion is, however, an etic variable since cultural beliefs and practices are at work apart from the official religious delineations recognized by the state. As an example of these local sociocultural systems of belief, a man was murdered because he was suspected of “being a witch” by people in a village just south of Noanini on the night before we returned for our second focus group session (Field notes, March, 2009).

Industry, School Donors and Tourism

Industries in the village are the San Marco Italian Space Station, fisheries, sand harvesting, salt mining, and subsistence farming, such as coconuts. The village has a government fisheries department office. The head teacher cited the existence of many

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12 The San Marco Space Station was built by the Italian government in 1964. It employs about 15 Italians and 200 Kenyans, including technicians, carpenters, mechanics, and kitchen staff. It has a dispensary (health clinic) with an ambulance and a nurse, which is often referred to as a “doctor” in Kenya.
community-based organizations: women’s, men’s, and mixed groups. A beach management unit is also concerned about the welfare of fishermen. The Italian government\textsuperscript{13} built new classrooms at the school, equipped with fans, electrical sockets, and light fixtures, but no electricity is available in the town yet. Electricity was expected by June 2009, promised by the Coast Development Authority, which is a Kenyan government entity funded by the Italian government among other donors. The Kenya Education Sector Support Program built a series of pit latrines and some new classrooms, including an early childhood building, where 55 students come in the morning only for class. An individual from Holland, who comes to the village as a tourist, started funding school improvements as early as 2003 and continues to support various school projects.

This site was affected by tourism. Students of all ages expected me to throw them candy, yelling “sweet, sweet” as we passed or saying it to me quietly when I was at the school. Children were accustomed to vanloads of tourists driving by throwing candy out as they went. On our way out of town after the second focus group session, students were walking in the road and as we drove slowly by and came to an almost complete stop due to the crowd of students, some of the older students started bouncing our car up and down and yelling for treats. A Peace Corps Volunteer, the first volunteer ever posted to this village, was there to establish more tourism. He explained that the sea and a nearby small island where tourists could go out and camp for a few days were attractions he and some local entrepreneurs were promoting to European tourists. He ran in to see me before we left the first session when he heard another mzungu (Kiswahili for white person or European) was in

\textsuperscript{13} The Italian government has spent nearly 3 million dollars in Coast Province, half of it in Malindi and Magarini districts. Noanini Primary School rehabilitation and extension, and the construction of the health center and secondary school were funded by the Italian government.  
http://allafirca.com/stories/200911191156.html
town. He also started a chess club at the school, which, he noted, encourages critical thinking skills. He said that both boys and girls were coming to the club.

**Free Primary Education (FPE) and School Fees**

The head teacher explained that the school provides free primary, but then listed several fees when asked directly about each one. If a student runs out of pens or paper, or an exercise book, then the parent pays for additional supplies. If a student loses a book, then the parent pays for its replacement. Parents pay 100 shillings per term for the teachers that the community employs because the government cannot supply enough teachers. The exam fees are due at every interval: mid-term and end of term. Class 1 through 3 students pay 20 shillings, Class 4-5 pay 22 shillings, and Class 6-8 pay 25 shillings. If a parent does not have money, he or she is asked to come see the head teacher.

At the time of the study, the school did not have a school-feeding program. At a March 2009 meeting with the District Education Officer, the head teacher was told that every school in Malindi District would be included soon in school-feeding due to the drought conditions. The head teacher also cited World Food Programme and the Egyptian government as other sponsors who may be enabling the school-feeding to restart (and cover the whole district). He held a parent meeting about school-feeding coming to the school. He has names for cooks and thinks he would spend about 2000 per month to pay 3 cooks. He is also working on who will bring firewood or gas canisters. The cost is not covered by the government, so the parents are responsible. There is no school-feeding program currently, but students can buy from the kiosk outside the school or go back home to eat. The head teacher says that there are lots of fish and coconuts around to eat.
Water

Water was available for children to wash their hands prior to eating and after going to the latrine. Soap was not available at the hand-washing location. The drinking water for the school was the same as for the town: an open well within the school grounds. The head teacher said that from time to time the health authorities put a treatment in the water.

*Figure 6.1.* Looking down into the well within school grounds at Noanini Primary School.
To drink water at school, one bucket for drinking water serves several students and stays within the school. While waiting for mothers for the first focus group session, women were coming into the school compound, getting water from the school well and carrying it away in buckets on their heads. Each time I was at the school, a little boy came to the well rolling a large container, which he would fill using small plastic buckets in the well, then seal the container and roll it home on its side with his foot.

**Availability of Health Care and Secondary Education**

A health clinic, or dispensary, was at the schoolgrounds. Mothers discussed going to the dispensary as well as seeking health care for serious emergencies at the San Marco Space Station, at dispensaries in neighboring villages, and at the hospital in Malindi Town.

A Form 1 class or 9th grade, the first year of secondary school, also meets at this school. This class started meeting in 2009 because a new secondary school is under
construction just behind the primary school. The head teacher reported that this school construction will cost 13 million Kenyan shillings and will be paid for by the Italian “cooperation” (Italian government funding). Selection of students will be done at another level, with the primary school not having a role in the selection. Students have to perform well on their primary school exam (KCPE exam).

The head teacher explained the difference between different types of secondary schools: national secondary schools require a 400 and up on the exam, provincial secondary schools take students within the range of 350 to 399, and district secondary schools receive students who have scored 300 to 349. If a student scores below 200, it is not easy to gain entry to any of these government schools. The student can repeat the last grade or attend a village polytechnic. Near this village, there are several polytechnics in batik cloth making, sewing, masonry, carpentry and computers. Coast Province does not have a national secondary school. When asked why, the head teacher says that the location of schools depends on national and regional leaders. The school under construction here may be a provincial school. The facility will be handed over to the District Education Officer when completed. The head teacher supports making it a provincial school because it will “pose a challenge” to students. Other provincial schools in Coast Province are: Malindi High, Ngala Girls, and Gede Boys. This one would be the fourth provincial school.

**Corporal Punishment**

At our first visit, a teacher was hitting a female Form 1 student with a switch under a tree in plain sight of our research team as we left the school grounds. The male teacher was using the switch to hit her hands or, as it is referred to in Kenya, “caning” her hands. Other students crowded around. The teacher doing the caning said to our research team as we
slowly left the schoolgrounds in a car “What are you looking at?” in a dismissive way and did not modify his actions in any way due to the research team’s presence. When asked about this incident, the head teacher said that the Kenyan government has signed agreements stating that corporal punishment should not exist. He explained that at the school, they try not to use it, but sometimes do, saying “You know, the African…” He explained that children have been brought up with the cane for discipline at home, so not using it at school is difficult. He said that the school uses it to remind students that “the cane is also one way”. I posed questions to the head teacher about motivation to learn and relevance of education to the students. The head teacher offered that in the community education was not relevant to the students; they needed to be encouraged to have motivation from within themselves. He expressed interest in understanding how to work with students to encourage intrinsic motivation.

Figure 6.3. First focus group session at Noanini Primary School.
Focus Group

Twelve women attended the focus group: 9 Muslim/Swahili women and three Christian/Giriama women. Two women came in after we had assembled 12 women and a research team member asked them to leave politely. Then, many more women came and the notetaker went out to explain to them that we could not take more than 12 participants. In the focus group, most of the women were fully covered, but some had a whole outfit underneath: jeans or patterned pants peaking out the bottom of the bui-bui (black garment that covers the face, head and body) This dress reminded me of travels to Dubai and affluent fully covered Muslim women in Gulf States, in which the Western-style clothes underneath are only for her husband to see at home. The facilitator was very overt about her own ethnic membership. She mentioned: ‘We are “Giriama pure”’ when addressing the three Giriama speakers in the group. While worrisome to me from my cultural perspective, perhaps this calling out of her own ethnicity and connecting herself quite openly to those three participants served to neutralize ethnic/religious/linguistic differences, which were so readily apparent, but not spoken of until the facilitator exposed them directly. The focus group met the first time in one of the newly built Italian-funded classrooms. There were fans overhead, but they were not working due to the lack of electricity in the village. The second focus group session was held across the school yard in an older classroom, which was one of the second grade classrooms that had EGRA reading instruction materials on the walls.

Second Study Site: Shadakunu Primary School

Shadakunu Primary School was chosen as the high-growth school. Of the three schools chosen, this site was the furthest from Malindi town thus once again challenging the quantitative findings about urban-rural differences. The second site was one hour and fifteen
minutes northwest of Malindi Town. On the road to the second site, boys were taking cattle for grazing at alternate locations in the area up and down the road, which meant they were not attending school. The landscape and ecology in this area were dry and hot. The village did not have electricity and the head teacher expressed the strong desire for solar or gas lamps. The school had 1,047 students, which included the eight feeder schools from outlying smaller villages. Some were as far as seven kilometers from the second site. This school housed nursery through Class 8 and had 14 government-paid teachers. Parents supported the nursery teachers and two of the parents were paying teachers at the eight feeder schools. Two teachers, a first and a second grade teacher, received the EGRA training and were still teaching at this school in March 2009.

**Religion and Ethnicity**

The village was less than 1% Muslim according to the head teacher. Muslim students went to a madrassa three kilometers from the school for weekend classes. The main ethnic groups represented in the community and the school were Giriama, Kamba, and Kikuyu.

**Industry and School Donors**

The main livelihood in this area was farming. Pineapple farming was going well until a blight came and killed the entire crop. After the blight, the closest pineapple farming was then 20 kilometers away. The head teachers said that this blight was “like what we say about AIDS, incurable”. A group of carvers from the Kamba ethnic group making souvenirs such as elephants, giraffes, and other animals found in Kenya was active in the village. The Community Development Trust Fund, a U.N. organization has been a key donor for this school. The Catholic Diocese of Malindi started the school. In 2006, the diocese built 10
classrooms and renovated the existing structures, including providing the water tanks, latrines, and desks for classrooms.

**FPE and School Fees**

The head teacher described primary school as free under FPE, but then listed a series of fees for which parents are responsible. Exams cost 15-20 shillings and the teachers’ fee of 30 shillings per student pays for non-government-supported teachers. He stated that no paper and pen fee exists and that textbooks and exercise books were paid for with FPE funding.

The school lunch fee was 15 shillings per student. World Food Programme provides food and the school pays the cooks. If a child has not paid by the 25th of the month, then the school lunch program only serves those who have paid.

**Water**

The school water tank, which caught rainwater for drinking and handwashing at school, was completely empty. The school did not have a particular spot for handwashing before a meal. The “security man” gets water from the tank and puts it into basins, but without water in the tank, no water is in the basins for handwashing.
Figure 6.4. Water tank at Shadakunu Primary School.

After going to the latrine, no particular place is available for handwashing either. Children can use a container to get water from the tank to wash their hands, then go back to class. Soap is not available. Drinking water also comes from the captured rainwater in the tank. The water in the tank ran out two days ago, so the school had no water at all in March 2009. The head teacher had communicated the lack of water to the area counselor and he promised to bring water. The security man has cups that he gives out for drinking. The students share the cups.
The focus group participants refer to a community-held dam where they get water, explaining that this “dam” is now empty since the rains are late. I returned to Shadakunu after the second focus group session to see this water source the participants had described. The picture shows the fence in the background that the community erected around a large hole people dug to capture rain water. The community will dig the large hole out more so that when the rains finally come, they can collect water here and fetch water within the village rather than walking an hour to find water. Community members are not allowed to get water out of the school tank, which had just run out of water the day before we began our focus group sessions.

Availability of Health Care and Secondary Education

The closest dispensary was up the road five minutes by car. A maternity clinic was under construction behind the dispensary. A secondary school named for Mehkatilili, a famous female freedom fighter, existed next door to the primary school. The same exam
scores reported above applied for getting into this secondary school. It was a district secondary school, so students who scored 300 to 349 on the primary school exam could be offered admission to the school.

**Health events.** This location is where we saw a girl lying on a bike with a group of adolescents around her walking the bike down the road on our first visit to the village. The girl was gesturing, gesticulating, and appeared semi-conscious. This event was the first observation of the “devil’s disease” discussed in the focus groups. When asked about what we had seen, the head teacher said that this sickness occurs in girls. He explained that the girl starts shivering, then falls down and becomes semi-conscious. Girls in this condition say words you cannot understand. He stated that the problem has erupted in the last few months. He wonders if it is some sort of malaria.

At this site, the research team was made part of a health episode at the school. A girl had collapsed at the school and the teachers asked if I could take her to the dispensary up the road in my car since mine was the only car in the village. We drove five minutes up the road to the dispensary. A male teacher from Class 6/7/8 and a female nursery teacher, along with two female classmates of the Class 7 girl and the sick child, travelled with me. They carried her to a cot in the building behind the dispensary reception building. The health worker came in within five minutes and took her temperature. It was slightly elevated at 37.5 degrees Celsius. She continued to have eyelids fluttering, limp body, and grunting/whimpering. She had some of the same symptoms observed of the girl on the bike. I wondered if this event was the same collapsing or different than “devil’s disease” that we have heard about at two sites and witnessed on our first visit to this site. The two teachers mentioned that this student probably had malaria. I think of the girl we picked up at a junction before reaching this
village and gave a ride to the next village; she was 16 years old and in Class 7. She has repeated grades 4 and 7 due to sickness. She missed too much school to continue and complete the year each time.

The head teacher talked about an emergency “discipline” meeting he was called to the day of our first focus group at this site. The Malindi District Education Officer brought head teachers in the district to Malindi Town to discuss an increase in schoolgirls getting pregnant. The head teachers reviewed procedures that the national ministry wants them to follow so as to collect specific evidence. Cases were believed to have become frequent because the communities have become aware of what is happening and thus more reporting occurs. He explained that parents may convince their daughters to direct the case against a teacher, who may not be responsible for the pregnancy, so the head teachers were instructed in procedures to follow to establish proper evidence of misconduct on the part of the teacher.

**Corporal Punishment**

The research team witnessed several caning events at the second site. I saw a girl being caned in the middle of the teachers’ room in front of many teachers the first time we visited. A group of students huddled around the teacher while one female student was hit on the hands with a stick; the others waited their turn. The other teachers sat around the room marking papers or talking. No one noticed my presence for a moment, then a Standard 5 teacher jumped up to help me and led me out of the room. No one seemed alarmed or in need of hiding the caning. Also, I saw a girl being hit on hands with a stick outside the Class 8 classroom. In addition, the school employed a man as an overall monitor along the Class 1, 2, and 3 row of classrooms. He had a big stick and was going up and down outside the corridor waving the stick at students to get them to go back in classrooms. Lower primary school
students appeared to be unattended from 10:30 until noon when they appeared to be free to go.

**Focus Group**

When we arrived for the first focus group session, several women were waiting under the tree outside the head teacher’s office. The group at this site was less responsive and less comfortable than the first site’s group. The group tended to be subdued throughout the sessions and laughter did not figure into either discussion or questionnaire response time, as had been the case at the first site. Three of the 12 women had small babies that they breastfed intermittently. Half of the group was barefoot; the others had flip-flop sandals.

When I returned from the trip to the dispensary, our facilitator asked me to meet her in the hallway and with frustration said, “This group is very dull”. The facilitator was exasperated that a co-wife had come to represent a child that was not her birth child and asked me if she could stay. I told her that she should stay and asked what the facilitator could do to improve the discussion. She said there was nothing to do and that we’ll just continue. Having the group session during school hours made a big difference as well. Students were anxious to see who I was and what I was doing and it caused some disruption at the school. Our focus group met at the far end of a long row of classrooms, so we walked past almost every student in the school to reach the room.

A power differential seemed to keep some mothers answering authoritatively while others stayed quiet. When asked about the group make-up, the head teacher said that the mothers who came were exactly those selected through examining the daily register. The school sent letters to those parents, so they came. One of the women was the cook at school. One dominant participant was the wife of the local “doctor” and pastor. Another dominant
participant found a relative in common with one of our research team and waited at the school for us to take her home in our car after all the other mothers had started walking home. Because we made the mistake of acquiescing about the ride, we had an opportunity to compare her house with other group members who lived near her. Hers had a tin roof, while others around her had thatch roofs, which indicated a marked difference in SES.

*Figure 6.6. First focus group session at Shadakunu Primary School.*
Third Study Site: Vikidi Primary School

It took an hour to reach Vikidi from Malindi. The landscape was much sparer here with a dearth of trees compared to the other two sites. The area was considered semi-arid and did not have a high population according to the head teacher who suggested that I call the provincial administration sub-chief to get the village’s population. The head teacher characterized the environment at Vikidi as harsh and explained that the majority of parents did not stay with their children here. Instead, they move to other towns to look for work. Children are then left to take care of their young siblings. He also considered that the majority of the parents were not educated.

Vikidi Primary School had six teachers employed by the government and two employed by parents. Those teachers are third and second grade teachers who also teach some subjects in the upper primary grades. These community-employed teachers are Form 4 leavers or graduates of secondary school. Because the school houses nine classes and eighth grade takes up two classrooms, the school did not have enough rooms to house all of the students in the morning shift. Third grade came after lunch for their school day. This afternoon shift could contribute to why we see children grazing animals and not in school on the way to Vikidi since some of these children attend school in the afternoon. The school was number one in the zone and fourteenth in the district last year in mean score on the primary school exam (KCPE). Two hundred eighty students are in first through eighth grades. Vikidi does not have electricity. At the primary school, teachers use paraffin lamps instead for evening preparation.

Two teachers from Vikidi Primary were trained as part of EGRA. One of them was transferred when promoted to assistant head teacher at another school; the other one was
currently teaching first grade. The class sizes at the school were somewhat smaller than the other two sites with 33 total children in second grade and 22 total children in third grade.

**Religion and Ethnicity**

The majority of the village and the school is Christian, with the head teacher saying that he thinks there are “not even ten Muslims”. Nevertheless, there were two mosques up the road at Langobaya, one in Vikidi, and one nearby in Mlanga. Also, the senior teacher who talked with me in the head and assistant head teachers’ absence was not Giriama; he was from Tanariva and spoke Pokomo. The head teacher explained that most of the community and school population was Giriama and spoke Kigiriama at home. Just one student was Baluya and two were Kamba.

A *madrassa* met at the mosque on the weekends for students of various ages from first through eighth grade and up through secondary. The head teacher thought that the *madrassa* also met in the afternoon and evening as well as Saturday or Sunday. At school, religious education was required in either Islamic or Christian education. The school separated the students and taught them their religion. When asked if students could learn about a religion that was not what they considered their own, the head teacher said that some learned about Christianity though they were Muslim. He said there was freedom and students could join in to learn if they wanted. He said that there was not any class about local traditions, but in extra-curricular activities, there may be music, traditional dances, and drama.

The head teacher said that it was a problem for English to be the language of instruction. Every subject at school was conducted in English, except for Kiswahili class itself. In fact, when I later asked the head teacher what his biggest challenge was, he said “the
use of mother tongue at school”. He said “it’s a war” to teach in English. All the students speak their home language together at school, which was for almost all Kigiriama. The families’ home language was perhaps not officially forbidden, but was not welcome to be spoken at school and was seen as antithetical to school goals and students’ education.

**Industry, School Donors and Tourism**

When rains are sufficient, which they were not at the time of this study, then farming was a primary occupation in the village. With the scarcity of rain, farming had not been going well. The main occupation was considered charcoal-burning in which one cuts the whole tree down, chops it into manageable size, and burns the pieces. Then, the charcoal is sold in Malindi and Kilifi. This practice was known to encourage deforestation, soil erosion and the scarcity of rain, but was widely pursued in order to generate income. Raising animals, such as cows, goats, and sheep, was also a common occupation.

The head teacher was in his third year at the school and said the biggest sponsor of the school was the community. The Catholic Diocese of Malindi constructed the school in 2005 and gave it to the community to manage. Before the building was built, the school was a mud structure built by the community on land donated by a parent. Parents came together in 1985 and built the first mud structure for the school, which was then used for 20 years. A group of Germans also organized a marathon from Malindi to Vikidi to raise money, which was used for desks and school equipment. Desks at the school were individually dedicated, with their sponsors written on them, such as: “Sponsored by Heinrich von Nahmen, Sponsored by Hildegard Nitsch, Sponsored by Schussel-Live”, etc. The head teacher mentioned that last term, the school had ActionAid sponsorship of some sort and benefited from a grant from the government (“MP donation”) to the Langobaya area, but after the
election in January 2009 and the post-election violence, this funding stopped. No tourist industry was apparent at Vikidi. The road to Tsavo National Park did not pass by this village, so tourists did not regularly tend to have contact with this village.

**FPE and School Fees**

The head teacher described the various fees parents paid that were not covered under FPE: 20 Kenyan shillings for exam fees, 200 Kenyan shillings for a uniform, 30 shillings for teachers’ salaries, and 300 per term for preschool. He said that the government provided paper and pen as well as schoolbooks. As for fees collected for teachers, five teachers including preschool and primary teachers were paid by parents. These teachers were paid 3000 shillings each per month out of funds collected from parents. Government-supported teachers were meanwhile paid at least 10,000 shillings a month. School-feeding from the World Food Programme started in January 2009 term and would continue for five years. WFP selected the area due to famine conditions; some residents have been going without food for three to four days according to the head teacher. Students have collapsed in class and teachers have been seeking out food for them. Students paid one shillings per day for lunch and the fee was collected daily, not monthly. The school needed to pay the cook, so collected the fee for the lunch for that purpose. The head teacher explained that, with the program, WFP wanted to see enrollment go up, especially for girls.
The head teacher explained that there were children who did not come to school at all. The country called primary education free, but children were still prohibited from coming due to costs. Some parents could not afford clothes. Students were not required to have a uniform, but some children did not have any clothes at all to wear to school. The school could not give an estimate of how many children were not in school, but the head teacher was sure that school-age children were at home and not enrolled or attending school. In addition, herders, many of them old men referred to as Gala, came from very far away with their animals. The head teacher suggested that these men had wives and children in the area with them and the children needed schooling options. There had been discussion about changing this primary school to a semi-boarding school. The farthest village to feed into this primary school is 10 to 15 kilometers away or about two hours walking.

*Figure 6.7. Kitchen at Vikidi Primary School for preparing lunches with food provided by World Food Programme.*
Water

According to the head teacher, the children washed their hands prior to eating and after going to the latrine. There were tins in each class for washing hands. Soap was not available at these hand-washing locations. For drinking water, the tap water came from a water plant at Langobaya. Sometimes the pipe was perforated near a joint and water stopped coming. In this case, students were told to bring water. Students got water at home from taps and wells. The school had cups for drinking water, but there were not cups for each student. Students in each class used the same cup.

Availability of Health Care and Secondary Education

There was a dispensary up the road in the next village. This dispensary was the closest health care option for families. When we arrived for the first focus group session and only three mothers came, we disbanded and decided to come back the next day. The teacher who had been designated to greet us when we came then asked if we could take him up the road to the dispensary as he was feeling sick and needed to seek medical care. We drove him up the road to the dispensary, which was about five minutes away by car.

This village did not have a secondary school. There were secondary schools in various locations in the area: Langobaya, Mekatilili, Kakoneni Girls, and Mwangea Girls. Eighth grade students started preparation for the primary school exam during the second term. The government paid tuition, food and boarding for secondary school, but parents paid school fees, purchased required equipment, clothing and school materials, and provided transport. The type of secondary school a student goes to determines the student’s chances for going to college. The senior teacher said that if a student goes to Alliance Girls, it is easier to go to university because of the prestige of Alliance versus going to Langobaya for
example. The senior teacher explained that parents needed to plan ahead and save money for their child’s secondary schooling from the time the child entered first grade.

The fees for secondary school are prohibitive as they are exponentially more per year than most families earn in a year. In this community, since no secondary school exists, families also know that going to any secondary school no matter what the level is that the child is accepted to, will involve leaving home. These barriers to secondary school may also hinder primary school attendance because parents and children alike may approach school discouraged in that they cannot continue beyond primary, so perhaps time would be better spent engaging in other activities rather than going to school at all. Unlike the other two study sites, the research team did not witness corporal punishment taking place at Vikidi Primary School so no section on corporal punishment is included for this site.

**Focus Group**

The day of the first focus group session at Vikidi Primary School, we did not take a needed turn along the way and were on the road to Tsavo National Park instead of heading to Vikidi. The head teacher, nor the teacher who stood in for him when we had visited the first time, was present when we came for the first focus group session. The head teacher and assistant head teacher were both in Malindi at the Ministry of Education for end-of-term exam registration.

Only two women were present for the focus group and told us that parents were not there because they were participating in a “food for work” opportunity offered by an NGO they could not name. An unspecified organization had come and asked adults to clear the road and receive food in exchange for the work. The female teacher we met on our first
school visit came and greeted us as we waited. We left after an hour and a half since only three women had come and we rescheduled the focus group for the next day.

The next day, after picking up a repaired tire at the Total station in Malindi, we got to Vikidi by 9am. We met with the head teacher before starting the session with the assembled mothers. Nine participants had arrived by 10:10 am, and mothers continued to trickle in, including the three who had been waiting the day before. My research assistant acting as focus group facilitator posed the first question on what does health mean. All was quiet, then she asked the question again and got laughter, as was the case more often at the first site, but not at the second site. This ice-breaking laughter gave me hope for richer responses to come.

Twelve, then thirteen, and finally fourteen and fifteen women arrived until we had to turn off the recording devices and talk with a couple of the women so that we could keep the group at a manageable size. The grandmother in the group refused to leave, saying she would stay and listen up to the end. Sitting under the tree in full sight of people beyond the school grounds may also have lent to the group’s growth with both latecomers and random comers. One woman that came and was politely turned away said that she didn’t receive a letter from the school about attending, but was told about it by a friend. One mother who came towards the end of the first session told my research assistant, who was acting as notetaker and dealing with latecomers, that she had a letter asking her to come to the focus group, but was late because she was at the dispensary for CD-4 counts and ARVs.

We met under a tree beside the school by the soccer field. With their mothers’ consent, I offered biscuits (cookies) to each of the four babies and toddlers in attendance, which calmed them. One of the toddlers was playing with a wrapper on the ground that his mom gave to him. We settled in to do both focus group sessions in one day and spent
morning through afternoon out under the tree, shifting the desks brought out from the school around so that we could continue to be in the shade. School kids came out to play soccer during this time with lots of boys playing together. Some kids- 2 little boys, 3 little girls – were walking around with arms around each other just enjoying friendship.

The preschool children walking home from school carried the bowls they brought to be served the school lunch. One little boy came and stood behind his mom. Her neighbor in the group bumped her and she looked back and smiled. Her older son, who was in first or second grade was still sitting behind her. The little boy next to me pulled his mother’s breast out – the other one that wasn’t yet out - found the nipple and started to suck. This use of the breast as toy, as comfort, and as nourishment all occurred fluidly as time passed in this group, which was also the case at the second study site. At the first site, the mothers did not have small babies along with them.

As the second session began, mothers raised their hands with responses to the question, “If your child is sick, could he or she go to school?” Holding both sessions in one day meant that we did not lose any participants, but we also did not gain the potential advantage of getting to know one another during the first session, then meeting again with a continuing relationship at the second session. The newness of the relationship and the lack of time to reflect on the first session before starting the second could have affected the responses, but also could have enhanced the responses as all the questions were asked and answered in one long day.
The context provided about community resources and school and village characteristics included in Chapter 6 shaped the home environments of the mothers and their children. Considering the contextual differences among the sites also leads to more questions about how these variables may be affecting children’s health and literacy. For example, water was in shortest supply at the school with the greatest growth in reading scores (Shadakunu). Water was available, but not clean, at the site with negative reading growth (Noanini). At the site with no change in reading scores, water was accessible through piped sources, but food was perhaps the least available of all three sites (Vikidi). These factors need to be investigated further by hearing from the women about their daily lives and how these contextual variables combine with others to affect their children’s and their own health, and how they then affect literacy formation at school. In Chapter 7, the mothers who participated in the focus groups in these three school sites will be the focus.
CHAPTER 7: LEARNING FROM MOTHERS

The early grade reading instruction training for teachers and assessment of students targeted the improvement of second graders’ reading achievement in schools around Malindi on the coast of Kenya. This chapter interrogates health as an often-cited reason for low literacy levels beyond school factors in developing countries, by using an emic approach that elicits perceptions from mothers of second-grade students in three rural schools around Malindi. Based on focus group discussions with mothers of students in the reading program, this chapter examines maternal attitudes about the child’s health and literacy and uncovers disjunctures between mothers’ narratives and development policy assumptions. Chapter 8 will address the mixed methods integration of results of the study, which move beyond Western assumptions about literacy, health and development and connect literacy across the lifespan, from the mother to the child.

After initially discounting women as actors in development, Western development approaches since the 1970s have increasingly recognized the central role of women in the development process. Development research has also heralded the positive effects on education, health, and human agency from educating a girl who, in African societies where marriage is culturally universal, will likely become a mother. While maternal factors have been shown to shape the lives of her children, the strong connection between the mother’s and child’s literacy has not been addressed in literacy interventions. By problematizing literacy approaches that exclude the mother, while bringing to the fore multilingual literacies and the interrelatedness of literacy, health and development, these findings move to a place
that makes sense for the African mother and family. The mothers’ perceptions and daily lives point to a need for engaging problems multi-generationally and bridging the divides of separate development sectors of health and education, which are deeply embedded in the same environments and contextual drivers.

As discussed in Chapter 3, to gain access into the ecocultural niche of the child, I talked with children’s primary caregivers, their mothers, to elicit the emic or insider view on what happens in the home that facilitates good health and reading achievement. Listening to this set of sensibilities with insights from African feminist, gender and development, and child development literatures, I tuned in to what mothers had to say rather than entering the research knowing what I would hear.

**Description of Focus Group Participants**

Thirty-six mothers took part in focus groups at three different school sites. Of those 36 focus group respondents, 33 completed demographic questionnaires with a member of the research team. Thirty-three mothers with a mean grade-level completion of “some primary” were interviewed. Fourteen mothers had not attended school at all, while three had completed primary school and one had completed secondary school. More than half of the women reported that they did not read in any language, while fifteen of the mothers reported the ability to read in at least one language. Figure 7.1 shows the frequency scores for answers about reading ability with level of schooling and languages reported to read included. The number of meals among the mothers can be seen grouped according to religion and school site in Figure 7.2. The number of meals also correlated with frequency of headaches reported by respondents.
Figure 7.1. Reading Ability in Which Languages and Level of Schooling.

Figure 7.2. Mothers’ Number of Meals Daily, School Site, and Religion.
The mean age at marriage (of the twenty respondents asked that question, which was only posed at the second and third study sites) was 19. Twenty-three of the respondents reported no toilet or use of “bush toilet”, while nine had a pit latrine and one had a flush toilet. Five of the respondents had a phone, while twenty-eight did not. One mother had a TV, while the remaining 32 respondents did not. Twelve of the women (all from Shadakunu) cited a ‘dam’ or water basin (as seen in Figure 6.4) as their source of water. Nine (all from Noanini) reported a well at school as their water source. Three reported piped water 30 minutes from their home, two said that piped water was available at their residence, one had piped water 15 minutes from home, and one had piped water one hour from home. One reported a public well as her source and another reported getting water from a well at home. The constellation of languages at each school site is depicted in Figure 7.3 below. Shadakunu’s focus group was the most homogeneous in terms of ethnolinguistic membership, with all respondents citing Kigiriama as their home language.
Figure 7.3. Home Languages of Mothers at Study Sites.

For reference, I have provided a table of focus group participants in Table 7.1 below, which includes the pseudonym of each mother, their child’s school site, the number of meals they eat per day, their home language, religion, self-reported level of schooling, self-reported reading ability and three socioeconomic index items (cell phone, toilet, and radio) from the asset index used on the demographic questionnaires with mothers.
Table 7.1

*Demographic Snapshot of Focus Group Participants*

<table>
<thead>
<tr>
<th>Participant</th>
<th>School Site</th>
<th>Meals per day</th>
<th>Language at home</th>
<th>Religion</th>
<th>Level of schooling completed</th>
<th>Can you read?</th>
<th>Toilet?</th>
<th>Radio?</th>
<th>Cell phone?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Afiiya</td>
<td>Noanini</td>
<td>1</td>
<td>Kiswahili</td>
<td>Islam</td>
<td>None</td>
<td>Yes, Kiswahili</td>
<td>Pit latrine</td>
<td>No</td>
<td>No</td>
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<tr>
<td>2. Aminata</td>
<td>Noanini</td>
<td>2</td>
<td>Kiswahili</td>
<td>Islam</td>
<td>None</td>
<td>Yes, Kiswahili</td>
<td>Pit latrine</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3. Rahima</td>
<td>Noanini</td>
<td>3</td>
<td>Kiswahili</td>
<td>Islam</td>
<td>Some primary</td>
<td>Yes, Kiswahili</td>
<td>Pit latrine</td>
<td>No</td>
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<tr>
<td>4. Amara</td>
<td>Noanini</td>
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<td>Kiswahili</td>
<td>Islam</td>
<td>Completed primary</td>
<td>Yes, English</td>
<td>Pit latrine</td>
<td>No</td>
<td>No</td>
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<tr>
<td>5. Nasirah</td>
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<td>Kiswahili</td>
<td>Islam</td>
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<td>Pit latrine</td>
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<td>6. Shurafa</td>
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<td>Islam</td>
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<td>Pit latrine</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>7. Kabibi</td>
<td>Noanini</td>
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<td>Kigirama</td>
<td>Christianity-Pentecostal Evangelical Fellowship in Africa (PEFA)</td>
<td>Some primary</td>
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<td>None(^1)</td>
<td>No</td>
<td>No</td>
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<tr>
<td>8. Zawadi</td>
<td>Noanini</td>
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<td>Kigirama</td>
<td>Christianity-Catholic</td>
<td>None</td>
<td>No</td>
<td>None</td>
<td>No</td>
<td>No</td>
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<tr>
<td>9. Dhahabu</td>
<td>Noanini</td>
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<td>Kigirama</td>
<td>Islam</td>
<td>None</td>
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<td>Pit latrine</td>
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<tr>
<td>10. Shuruq</td>
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<td>11. Zena</td>
<td>Noanini</td>
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<td>Kiswahili</td>
<td>Islam</td>
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<td>Yes, English &amp; Kiswahili</td>
<td>Pit latrine</td>
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<tr>
<td>12. Zorah</td>
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<td>Islam</td>
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<td>Yes, Kiswahili</td>
<td>Pit latrine</td>
<td>No</td>
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</tbody>
</table>

\(^1\)“None” indicates that the respondent cites a “bush toilet”, which means going outside for toilet needs.
<table>
<thead>
<tr>
<th>Participant</th>
<th>School Site</th>
<th>Meals per day</th>
<th>Language at home</th>
<th>Religion</th>
<th>Level of schooling completed</th>
<th>Can you read?</th>
<th>Toilet?</th>
<th>Radio?</th>
<th>Cell phone?</th>
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<tr>
<td>13. Sara</td>
<td>Shadakunu</td>
<td>2</td>
<td>Kigiriama</td>
<td>Christianity-Light of God</td>
<td>Completed secondary</td>
<td>Yes, English &amp; Kiswahili</td>
<td>Pit latrine</td>
<td>Yes</td>
<td>Yes</td>
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<td>14. Mali</td>
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<td>None</td>
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<td>15. Mary</td>
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<td>Christianity-Light of God</td>
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<td>None</td>
<td>No</td>
<td>No</td>
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<td>16. Kadzo</td>
<td>Shadakunu</td>
<td>2</td>
<td>Kigiriama</td>
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<td>17. Rehema</td>
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<td>18. Pendo</td>
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<td>19. Furaha</td>
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<td>21. Maria</td>
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<td>23. Karemba</td>
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<td>24. Kadi</td>
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<td>25. Sidi</td>
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<td>26. Nyevu</td>
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<tr>
<td>Participant</td>
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<td>Language at home</td>
<td>Religion</td>
<td>Level of schooling completed</td>
<td>Can you read?</td>
<td>Toilet?</td>
<td>Radio?</td>
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<td>27. Rashida</td>
<td>Vikidi</td>
<td>3</td>
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<td>Pit latrine</td>
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<td>28. Kache</td>
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<td>1</td>
<td>Kigiriama</td>
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<td>29. Dama</td>
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<td>Christianity-Pentecostal Angono</td>
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<td>30. Rida</td>
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<td>31. Jelko</td>
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<td>32. Mapenzi</td>
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<td>Chonyi</td>
<td>Christianity-Pentecostal Angono</td>
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<td>33. Neema</td>
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<td>34. Kalodzi</td>
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<td>None</td>
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<td>35. Kafedha</td>
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<td>36. Bendera</td>
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<td>37. Heela</td>
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<td>None</td>
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</table>
Four Interlocking Quadrants of Mothers’ Lives

As we proceed with the consideration of findings that emanate from the qualitative phase of the study, revisiting the list of research questions reminds us that we had several areas of inquiry and numerous research questions underlying the questions we asked the mothers. Our findings first are reported in four quadrants that speak to aspects of each question although they may not map specifically to each research question. Each of the research questions had to delve into each of the quadrants, as they are interlocking and interdependent categories of mothers’ lives. Chapter 8 will progress from the quadrants organizing Chapter 7 to building grounded theory from these findings.

The various school sites corresponded with certain propensities: Noanini was made up of a majority of Muslim and Kiswahili-speaking mothers while Shadakunu was comprised of Christian and Kigiriama-speaking mothers. Vikidi’s focus group showed more heterogeneity in the home languages cited and in varied responses on religion. In spite of certain site-specific differences in terms of contextual factors, repeated responses occurred in the first through third sites, which indicates a level of saturation in the qualitative data. The small differences do not make health so vastly different or different enough that there cannot be saturation noted in the focus group findings although the small differences lead to nuanced shifts in a mother’s daily endeavors and her child’s health and schooling. My analysis remained mindful of the inter-group differences in reading growth, in the level at which reading started prior to EGRA, in ethnolinguistic and religious group make-up, and in water source. While I continue to consider those differences, my findings will focus on the major
themes that arose and became apparent across the three study sites in spite of inter-group variations.

The context of the sites as it is reported in Chapter 6 served to fill out the elements of daily life that were being drawn together in the mothers’ voices. The focus group transcripts were coded with the field notes, head teacher interview data, and mothers’ demographic data as surrounding reference data initially, but then later to enhance the story emerging from mothers’ perceptions, attitudes and descriptions. I began to categorize mothers’ lives into four quadrants in order to “dimensionalize” (M. Kearney, personal communication, May 20, 2010) their discourse. I needed a picture that could capture, yet stay fluid, and show the overlapping nature of elements found within each quadrant. The spinning wheel made up of the four quadrants emerged. This way, I could continue to ask what was going on, but within a dimensionalized figure that would provide a kicking off point for answering research questions with a grounded theory model in Chapter 8.

Figure 7.4 contains the four quadrants of mothers’ lives that I use to categorize findings and display focus group findings. Gender, health, environment, and language and literacy are the four overarching areas of discussion. Each of these quadrants contains the daily concerns of mothers’ lives, but also points to thematic sub-areas: Gender is characterized by responsibility and resilience. Health is made up of definitions, actions, and intersections. Environment envelops situational givens of the physical or natural context, cultural and linguistic context, and socioeconomic context and how all of these interact. Language and Literacy encompass the impact of parental involvement and mothering of the child.
Figure 7.4’s four quadrants and activities within each encapsulate what the qualitative findings demonstrate. Hunger, water, heat, distance, and disease are situational givens dealt with by mothers regularly. These givens, in turn, affect the child’s health. Mothers are engaged in a constant search for income, food, water, and money for hidden school fees. The child participates centrally in the mother’s struggle. Thus, hunger, fee arrears, dirty uniforms due to lack of water, sickness of the child, and absence of mother due to the search for income-generating labor lead to the child missing school. Access of mothers to the world outside of these daily challenges is blocked by environmental variables. The Mothers’ Lives Model categorized daily pursuits into quadrants that affected one another and overlapped with one another. Later models and grounded theory in Chapter 8 built on this model. Just as there is a maternal-child health linkage that is studied and addressed in public health
interventions, so there is a maternal-child literacy linkage that must be addressed in literacy interventions, and these linkages should be addressed cross-sectorally across health and literacy. Health itself is acted on and depleted by hunger, water, heat, distance, and disease, all of which are the situational givens dealt with regularly by mothers and their children.

**Health: Mothers’ Definitions, Actions, Intersections**

Health was the primary focus of the group discussions, especially during the first session with each group of mothers. Mothers talked about their definitions of health, actions they take regarding their child’s health, and intersections of health with other aspects of their lives, such as income-seeking activity, and water and food and all the attendant occupations of a mother’s daily life. Mothers talked about connections between health and school attendance, economic status and school attendance, and, less overtly, connections between health and socioeconomic status. Health factors do influence school attendance and school achievement. Children miss school due to disease and sickness, but also due to water (when none is available to wash body or uniform, and when child needs to engage in fetching or care for the home while the mother is fetching further away). A lack of school fees for various hidden costs that mothers chronicle is also cited as a reason for missing school. School achievement, thus, suffers given the lack of attendance. Mothers perceive their role in child’s health to be first and foremost to feed the child, but also to seek care for a sick child, find a cure for an illness, and also to give the child “freedom”, to help the child to grow up happily.

Definitions of the meaning of health, of poor health, are both described in terms of food, disease and cleanliness of the home and child. These elements enter into a description of the developmental niche of the child and the cultural practices related to health and
parenting described by mothers. The role of the mother in this niche is central and women’s duties as mothers stretch into every aspect of community life – socioeconomic structure, health clinics and services, schooling and learning. Mothers describe their role as connected to these structures and institutions, but disconnected in terms of those structures and institutions being aware of or responsive to their needs, their realities or ready with resources as demonstrated in the following exchange:

Facilitator: And these members of…of parliament of yours or.. your leaders..that is let us say this area's leaders,they usually....usually cooperate with parents or with those..people of this place to ensure that they, aah, they improve the health of children here or of everyone's health?

Shuruq: (Inaudibly) Everyone stays on their own. There is no one who comes and asks for the health of children or parents....

F: We cannot hear.

Rahima: She is telling you that after they have gotten, they go away with their money.

F: Eeh…

Shurafa: That is, everyone..number six..cares for their children themselves..you know if they are healthy or not healthy. There will not come one from the village to ask you if the child's health is good or what.

F: And...how to make sure that they have..they have...making sure that in school the children get good results...that is them coming in the middle to make sure that children get good education in school?

Shuruq: About these people...

F: Those leaders of yours

Shuruq: There is none.

Shurafa: …I do not know, like this..they call for a meeting, like just the other day..the one for the other day. They call for a meeting,comitte and teachers and parents so that they can find....from last year..to look for a way for children to succeed but the results have not been good..committee, teachers sat down,and parents also we were called but up until now,good results have not been found. But the teachers themselves when they say that they want cooperation among these three people is when children.......they get to rise up, rise up.
These mothers do not give examples of community leaders or civic figures of any type taking an interest or pursuing an agenda in support of their children’s health or education. Meanwhile, mothers at two other sites cite scholarships being given on a financial need basis (Shadakunu) and food aid, school uniform purchase, and construction of the school building being provided (Vikidi), most often coming from “sponsors” who plan and meet with community leaders. Nevertheless, after mentioning these outside “sponsors”, when asked what leaders do to make schools better, Dama replies, “In short, we have not yet known what they do and they are not bothered”.

Liminal and multi-faceted definitions of health. Health is a multi-faceted concept, but also closely tied to basic needs, such as food, water, and cleanliness, and the basic fact of being alive or not. Mothers illustrate throughout our discussions the liminality and precariousness of health by defining health as “being alive” and not having health as being the alternative, not waking up or not being alive. Health is thus a condition on the precipice at all times; at the same time, this characterization of health is juxtaposed against depth in the health definition. Mothers discuss physical, socioemotional, and spiritual aspects of health, constructing a picture of the meaning of uzima, or being alive, as a multi-faceted concept. Being alive entails living in all of those areas including socioemotional and spiritual, but also is closely tied to the simple fact of being alive physically. When the facilitator asks about what health means to the group of mothers at Noanini, a series of responses follows:

Shurafa: I understand the word health is uzima (Kiswahili for ‘being alive’).
Facilitator: Being alive?
Shurafa: Yes.
Facilitator: When you are alive, you are healthy? (Everyone nods their heads). Okay, who else has their opinion? Everyone has, has the freedom to explain to us.
Afiya: And having good food.

Amara: *Maisha bora* (Kiswahili for ‘good life’) is also health.

Kabibi: (Laughs) Health is that the child feels alive (pause). When the child gets out that he does not experience sickness like that. In fact, he can complete countable months or even a year without getting troubled by fever. But, if you come and start seeing that the child gets fever often, than it is probably that in his body, there is a part that is disturbing him or something like that.

Zawadi: (Bows her head). It is enough, what they have said. (Everyone laughs).

Shuruq: That the child has good health, when the child eats good food.

Mothers refer to food as a primary necessity for health when asked to discuss what the word “health” means. They also bring up disease and “normal sicknesses” as constant in their and their children’s lives, and as a constant preoccupation of theirs for controlling, treating, and recovering from them. The liminality and precariousness of health comes across in respondents’ basic definitions of health. “Energy-giving food” has to be present for mothers and children to maintain health. Sickness has to be dealt with and overcome.

   Facilitator: And…when you…like that day you do not have, ok…but when you get food, do you give them good food…or healthy food that gives health to the body?

   Shuruq: yes, when you get…food…good food, you will give them and when you get these ones of *ugali*\(^4\), you will give them also. If it is better food some other day you get, you will give them and maybe if there is nothing at all, they will sleep that way.

Food, sickness, sleeping and waking are basic building blocks of health in mothers’ eyes.

Mothers at Vikidi describe these basics of a child health, ending with a reference to health equating with ‘being alive’:

   Kalozi: I see that my child is *tototo*… (Kigiriama for okay)

\(^4\) Staple starch made from cornmeal and water cooked to a dough-like consistency and eaten with vegetable or meat sauce.
Facilitator: And what do you do to make sure that your child is okay?

Mapenzi: (Whispering) It is just that you give them food.

Kalozi: It is food…eats enough food.

Facilitator: And in terms of diseases?

Kalozi: Diseases do not stop…fevers, but when you go to hospital, a little, in the morning, they are outside.

Facilitator: Okay, she has said that .. and another? Kache, how do you see it..when you look at your child’s health and friends’ children in the village, how do you see it?

Kache: I see that my children’s health is mbidzo (Kigiriama for good).

Facilitator: How…in terms of health and his life?

Kache: Diseases do not stop…fevers and colds..

… Facilitator: And how do you make sure that his health is good?

Mapenzi: Because he is alive, when he sleeps and wakes up, he is still alive and comes to school without a problem.

When asked about poor health, mothers cite the absence of food as the major driver. Mothers also expand on this “bringing up well” model, citing cleanliness as well as disease care.

Facilitator: Okay. What is it that makes a child have poor health?...Yes, number two.

Nyevu: It is that maybe they are not being looked after well enough…for example, if it is food, if they are to eat three times a day, then they are given once a day… it can contribute to poor health.

Facilitator: Anyone else?...what makes a child have poor health?

Rida: Sometimes it is the way of bringing up…for example you have a child and you do not take care of him well… the child will not have good health. Even if you give them food, but there is no cleanliness, you see, the child will not have good health… maybe they are sick and you do not care…also that is a thing that makes a child have poor health.
Mothers articulate the importance of socioemotional health and their role in assuring its growth. This mother describes “freedom” as critical to her child’s good health and describes stress as antithetical to good health:

Facilitator: Zena, what can you do to make sure your child has good health?

Zena: You give the child some freedom. That is if you are happy for him, and you are always happy when she/he is near you, but if she/he comes home and the mother expresses sadness, the father also the same, the child will have stress.

**Health affects attendance and schooling.** Health does affect schooling, with ailments keeping children at home, especially when distance to school is long, water is scarce, and food is lacking. In the excerpt below, headaches and fever keep the child home. These are part of the “normal sicknesses” articulated by mothers, which is malaria and may be cerebral malaria when described as below.

Facilitator: Okay, not taking care of the child…is there anyone else with their opinion to tell us?...(no response)… And how have you seen the health of your children in relation to their education? Does it affect their education or …there are those who have already said something…but what about the others…when your children are sick, do they come to school or they do not come?

Heela: They do not come.

Sidi: Some do not come…it is until they are healed that they come.

Facilitator: And what disease can make a child not come to school?

Sidi: It is fever of the whole body and headaches.

Facilitator: So what brings about these headaches?

Sidi: They will just say that their head is aching…and then say that their whole body is aching..so I cannot know what brings that.

Distance to school is a compounding problem related to health as well. Sara, a member of the group in Shadakunu, lived in a community with children from many kilometers away in smaller settlements who walked to the primary school.
Sara: Secondly, it’s the distance. The walking distance to the school sometimes affects the child. The struggling of a child to walk long distances makes… makes the child deteriorate healthwise.

Facilitator: You mean the distance from their homes to here is like how many kilometers?

Sara: Mmmm. Up to here… some children’s homes are very far…. about 10…15 kilometers.

Facilitator: Is it?

Sara: Yes.

Facilitator: And they come by what means?

Sara: They come on foot.

This mother connects the walk to school with failing health, which will in turn affect concentration, cognitive ability, and school performance. In the next excerpt, Sidi, from the Vikidi focus group, connects her child’s walk to school with those same outcomes. Her child has failed twice; he is in Class 2 while his agemate is now in Class 4. She says that “his mind does not get” it. Health is integral here because distance to school is viewed as depleting his health and contributing to poor cognitive function.

Facilitator: And when you look at the distance from your homes to the school, can that affect the children in their education or does it not affect?

Sidi: Many are affected…like mine already, then…when he was starting school, he was good, but now, the mind has totally changed to a different one such that he does not get anything in class… but in the beginning, he was getting…but now, he has really dropped…he even has an agemate who is now in class 4 and he is still in class 2…as I am talking.

Facilitator: And when you look at it, what do you think is the reason?

Sidi: I think that it is just his mind does not get it.

Facilitator: And from home to school, how far is it?

Sidi: It is like two hours.
**Mother and child health intersections.** Mothers discuss suffering from the same illnesses as their children, with malaria and malaria-associated symptoms being the most common disease for adults and children. Malaria is cited across all three sites as being the foundational illness experienced by community members. Other illnesses are not noted as being a shared burden of children and their mothers. Mothers discuss muscle strains and pressure, diabetes, and stress, which are conflated often as one and the same health issue as affecting them while they discuss ringworm, tapeworm, cholera, allergies, convulsions and colds and flu as illnesses experienced by children.

Mothers talk about differences between their own health and that of their children. Mothers connect their deterioration in health to caring for their children. For some mothers, caring for their children means seeking out work to buy food and keep her their children fed, which exhausts and expends their energy for caring for themselves. Dhahabu says, “…you see I am the one who looks for food for them and cooks for them, so I am the person who look for food then… deteriorates in health”. All of the women in the group chime in saying, “It’s true”, then laugh. Dhababu continues, “Looking for food… I pay by… the jobs that are here are fetching water, I carry a bucket of water on my head (pause), washing clothes for people… then you get…money, you buy maize flour and take it to the children”. Shurafa agrees that her health is not as good as her children’s although not for the same reasons, “As for me, my children have better health than myself, because they are all young, I take care of them. I do not look for food for them, their father looks for food for them, but all the things at home, I take care of them myself. Now, I don’t understand if it is being tired from taking care of them that makes my health not be good!?” Dhahabu then says she had not finished, “That
searching, searching until… and you will spend the whole day hungry until evening… that is why I am not the same as these children (mothers all laugh), they have defeated me”.

**Intersection and variations in health issues across three communities.** Water sources, distances to school, water, health clinics, and other community differences were associated with variation among the communities in what illnesses were brought up as common and frequent.
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Environment: Physical, Social, Economic

In keeping with efforts to categorize contextual factors in various ways, I have sought
to delimit environmental factors in a manner similar to the ICF-CY, which is an
internationally applied WHO tool\(^\text{15}\). In the ICF-CY, environmental factors include physical,
social and attitudinal factors. Personal factors are a separate contextual category and include
elements of identity, such as gender and race. Environmental factors can be both individual
(at home, school, work) and societal (formal and informal social structures in social
networks, laws, community systems). I include economic factors under this section on
environment as well because those factors are integral to mothers’ articulation of their lives.
Personal factors as described above are addressed in the Gender quadrant. Contextual factors
have to be considered when considering functioning and disability in this framework because
health conditions and contextual factors are in constant and dynamic interaction.

Environment and situational givens determine health. Mothers describe health
factors that are environmentally situated. Health factors are linked to much more than
personal illness control. They are linked to the physical, cultural, and socioeconomic givens
of the community. Mothers’ use of time, for example, is contingent on environmental factors.
Her duties are culturally imparted, unable to be alleviated, and dependent on the physical
environment at the same time. Environment when discussed in human development literature
does not expect or extend to such culturally imparted contingencies in the environment.
Physical, cultural, linguistic and socioeconomic circumstances are all part of the
environmentally situated health factors mothers describe. (Linguistic factors are not dealt

\(^\text{15}\) ICF-CF stands for International Classification of Functioning, Disability and Health-Version for Children and Youth.
with under Environment because they comprise their own quadrant in the Mothers’ Lives Model called Language and Literacy).

**Physical environment: Water.** The vital link of water to education is clear in the central focus on water in mothers’ and children’s lives. A shortage of water (whether from a clean source or not\(^{16}\)) first shapes mothers’ and children’s lives due to time spent seeking out and fetching water. Time spent getting water increases when availability of water decreases. Mothers and children walk longer and longer distances to find and bring home water at Shadakunu and Vikidi. Mothers then cannot do other income-generating work to provide food for the children and children cannot go to school because they and their uniforms are dirty and also they need to go fetch water.

No matter how far away the water is, unclean water sources also result in mother and child sickness. Children then miss school due to their own sickness or due to their mother’s sickness if they need to fetch water when she is not able. “Water from this well here, that hole dug for the latrine is the well. Basically the water is already dirty at the bottom”, says Zena of the Noanini focus group. She refers to an uncovered well in the school grounds. It is the water source the whole community uses except for those that work at the Italian Space Station and carry home bottles of purified water. Also, children may attend school, but be sick, weak and not concentrating due to water-bourne illness or lack of sufficient water for cooking, drinking and washing. In Noanini, as in the other two study sites, “the rains have not yet come” and Shurafa talks about the rains coming at the time when cholera and other water-bourne illnesses will become prevalent.

\(^{16}\text{The Ministry of Education official I spoke with about water sources, especially the community water basin in Shadakunu, voiced an opinion widely held, “We don’t care about clean water, we just want water”. My research assistant/facilitator explained while we toured the Shadakunu water basin that the water you drink from an early age is the water your body is conditioned to process. Her opinion and that of the teacher with us was that a person’s body adapts to that water can drink it regularly without getting sick.}
Social environment: Developmental niche and mothers’ knowledge. Mothers describe knowledge about diseases and how to handle various situations that arise with their children. These parental ethno-theories (Super & Harkness, 2002) provide cultural insight into sickness and health, gender norms and behavior, and funds of knowledge mothers tap into in the care of their children. Definitions of the meaning of health, of poor health, are both described in terms of food, disease and cleanliness of the home and child. These elements enter into a description of the developmental niche of the child and the cultural practices related to health and parenting described by mothers. The role of the mother in this niche is central and women’s duties as mothers stretch into every aspect of community life – socioeconomic structure, health clinics and services, schooling and learning. Mothers describe their role as connected to these structures and institutions, but disconnected in terms of those structures and institutions being aware of or responsive to their needs, their realities or ready with resources as described by Shuruq and Shurafa (see page 172).

Getting resources. Because children’s lives are so closely tied to their mothers’ lives, mothers’ struggles are children’s struggles as well. In Vikidi, charcoal-making, which mothers are aware is illegal, is the only income-generating activity available for most women. Children accompany their mothers on long walks to find and cut trees that they burn and then transport back to the road to sell as charcoal. Through shared pursuits and enterprises, mothers’ and children’s health is tightly linked, not just antenatally, but throughout childhood. Maternal-child health linkage is experiential and environmental as well as physical and nutritional. Mothers’ descriptions of struggles to provide food for the child and to provide for basic school needs, such as pens and kerosene, cannot be hidden.
from the child and thus are shouldered by children as well. Examples of such struggles are shown in Kafedha’s and Kabibi’s comments (see pages 197 to 200).

**Child-centered parenting.** Parenting attitudes are articulated and adapted depending on the personality, ability and nature of the child. Mothers recognize these differences in children and adapt their responses to their children accordingly. This child-centered parenting comes in stark contrast to the school system where children must conform to one standard of achievement, dictated by exams and not noted to adapt to learner differences.

Nasirah: Children are different. Even with mine, there is that who likes studying and the other one is always a “goal keeper” (the last position in the class). He likes playing with balls until you get tough on him/her. “Read, no playing with the ball, no roaming about”. While there are some you don’t need to tell them such that when he/she comes and has some homework, he/she does and keeps her/his book in order, but another one goes away. So, another one may not be the same. You are then supposed to be serious handling those children.
M: Ok, so how do you find your own?
Nasirah: Those are mine and they differ, but I make sure I am tight on them.
(Nawashikia ngangar)

... Shuruq: It’s the same. The child must be interested; some are taught, but are not as serious due to liking to play, so it is up to you as a mother to be alert with them.

... Kabibi: I feel that according to our children that after school, you should take care not to let him/her play around too much because mostly too many activities hinder him to think of getting into books. Some children are influenced by videos/shows after school, yet I don’t have someone strong to tell him/her and he/she listens. It’s me who would tell him not to attend videos, but he escapes and goes to the video show and comes very late at night and is required to go to school. At school, he/she will write while dozing. After school, you will tell him the same and you also may not know what is written in the book.

Mothers spoke about their parenting attitudes for girls in particular.

Shuruq: I will pay for all.
F: What are the reasons? You must be having your own reasons.
Aminata: If there isn’t, I will pay for the boy and leave the girl.
F: For what reasons?
Aminata: Because the girl will not go to tuition.
F: Why?
Aminata: She will go and play with her friends.
F: And Shurafa?
Shurafa: If my daughter was big, I would pay equally with the boy because with the present lifestyle, you will find that life is the same. Girls are working the same as boys. Therefore, if my girl was big enough, I would pay for her the same as for the boy.
M: Ok. How about Shuruq?
Shuruq: I am also feeling the same. If I have the money, I will pay for both.

Here, mothers at Noanini are discussing whether they would pay “tuition”, which is afternoon tutoring outside of school, for their girls as well as their boys. One viewpoint hews toward the traditional gender preference with the idea that the boy will get resources for school, that he will be serious and study, while the girl will go play with her friends. The sentiment of the boy being a better and wiser investment runs through this viewpoint. Another viewpoint arises from a more current reading of the employment landscape. Mothers say that both boys and girls would be paid for because both can work in the “present lifestyle”. The choice of paying for a girl and not a boy if money is scarce does not get discussed or debated even though it was one option given by the facilitator. The sense that educational expenditures on girls is as useful, practical or desirable as for boys exists, but has to be reinforced by making a case for investment in girls.

**Discipline and punishment.** Corporal punishment was ubiquitous in the primary schools in this study. Home and school connection on corporal punishment is articulated by mothers and head teachers, even though policy prescribes a ban on corporal punishment in schools. At the policy level, the District Education Officer for Malindi described the disconnection between policy and practice. On the policy of corporal punishment he said, “It’s outlawed. We don’t even talk about it. It was outlawed and therefore it’s not there” (Field notes, March 27, 2009). On the practice of corporal punishment, he offered, “Done just quietly. Unless there are complaints, you won’t know”. He clarified what constituted
sanctioned punishment at schools, citing manual labor as an acceptable disciplinary action for students. When asked about parental consent for teachers using caning, he cited the U.N. charter on child’s rights and explained that the “global law” covers all Kenyans. Teachers, he suggested, will tell parents that if they want caning of their child, they can do it themselves.

In terms of knowing whether or not caning is happening in Malindi District schools, he referred this area to deputy head teachers who are “in charge of discipline”.

At two sites, I observed teachers caning upper primary female students under a tree within the school grounds and in the teachers’ work room. At one of those sites, a school guard carried a long stick up and down the corridor of lower primary classrooms swatting at students who were in the corridor. Mothers, head teachers, and my research assistants talked about corporal punishment as resulting from a pact between parents and teachers even though it was not the policy prescribed by the public school system in Kenya.

F: Some other day, we were leaving here and we found a teacher caning children… and we said, ‘this caning is still there’. This one (indicating the principal investigator) asked, ‘is caning still here?’ We told her..no. She asked, ‘do you usually cane?’. I told her sometimes it is an agreement between the parents and the teachers because if the teachers are given permission by the parents… that if my child does wrong, you can punish so long as you do not hurt them, then they cane. (All agree). Their caning…(inaudible because everyone talks at the same time).

Shuruq: …when they do wrong, they have to be punished.

Shurafa: So that the next time, they will not do it again.

All: It is true.

As discussed in Chapter 6, the head teacher at Noanini saw corporal punishment as one way in which the home connects to the school, explaining that parents use this form of discipline, so the students are conditioned to expect this type of punishment at school as well. He was interested in discussing motivation when I brought up other methods of encouraging
students to conform to school demands and standards other than physical punishment, which also includes physical labor in some cases as well as caning. The head teacher was open to thinking about making what happens at school relevant to the children and giving them a sense of mastery and success rather than ruling through the threat of punishment, but did not feel equipped to change the way things had tended to be done. The contextual nuances of this type of social practice lead to further consideration of macro environmental factors, or those that orbit the school in the socio-political environment.

**Macro environmental factors.** Mothers in the study responded to questions about leaders dismissively, indicating that local and political leaders were not seen as helpful or available in solving their daily problems in engaging in family-level struggles. Other informants confirmed what was discussed in Chapter 2: that political intrigue and a power imbalance characterize relations between the Coast and the rest of Kenya (Field notes, March 7, 2009). The relative lack of political power on the coast manifests itself in the national education system. Historical origins of the system began with missionaries building schools in Nairobi and Central Province. The missionaries did not build schools on the Coast because the region has been viewed as Islamic with Arabs having a strong trading and settling presence for thousands of years. Alienation from the rest of the country stemmed from this perceived or actual religious difference, according to my research assistant.

**Access to secondary school and university.** One of the situational givens that characterizes the educational environment on the coast is that no national secondary schools exist in Coast Province. As described in Chapter 2, the country’s top-performing students go to national schools, so the absence of a national secondary school in the province means that any student who scores high enough for that level must leave the province for secondary
school. The secondary school issue is also mirrored by university non-existence in the province. No university exists in Coast Province and relatively few Coast residents attend the nation’s universities. My research assistant, a university student as well, said, “It’s like we’re not even in the same country. The first time I was introducing myself (at the university), everyone was surprised. What? You’re from Mombasa?!”.

“Outside” ownership of resources. She described also how coastal resources are controlled by people from outside Coast Province: “Kenyatta owns most of beach property in Mombassa. Tsavo is a national park, the rest of it is owned by Kenyatta. There are mines – gold, precious stone, coal. Indigenous people are complaining that they are squatters on their own land. People from here are not aggressive. It was easier for others to come and persuade others to come get it. Elders let them have it”. She went on to say that Kikuyus, who are traditionally from Central and Nairobi Province, are ubiquitous in Kenya: “In Coast, you’ll find a small village of Kikuyus”. She described how secondhand clothes come in at Mombassa and then go to Nairobi to Kikuyuni, who then supply them around the country to sellers. She also explained that after independence Kenyatta said he was bringing tractors, but instead brought Kikuyu to clear the land. When asked about land reform, she did not see the political will for it, but said that “people make problems for Kikuyu. During post-election violence, even here, there was some [violence]. The Orma, who are nomadic people feel that the Kikuyu take land. Orma invaded Kikuyu in Mpekatoni in Lamu”. She continued saying, “People are quiet, but it’s gurgling underneath. Come 2012, this place will erupt like a volcano”.

17 Her family history also held a large stake in the power imbalance and politics between Coast and the rest of the country. In 1963, independence was finally won for Kenya and Kenyatta was still in jail. Ronald Ngala, a Coast political leader and her great uncle, died in a mysterious accident. My older research assistant, mother of three living in Nairobi who grew up on the Coast, added that her father got out of politics because of danger.
Economic environment: “Looking for food”. While variation exists in the economic environment for different ethnic memberships and perhaps attendant class divisions, mothers do also describe their health as having no difference citing their overlapping situation of poverty, which stems from the environment they all inhabit together. Shuruq says, “I see that we are all the same, we are all poor”. (Zena laughs). Nasirah explains, “When we compare the state of health, all of us in Noanini are the same. Because all of us use water from the well, we all eat fish, our lives are exactly the same, one level. So I see we are the same. The dispensary is the same. Today if I go, I might see this one and tomorrow I will find the other. I see that we are all the same”. So, the mothers describe poverty or the state of being “poor” as rooted in their physical environment, which dictates the water they drink and the food choices they have. Their health then, when compared with one another, they see as the same in spite of ethnic and class differences. Again, when comparing their child’s health to other children’s health, mothers refer to the “environment”. Zena says, “Because the environment is the same, they are in the …same environment, so I think they are the same”.

Economic struggle is also rooted in the physical environment, such as with reports of fathers returning home with no fish in Noanini, pineapple farmers losing their livelihood to blight at Shadakunu, and persistent lack and lateness of rains obstructing farming yields in Vikidi, which in turn leads environmental degradation through a focus on more tree-cutting for charcoal-burning. Poverty is tied directly to the physical environment that families inhabit.
Language and Literacy: Literacy as Loss

Most of the mothers across the three sites had not had this experience of learning English and entering the Kenyan-shaped English speaking world within their country and within the systems of their culture. They remain, then, left behind in their own home languages in which they have not developed reading and writing proficiency. For mothers, locus of control is the linking aspect between gender and language and literacy. They are linked because there is a sense of schooling being outside their locus of control. Mothers cannot help with homework, they cannot draw on their own knowledge to help their children with school. Mothers talk about asking a teacher or family member (often a child’s older sibling) to tell her how her child is doing or to help. Mothers feel constrained as well due to language and literacy issues to pay a “tuition” teacher, who would conduct an afternoon tutoring session, to teach the child and help the child complete homework. Asking others to help is a way of establishing a better sense of involvement and control. It is a coping mechanism, an adaptive response, but does not mitigate the separation/fracture/disjuncture the situation builds between mother and child, home and school. The child is separated at a fundamental level in the school domain from his/her mother and his/her mother tongue. This element of gender and of language and literacy disconnects mother from her mothering of child and from her involvement in school.

Health-related loss. Through a similar dynamic, the language and literacy issue separates mothers from their child’s health. Mothers describe their child’s illness, various parental ethno-theories about how various illnesses come about, and they cite various health care options within and outside their communities. Across the three sites, mothers always refer to the “doctor” or “one of his followers” writing something down and often then getting
tablets for the illness. Echoing Djite (2008) about sociolinguistic difficulty in navigating health care and hospitals, mothers say that they do not know what the health care worker diagnosed or any further information other than the need to take tablets. Mothers then cannot trace symptoms to diagnoses or one health problem to the next. They are cut off from the written, and often spoken, part of interacting with the health sector. One mother describes how she can talk with the health care worker when he is a fellow Giriama and refers to this case favorably, but as infrequently encountered.

**Indigenizing**¹⁸ **English.** A teacher I talked with at a secondary school in Malindi District talked about Kenyans making English their own. He said, “We speak our own English”. This making of the European, colonial language indigenous to the African culture results in contextually grounded language structure and vocabulary that one can find in post-colonial settings all over the African continent. In this context, this indigenization of English gives Kenyans ownership over the foreign language that is their language of instruction and language of government and commercial sectors. It indicates an impulse to remake the language, gain ownership of it, and indigenize it for local purposes. Under the current school system, children do not get to keep their home language as they move through school. They need to acquire a foreign language to succeed in school, so it is refreshing to hear a teacher, who has referred to English as *Kizungu* (language of the *mzungu*, which means any European language or, simply, white people’s language) instead of *Kigereza* (English), as making the language their own.

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¹⁸ Rather than meaning that the local culture is forced to adopt another culture, I am using the term ‘indigenization’ to mean that Kenyans make English their own by molding and using it within their context. This understanding of the term includes a sense of ownership and power for the local culture rather than for the outside culture.
Mothers’ experiences with child’s school literacy. Mothers report reading progress in their second grade children, but have not heard about a reading program (EGRA) in their school. The program did not enlist mothers in its design and schools did not tell mothers that their children would be engaged in the program or in the assessment of reading, so perhaps it is not surprising that mothers did not know about the program, but it is a symptom of the accepted and assumed disconnect between mothers and their children’s literacy in Malindi District. In the school with a high-growth outcome:

Kadii: No, we don’t know it.
M: Ok. Who knows about it? (No response). Jumwa, you don’t know about it, how about Sara?
Sara: We don’t know about it, but the difference we have noticed in the past years is that we have been seeing the class 1 and 2, they are class 2 and 3 are returned back to school in the afternoon to practice reading. Only reading books.
M: Like which ones?
Sara: Library.

In the school with no change in reading scores, Kafedha described how her child alluded to his involvement with the program, which she had not been aware of previously. The student reported to his mother that the school called for all of the children who could “write” to come to a neighboring school for games. They ate biriani (an Indian spiced rice and chicken dish eaten on special occasions) and drank water “from bottles”. This mother’s story seemed to imply a reward for progress made for some students, but indicated also her distance from the whole process of learning to read and write, measures of progress, and student reward and withholding of reward for progress.

Mothers cite various examples of their child’s progress in reading. Sara describes the following:

I have seen changes because my children who are in class 2 and 3 could not even read an English sentence. I am seeing a difference with my elder ones who are in class 7
and by this time (class 2 and 3), they could not read any sentences in Kiswahili and English.

Sara describes these “changes” as occurring during a period when her children would return to school in the afternoon saying they had lessons of “reading storybooks and being told of their meanings”. Rehema also says, “I have noticed some difference with mine because I have a neighbor whose child is in class 6. She can give him some words to read and fail to read and gives it to my child and she reads it. The neighbor even told me ‘your child is very sharp’”. Kadzo also offers, “…this one (in second grade) can read because he can sometimes read in English and translate in Kiswahili. You may see him taking a lesso (a wrapper) and read it very clearly and quickly”. Jumwa, on the other hand, cites her first grader as reading names and knowing his name on his book while her second grader “has not yet known how to read”. Furaha says, “I am also very thankful because he can write his own name, his father’s and any animal!””. Pendo cites progress that her child’s teacher notes after employing a “tuition teacher” to help him.

**Knowing English.** At the same time, mothers recognize the difficulties due to languages at school being different than languages at home. Shurafa, a native Kiswahili speaker, explains that children do not “know” English: “…because our children have problems.. do not know English completely, especially the second and first grade children…and third, even eighth, do not know English, these children”. Her first fix for the problem is hiring a “tuition teacher”. She continues saying, “All the subjects used here are taught in English, so if the child does not know English, really, will they succeed? The subject is in English, the child does not know English, even when explained, they will not be able to understand it. Yes, in the Kiswahili class, they are usually succeeding, but in the English
classes, the children fail‖. She once again suggests tutoring for second and third grade students, books for reading and dictionaries, so that children can “teach themselves English and Kiswahili”. Shurafa’s solutions to a problem she observes regularly are both outside of herself and demonstrate her external locus of control concerning her child’s learning. The child needs to teach himself or herself the language in order to read. The idea of Shurafa helping as the child’s mother does not enter in to her problem-solving for this critical issue, indicating her disconnection linguistically from the child’s schooling and the separation of the home, where education begins, and the school, where reading is supposed to happen.

**Mothers’ capacity for involvement in helping child.** Mothers’ perceptions of how to help their child have good health and how to help the child learn at school come across as intermeshed responsibilities and aspects of parenting. An unidentified respondent at Noanini says:

To assist him/her when he/she comes from school. The food has to be ready, to eat well, have a good bath. You have to make sure you work hard to make him eat good food in time, be responsible when he/she is sick, if he/she misses attending school to be able to know such that if you are to punish him/her, you may do so. You also go to school to know how they relate with teachers about her/his progress. That is when your child will learn well, but if you only take good care at home, yet you don’t know how they relate with the teachers, then your child may not do well. When at home, you know how to talk to you child, to be free…that is have some freedom at home. The teachers and your child have to relate well. That is when your child will do well.

Mothers’ perceptions of success at school are bound to the exam-driven system of schooling. Success is predicated on passing yearly exams and mothers view these hurdles as signs that their child is succeeding and learning. Mothers need to buy requisite equipment and pay needed fees, which is a socioeconomic burden mothers fulfill with difficulty. Furaha, at Shadakunu, offers the following comment:
To succeed academically is to give all the equipment needed in school. That’s when he/she can pass exams. For example, if he lacks a book for a certain subject, you should be able to buy for her/him, if you can. If he asks for a certain thing needed in their class, you should be able to buy it. That’s when he can always add to until when he comes to school and is taught by the teacher, he/she will be able to learn. Facilitator: At school and at home…
Furaha: Yes…he will be reading the books he/she asked for to assist him. That is when he/she can succeed in his/her exams.

Karembo says that the mother’s best course of action when she herself cannot read to help the child is to communicate with the teacher, “To be coming to ask the teacher about his status in the class, how he writes his work, because if you keep on coming to ask the teacher, the teacher will tell you that this thing and that are not fine”. The system is not only exam driven, but very teacher driven. The teacher ranks all students in the class according to performance on exams. Mothers who do not read do not know how their child is doing by reviewing his or her work. Mothers are not able to read over homework or understand an assignment, thus rely even more heavily on teachers’ reports on how well their child is learning.

Language and literacy issues mean that mothers cannot participate in homework with their children and cannot assess their children’s work or decipher marks or comments made by teachers on their children’s work. Mothers must rely on teachers to know how their children are doing at school and do not feel a sense of control over monitoring and appreciating their children’s school success. Kabibi says that she has not done so yet, but thinks the way to deal with her own inability to read what is written is to talk with the teacher:

My role…is to cooperate with the teacher because myself already, I do not know how to read. I should be going through the teacher to ask how my child is faring because myself even when they are written I do not know what is written.
Facilitator: Is that what you always do or are thinking of doing?

Kabibi: I have not done it, but I think I will do that because when they are written, I do not know what is written.

Facilitator: Okay. For now, how do you make sure that...what is your role in making sure that the child, their school matters are *shwari* (Swahili for in line or okay)?

Kabibi: As for me, like the way you talked the other day, and even today, they have touched me..(all laugh).. to reach where I should continue looking at the teachers so that I know how my child is doing because myself, I did not read..if I wait for him until he comes, when he enters the house, he will come and show me somewhere even if it was written...that week, I do not know because even just the date, I do not know. He will say he has written, he has reached while he did not even get there. Children of these days themselves are like that. Now, like the way you have talked, I am thankful I will also enlighten a bit. I will be forced to come and meet the teachers.

Pendo, of the Shadakunu focus group, says, “For me, I cannot know if my child is doing well or not doing well. It depends on the teacher teaching him…if they see that they are good and going on well… yes, the teacher is the one who knows. I cannot be able to know”.

Nevertheless, mothers find other ways of helping children with their homework even when they themselves do not read or write. Mothers give various strategies for helping their children with school even when they cannot check the work themselves. Furaha, of Shadakunu focus group, talks of another strategy for helping her child when she herself cannot read, “I did not go to school, but I can help him because there, he has fellow children who are ahead of him. So, if it is evening like that and they are reading, I tell them, “teach him, too”. Karembo describes strategies of helping with homework for mothers who do not read:

It is just making sure that the school work is done if they can do it on their own. And the parent, even if you did not go to school, it is not reason for you to let you child go back to school with out doing the work….because there is someone at home who did not go to school, but makes sure that her child, the work they will have been given.. she is even ready to call a neighbor to come and supervise. He will write and then she will take it to the neighbor and ask, “Did he write it that way?”. So, what she does is
just to encourage the child…not telling the child that “you are always the last”. That way you will be discouraging the child.

The difference it makes for the mother to have access to school literacy is highlighted by one mother who has reading skills. In one-on-one interview data, Rida, of the Vikidi focus group, who completed primary school and reads both English and Kiswahili, wrote into her answer about whether she feels that her second grade child has learned to read at school: “school and home”. She illustrates the key role her own skills in reading played in her second grade child learning to read. It was not just at school, the learning occurred at both school and home.

Rida’s situation stands in stark contrast to Kabibi’s. Kabibi offers the following:

I am expecting him to learn and proceed very far such that when he comes he will be doing a job like yours. It should not be like my job of carrying a bucket of water because my father never sent me to school, but for my girl child to go and find her also doing this (imitates how to write with her finger) and I ask her, ‘what are you writing my child?’” (causes laughter). She just does this. In fact, in that office, there is a lady who just does this. (talks while laughing). You are looking, yet you don’t understand anything.

In this passage, Kabibi illustrates her disconnection from literacy practices and events around her, such as in a local office, as well as her separation from her own child’s literacy actions. At the same time, she voices a resolve to provide a school-based education for her daughter. Kabibi finds her daughter’s schooling and literacy formation especially important given Kabibi’s own sense of loss when confronted with literacy events in her community and home. Kabibi also gives voice to the continuing and probably lifelong constraints in the form of persistent economic limitations that she traces to her social/gender-based preclusion from school.

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19 The EGRA variable on homework help demonstrated the effectiveness of mothers’ help when they were able to provide the help.
Gender: Responsibility and Resilience

Mothers described a constellation of responsibilities in the home concerning their children’s health, well-being and education. They expressed a sense of resilience in the face of contextually based challenges to caring for and providing for their children. The term locus of control was useful to me in describing mothers’ perceptions of control over various aspects of their child’s well-being. As seen on page 194, their responses indicated an external locus of control and a desire for the capability to provide for their child economically and for the nurturing of health and literacy.

Centrality of mother’s role. The mothers’ stories bear out the literature reported in Chapter 3 (see pages 68 to 73). Mothers describe their role as multi-layered, with a sustained energy expenditure on household duties and income generation to keep children well. Mothers are responsible for finding work to bring in money and purchase food, and for cooking the meals, finding and bringing home water, providing care for the children, and parenting. Mothers described monitoring their child’s moods, overseeing physical and cognitive development, as well as progress at school, and supporting and advocating for the child. Mothers have income-generating responsibilities while also often, even when the father is present and still living, being the sole caregiver to the child. A noted exception was Rida whose husband was a primary school teacher and helped her children with homework in the evening.

A child’s mother is the constant in the home and her role is critical for the health of the child. In this passage, a respondent describes the hard work of charcoal-burning and selling that allows her to buy a packet of maizemeal (corn flour) so that she can cook ugali (staple corn paste eaten with meat or fish sauce) for her children, so that they will not be
hungry and thus have a chance at good health. Mothers discuss seeking out income-
generating activities so that they can feed and maintain the health of their children. Kafedha’s
description of her work also serves as a metaphor for the struggle mothers across the three
sites described to achieve adequate daily wealth for providing food for their children.

I strive to make sure that they get good food so as to get strength… but also the food, you
have to look for it..pass through cutting down trees..you cut down a tree, pull it, put it together… arrange it…start looking for leaves..you put…that you are covering the
thano (cut pieces that form charcoal)..you take a jembe (hoe) and dig soil, then you
start taking a shovel and throwing the soil on top. When you are done throwing the soil up, you take fire and put in, it smokes. Then, you keep going to check until it is ready, then you come and start breaking… that is when you get the charcoal. When you get the charcoal, you sell… when someone buys, you buy a packet of maizemeal so that your child can get food. That is when you will see that the health is there, not there…the other reason is hunger for these children.

The mother’s socioeconomic role was critical to the health of the child because it is
the pathway by which children get food, have water, get clean, have a clean home, and
receive attention and help for sickness. A mother’s socioeconomic role was tied in their
discourses directly to the child’s well-being and receipt of elements of basic need, such as
food, water, and illness control. Participants felt the weight of this role, while recognizing
this role as her duty that she would carry out no matter what the adversity and challenge to
completing these tasks may be. Mothers did not describe sharing these duties with their
husbands; they did describe asking a neighbor to help when they were sick if no mother or
mother-in-law lived with them.

Mothers were also well aware of the constraints their socioeconomic situation placed
on their child’s schooling. In the following passage, a respondent discussed her
responsibilities, the comparison of “tuition” children or those who had paid afternoon tutors
with her children who did not have paid tutors, and the struggle to work enough and earn
enough income to feed the child each day. Kabibi, whose husband has died, also gives voice to mothers’ sense of an external locus on control in providing support and feedback on their child’s homework.

Kabibi: The issue affecting the child is that…you cannot give him someone ahead of him to assist in tuition just like what this mama has said because the teacher will teach and when he leaves here (the school) and reaches home, he should find someone else who will show him/her how to do the rest because there could be some he may have written and got them incorrect while you at home has no knowledge. Instead if there is someone who can assist him with knowledge, when he gets back to school, he/she will get some achievement. Therefore, the resources to initiate tuition is the problem because doing this is money, yet money is scarce. So, if I figure at the learning programs and I look at my colleagues’ children, a child learns here and goes back to tuition, I don’t have the ability. I also don’t have that because even my class 6 child is not attending tuition and the rest too is just to come here and go home to wait for me who is their mother and their father too to get home whether I will have got some food or not to eat, get to bed and go to school the following day, without breakfast, they would just go that way. Will the child be able to hear what the teacher says?

Zena: No.

In spite of the multi-faceted role of a mother and the challenges women face in keeping their family afloat, mothers express an unquestioned commitment to their job. Mothers describe perseverance in carrying out their culturally designated duties no matter what. Shurafa and Dhahabu describe continuing on in spite of sickness and fatigue to care for her children, and Nasirah reinforce the fatigue brought on by a mother’s work:

Facilitator: And do you think that these diseases that affect the parents… do they interfere with the way they care for their children?

Shurafa: Yes, work tired someone a lot. I see that, myself.
F: I mean that if you are probably sick, does it affect how you take care of your children well?
Shurafa: Yes, it will interfere, but you will do it all the same, even if you will fall down. Maybe you are with your children and your mother is old, you will be forced to do the work that way.
Dhahabu: And what if you do not have a mother?
Shurafa: You will rise up and fall down.
Dhahabu: Because I also do not have a mother.. if I am sick…
Nasirah: Work really tires someone.
(The mothers murmur among themselves).

In this excerpt, Swahili and Giriama mothers are agreeing and reinforcing one another’s assertions about a mother’s responsibilities and resilience in caring for her children.

Variation does exist between ethnolinguistic groups in how they view their roles as mothers and how they experience responsibilities. Swahili mothers talk about their husbands as providing food although fathers are currently returning from fishing empty handed, which is affecting their livelihood, income structure, and labor organization in the home. Swahili women think of the mother’s role as confined to cooking the food for the family and not generally working to purchase food, while Giriama mothers articulate their situation as focused on finding food for their children, which means working to make enough money daily to purchase the basic foodstuffs needed to cook, such as cornmeal, then to get home to cook for their families. Kabibi, a Giriama mother at Noanini, describes the system of work within the community that is being disrupted by Swahili women needing work and food as well:

… but you do not know what type of job you are going to get….there are no jobs. Even right now as you can see, if you had come with talk of food aid, then it would have saved the house. (All laugh). Because even if you were in bed, you will not get sleep and even when you get out you follow them (points to Swahili women)… and even nowadays they go to look for work. They do not have anything themselves as you see them until they also do not know what to do. So how will they help us?... Work is the same: carrying buckets of water. (All laugh).

Mothers’ locus of control described as external to themselves. With an African feminist sensibility (see pages 75 to 80) and Sen and Nussbaum’s (Nussbaum, 2000) Human Capabilities Framework in mind (see pages 33 and 34), mothers’ responses on stresses in their lives, how they relieve stress, and what activities they enjoy doing generated a picture
of gender and identity mediated by men’s roles in mothers’ lives both as fathers and husbands, and movements between agency and locus of control. Sen and Nussbaum’s framework asks for an approach grounded in mothers’ perceptions of their capability to do and be. Mothers mentioned stress as either related or equated with pressure, which was also often conflated with diabetes. Stress is physically manifest as well for mothers in muscle pain and strains, as well as an inability to sleep.

In the focus groups, the researchers asked mothers to discuss health, over which they might feel arguably more control than reading or schooling if they did not attend school or do not consider themselves readers. Health unfolds in the home and parents decide, given their circumstances, when, where and how to seek outside help for making their child well. Mothers’ locus of control is articulated alternately as internal and external to themselves. They refer to fathers occasionally, and not themselves, as decision makers about health care seeking. They mention religion as an external locus of control as well. Because they are subject to the unreliability of husbands as providers (husbands who are absent, dead, inactive, or no longer able to generate sufficient family income), plus the norms of gender roles and their culturally assigned responsibilities, environment (water scarcity, food insecurity, illegal and strenuous livelihoods), school practices (language of literacy in the school system not accessible to them), their locus of control has developed in interaction with these aspects of their lives. In each of these areas, their control is clearly delimited in the way that they describe it. Heela’s words are illustrative, as she described a prolonged episode of convulsions and treatment-seeking at the hospital:

I came and explained this to his father and he said that at the moment, he did not have the money that is required to take the child, so it was that were to leave it to God…whatever will happen, then only God knows. So that is where we left it, but he still convulses up to now.
The facilitator asks: And maybe you tried… you decided to try somewhere else and if you did, where did you seek help… because we are all human beings.

Heela responds, “Aah, the decision I made was to go to church… to leave it all to God.

Heela’s husband was the final decision maker in whether to seek further treatment. This mother voices a reliance on forces outside of her control by placing the child’s fate in God, but felt she made a decision and took action in some sense by going to church.

Mothers discuss various health care options, financial and geographic access to health clinics, access to and use of medicines. One mother sums up a common viewpoint expressed in the groups about getting treatment:

Facilitator: And you, your role in making sure your child has good health….what do you do?  
Shuruq: You take them to hospital; they get medicine and that is it.

The descriptions of health show the knowledge mothers have about health and its immediacy in their lives and their cultural parenting duties. At the same time, environment and situational givens mean that mothers have less control over health than they would like. They cannot navigate hospitals without literacy (Djite, 2008) and enter a world well outside their domain of operation when they venture out for help for their child. Across the three study sites, mothers also noticed some drawbacks such as when medicines were unavailable or unexplained, and conditions were not always understood by the staff or explained to the mothers. Referral to a bigger hospital meant also financial burden due to transport costs.

Mothers’ perceptions of their role in helping a child have good health and helping a child learn demonstrate some belief that they have influence in these areas. But, their locus of control is delimited in their explanations. They may describe their first attempt as their own
action and beyond that, they are subject to the whims of fate and describe this external force as God, put in terms of Christianity or Islam. In this sense, mothers are aware of their limitations in their environment as their health and education contexts are dictated they recognize by the conditions of their environment. Their recourse to God then is a means of placing control in external hands since they do not feel able or empowered to alter their own environment. This locus of control issue demonstrates how mothers’ personalities and outlooks are shaped by her environment and her experiences interacting with it. In this case, religion becomes a locus of control (Rotter, 1990) tool so that mothers can articulate God’s hands taking over for the child.

Furaha: Yes, we take them to hospital (Pendo’s child next to Furaha starts crying)

Facilitator: Okay…(pause) and there are others who…they use… they go to traditional healers so that they can get protection of the body. So, here at Shadakunu, what do people mostly do to protect their bodies?

Furaha: Many have left that… because I got saved myself… so I can say that my preventive measure is just God…(says something that is inaudible)

The mothers’ resilience then propels them to continue to act on behalf of their child, through continued vigilance of their child’s condition and through prayer, even though their locus of control is often described as external to themselves. As illustrated in the excerpt about falling down yet continuing on (see page 200), the mother’s sense of responsibility for fulfilling her obligations to her children forms the cornerstone of her resilience in the face of various energy-sapping barriers to helping her children. When describing stress relief and activities she enjoys, mothers most often cited sleeping to relieve stress, but most often cited income-generating and work-related activities when asked about “activities you enjoy doing”. Work-related endeavors provide mothers with a culturally sanctioned form of freedom to act on behalf of their children. Their citing of these activities as providing enjoyment indicates that,
in addition to being a response to an ongoing stress related to providing food and keeping their children healthy, income generation may also provide not only solace but satisfaction for mothers as a way of asserting themselves within cultural parameters.

From Findings to Theory- and Model-Building

In examining the data from field notes, interviews and focus groups, I moved beyond quantifiable etic-type questions to uncover insights from real world contexts that cannot be elicited solely from etic research approaches and designs. In Chapter 8, I will integrate findings from both phases of this study and show how the mixed methods design is efficacious in, first, highlighting relationships between variables and, next, allowing for deeper study into what makes up those variables and how and why they interact. Aspects of health become more than surface outcomes to measure, but sociocultural processes to understand and work within. Socioeconomic status and gradations of poverty receive greater analysis so that local contextual landscapes explain origins, definitions and conditions underlying these labels. Mothers’ understandings of health, but also schooling and the path toward school literacy for their children, inform about what have been perceived as persistent barriers, but are perhaps untapped opportunities for demarginalizing those who have been marginalized in the education system. Two of the mega-themes that arise from the data analysis thus far are explained in the two closing sections below.

Health as a Sociocultural Process

As described in Chapter 4, during one month of field work, I explored health themes around literacy by eliciting responses from mothers in focus group settings. Some of the data pointed me to hypotheses, but did not allow for a finished finding or theory. Grounded theory calls for this type of hypothesis making and testing (Kearney, 2010), so it is important to
identify intriguing observations and data that require further study, further data collection, and a search for more literature. I recognize that my field work period was a proscribed amount of time and I was not able to immediately return to respondents, do member-checking, and further exploration. Nonetheless, one area that requires further study has also already pointed me to literature and helped me take a leap in my theory-building.

One of those critical areas of data concerns a fainting sickness that girls reaching puberty are exhibiting, that mothers talked about in each focus group, and that the research team witnessed as described in Chapter 6 on pages 145 to 147. Mothers give names for it, most often “devil’s disease”. They also connect pubescent girls’ fainting sickness to malaria and even to corporal punishment at school, as one mother describes her daughter fainting as the teacher prepared to cane her. My hypothesis revolves around recognizing that girls are under socioemotional and physical stress at school. This sickness is a manifestation of that stress and a psychological coping mechanism. Mothers talked about seeking out local healers’ treatment as well as the health clinic for this illness, citing some girls as persisting in a fainting or convulsive state for multiple days. This illness could be an adaptive response to a situation over which mothers, fathers, and teachers are trying to wield control.

While this phenomenon demands further study, it has also helped me to take a leap toward grounded theory building from Chapter 7 through Chapter 8. It encouraged me to look at literature on adaptive responses and resilience and to build these concepts into my model. I am speculating about what this health issue means culturally, but nonetheless view it as potentially a part of a passage from childhood to motherhood and have a hunch that more research would uncover a rich cultural understanding of what takes place with this illness. The mother involved in the focus group, who was once or was perhaps very recently an
adolescent girl, and in the formation of the Grade 2 girls I am asking their mothers to reflect on, exist in a cycle of relationship with this health issue. At the least, this health phenomenon makes a case for health as a sociocultural process. This health issue derives from the series of environments layered in the home, but also has significant effects on the child’s schooling. The illness unfolds in a public space at school as the child encounters the social/gender environment outside the home. Viewing health as a sociocultural process steers us toward a more nuanced and informed approach to health and literacy. Rather than a question of controlling illness, this sickness illustrates the need to dig deeper into the sociocultural nature of illness and the origins and effects that they claim and incur in both the home and the school.

**Identifying Disjunctures**

Data from mothers discussed in Chapter 7 also pointed to the disconnection between mothers’ daily lives and development assumptions about children, families, homes, schools and how to help people and institutions with their problems. The way problems are isolated to address them in development projects as well as the linear nature of the solutions delivered were not consistent with the cyclical nature of the factors in the children’s and mothers’ lives. In mothers’ stories, I heard a mismatch between mothers' realities with Kenyan and development policy assumptions. From the mothers’ perceptions and attitudes, I saw that Western development fixes for critical health issues, such as infrastructure like water sources and software like ORT (oral rehydration therapy), did not work or were discarded. Because these issues are cyclical and, in the case of water, are determined by the environment (rainfall and maintenance of existing water sources), development fixes eventually failed due to persistent contextual conditions.
The physical environment also dictated systemic issues, such as a shortage of the staple corn flour and rising hunger due to low crop yields. When the rains did not come, then crops did not grow. Also, the commonly heralded education access fix of free primary education was a misnomer practically speaking. Mothers cited numerous hidden school fees that acted as barriers to children’s sustained school attendance. Disjunctures between grounded realities and development discourses represented an overarching theme of the mothers’ descriptions of their daily lives. In Chapter 8, I extend the disjunctures theme and analysis of the home and its effects on the child’s schooling outcomes that influence literacy formation. I propose a new model of health and literacy as mediated by the series of environments embedded in the home and a new model for literacy intervention that takes into consideration the deeply connected nature of the home context with literacy learning.
CHAPTER 8: FINDING THE WAY(S) FORWARD

Literacy efforts have so far failed to reach the poorest and most marginalized groups of populations. Under the banner “Literacy as Freedom”, UNESCO has taken over the coordination of the Literacy Decade. It is meant to mobilize international agencies and national governments to join forces and dedicate resources to implement successful literacy activities.

(UNESCO, 2010b, para. 2)

This study explored primary school students’ reading scores and their mothers’ perspectives in Malindi District on the coast of Kenya. Mothers, such as Zena (see page 176), used the term “freedom” in their descriptions of childrearing. The study findings begin to consider ways in which literacy was or was not manifested as freedom within their lives, families and societies. Mothers’ perspectives pointed to the importance of according freedom to their children in their parenting approaches while also identifying constraining forces within their contexts, including health, which was experienced as a sociocultural process grounded in social/gender, linguistic, economic and physical environment factors.

Summarizing the Study

The problem that Western-led efforts to improve literacy address in developing country settings is that of insufficient literacy levels for economic growth and development. I set out to unpack the literacy problem itself, its various components, including constraints on literacy formation in various literatures that may or may not be engaged currently in literacy interventions. I also contested reductionist tendencies in how the problem is understood by donor and beneficiary governments and development organizations.
Connecting to the Theoretical Framework

The theoretical framework from Chapter 3 shaped the study’s inquiry, and helped group the data and explain the findings. As shown in Chapter 3, the Western development paradigm highlights forces commonly recognized as stymieing children’s reading achievement, with health being one of those, but Western-led approaches may not then incorporate those areas into literacy interventions. Other areas neglected in literacy approaches were also consulted and incorporated in the theoretical framework, including literature from sociolinguistics, reading research in first and second languages, cultural anthropological and psychological perspectives, and African and Western feminist theory. Guided by the review of literature, this study focused on three areas of inquiry needed in global literacy scholarship, policy, and practice: a critical inquiry into literacy education in post-colonial settings that takes into account constraints to literacy identified within the Western development paradigm, such as health; an engagement with home actors, primarily mothers, who are the primary caregivers and literacy models for their children and; guidelines for developing literacy interventions that move beyond current entrenched modes of thought to promote sound approaches to forming early literacy within a sociocultural framework.

Revisiting the Research Questions

This study used both quantitative data analysis of pre-collected reading data from an etic, psycholinguistic literacy intervention (see Research Question 1) and qualitative data collected by the researcher in an emic, constructivist phase of research (see Research Question 2). Below, I revisit each research question and map the appropriate ones to a section or model found in Chapter 8.
1. From a primary school reading dataset in Malindi District of coastal Kenya (Kenya Early Grade Reading Assessment-EGRA), among second-grade students, what variables are correlated with reading growth from pre- to post-treatment testing and which schools demonstrated high, medium and no growth in reading scores?

2. From qualitative focus groups and interviews, how do mothers’ perspectives on primary students’ health and literacy outcomes inform the salient factors in the EGRA dataset? (The Mothers’ Perspectives Model discussed and displayed on pages 217 to 225 encourages the use of mothers’ daily lives as a starting point for interventions and underlines health as a sociocultural process constructed within the home, with effects spanning out to the school and literacy formation).

3. Given the answers to questions 1 and 2, what are the determinants of literacy formation that are most promising and most modifiable? (The Maternal-Child Literacy and Health Model, with figure and discussion found on pages 228 to 232, recognizes mothers and multi-generational engagement as overlooked determinants in children’s literacy formation. The model points to health and literacy interconnections; both depend on home environmental layers and are affected by maternal-child relationships).

4. What are the main components of the literacy intervention model in coastal Kenya, what is missing, what can be added and what areas of change are recommended for curriculum, teacher training and stakeholder intervention? (The Literacy Intervention Model contained in Table 8.1 with discussion on pages 233 to 240 returns to the reading assessment intervention model considered in coastal Kenya, identifies
missing pieces and recommends additions for a sounder and more comprehensive approach to promoting children’s literacy formation).

**Building Theory Grounded in the Mixed Methods Findings**

Chapter 4 described the chronology of this mixed methods study and how the methods are mixed both in design and analysis (see page 86 for visual model in Figure 4.1). Chapter 8 calls on the quantitative data and findings from Chapter 5, combining and triangulating with Chapter 6 school site data as well as Chapter 7 mothers’ discourses and findings. In keeping with the goals of the mixed methods approach to research, in Chapter 8, I move the selective storyline further by positing a new grounded theory model (see Mothers’ Perspectives Model in Figure 8.1 on page 222) examining health effects on school literacy that illustrates the home’s layers and their driving of health and, in turn, school literacy outcomes. The Maternal-Child Literacy and Health Model (see Figure 8.2 on page 230) focuses on the maternal-child connections that drive health and literacy, and the connections between those that are grounded in home environmental layers. I also suggest a literacy intervention design (see Table 8.1 on page 235) that takes into account the grounded theory model about health and literacy, recommending a need to home in on these cyclical and interconnected sectors of children’s, mothers’ and families’ lives.

Three simple findings from the quantitative and qualitative phases of research come together to support one another and lead to theory- and model-building.

1. EGRA reading growth was linked to commonly considered SES variables, which were unpacked in the qualitative portion of the research.
2. Reading items, such as letter-sound recognition, that showed growth suggested the value of the transfer of home language literacy to school literacy learning in
the context of Kiswahili and Kigiríama. The disconnection between the two showed up in the qualitative portion of the study.

3. Mothers’ responses informed these salient factors from the EGRA data by demonstrating that health is deeply embedded in the home, that health affects literacy learning at school, and that the same environmentally situated drivers affect both health and literacy.

Look Deeper into SES Proxy Variables

Three variables collected as student background information in EGRA correlated with reading growth: geographic zone, TV watching in home, and homework help. As no explicit SES measure was taken in the EGRA study, these three variables acted as proxy variables for SES. Geographic zone demonstrated that communities closer to the district’s urban center of Malindi town improved more than communities further away in rural areas more distant from Malindi town. Presence of TV gave a similar indication since students who watched TV would have to live in an area with electrification, which would mean more urban locations. Students would need access to power and equipment in order to watch TV.

The third variable, homework help, indicated that students who reported homework help from various family members showed more growth. A family member who helped would need minimal reading ability in school languages as well as some primary schooling. The Tukey’s B done on this variable showed that homework help from sisters correlated with the greatest growth in reading scores. Mothers much less frequently were cited as giving homework help, but raised scores when they were reported to help. On the other hand, when fathers were cited as homework help, this variable correlated with a drop in reading scores. These three covariates have tended to be considered proxies for SES since living in an urban
area, having a TV, and having enough education to help a child with homework would correlate with higher SES, but also have untapped significance in terms of the social/gender aspect of health and literacy. The caregivers of the child, the mother and the sister, need to be engaged in the child’s literacy learning. The father, as borne out in the qualitative data, tends to be more tangential to the child’s development and may not have the skills necessary to help in this manner.

**Connect Home and School Languages and Literacies**

Looking at the numbers from the EGRA intervention, children performed better overall in letter and phoneme recognition in Kiswahili than in English, especially at school sites with an appreciable native Kiswahili-speaking population, such as Noanini. This finding reinforces the literature about using functional home literacy practices to build literacy in school and the desire among focus group participants, such as Kabibi, to have literacy skills so that they could help their children with homework. Bilingual literacy research tells us that giving children thicker, richer home literacy practices in home language builds literacy skills in second and third languages. Since some of the children speak Kiswahili at home and others speak Kigirima, which is a Bantu language from which Swahili was derived in contact with Arabic, then they do better in the testing that builds on that knowledge. If this linguistic contextual factor has such a strong effect on children’s literacy formation, then it must also affect health and other contextual factors must also affect both health and literacy. This confirmation of the interaction of home and school confirmed and informed the need to dig deeper into both the contexts and our understanding of these separated development sectors of health and literacy.
Engage Mothers’ and Children’s Contexts

The set of situational givens of mothers’ lives is cyclical and grounded in culture and context. Analysis of the EGRA dataset demonstrated that the teacher training on reading instruction techniques resulted in improvement in various basic skills of reading in Kiswahili and English that were assessed. Further analysis found that SES proxy factors, which were urban-rural location, TV watching, and who helps with homework, correlated with growth. Since no further SES or contextual factors data were collected, more exploration was done in the qualitative research phase in these areas. Insights emerged from the qualitative exploration. Data from observing site contexts and from on-site interviews and focus groups allowed for a more nuanced understanding of SES, for example. Being poor is neither a static nor a homogeneous state, and has many gradations of severity that make a difference in children’s and mothers’ lives. The measure of SES or poverty alone without deeper investigation does not tell us enough about the context. Mothers’ narratives suggested the disjunctures between Western assumptions about literacy constraints and the realities of mothers’ and children’s lives.

The mixed methods design of the study allowed for the discovery of more insights about children’s literacy and the many aspects that surround it. Mothers’ perspectives on their primary students’ health and literacy outcomes, as evidenced in focus groups and interviews, built on the salient factors found in the EGRA data analysis in Chapter 5. Mothers perceived their children’s health as being linked to basic needs, which was expressed primarily in narratives about “finding” and preparing food for their children. This critical building block of health was moderated by the series of environments making up the homes of mothers and families. In Chapter 8, I take the quadrants of mothers’ lives discussed
in Chapter 7 and push further in theory-building so that the layers of environment making up
the home become the drivers of the model. The physical, social/gender, economic, and
linguistic environments determined family income generation, mothers’ use and access to
knowledge and opportunities, and access to water, food and livelihoods. The homework help
variable from the EGRA dataset and its effect on reading growth was linked and expanded on
in mothers’ perceptions of their children’s outcomes and their capacity to help them. Other
salient factors in reading growth data, geographic zone and TV, also served as
socioeconomic status proxies. Mothers’ descriptions of their daily lives, and the home they
shared with their children, unpacked SES factors and the complexities contained within these
proxy variables.

Mothers described both liminal and multi-faceted definitions of health. Good health
was dependent on food and articulated at a basic level as whether one is alive or not. Good
health also encompassed socioemotional health, encouraged by appropriate parenting
approaches and giving the child “freedom”. Mothers articulated ways in which health
affected attendance, cognition, and achievement through various pathways grounded in the
series of environments making up the home. Mothers also saw their own health overlapping
with their primary children’s, often in the sense that mothers’ health suffered due to their
struggles to care for their children. While circumstances differed across the three study sites,
there were intersections and commonalities in health issues, such as the endemic nature of
malaria. There was also variation in health determined by the differing circumstances, such
as incidence of cholera and typhoid depending on water source.

Series of environments embedded in the home affect health and literacy. The
physical, social/gender, economic, and linguistic environments mothers and their children
inhabit contain situational givens. I combined “social” with “gender” to describe one layer of environment in the home because gender norms, practices and roles largely define the social environment of the family and community. These layers of environment and situational givens determine health issues and outcomes for mothers and children. These givens are cyclical in that they cannot be simply fixed in a linear approach and surpassed. For example, the physical environment will persist in having challenges with water scarcity. The layers of environments are also interconnected and influence one another. The series of environments and what characterizes them follows in the next four sub-sections.

**Physical environment.** The Physical Environment refers to the natural environment, or the geographic and climatic conditions that surround the family. Water presents a constant focus in the lives of mothers and their children. The scarcity of water, which is especially acute before the rainy season starts (during my field work period), leads to a large expenditure of time on the part of mothers and their children in attaining water at an increasing distance from home. Rains are coming later than previously due to climate change effects on the coast in what was already a marginal ecosystem. The uncleanliness of the water that is available carries health risks as well. Due to water scarcity, children’s school attendance drops commensurate with inadequate food for the family, inability to bathe or to wash school uniforms, and children handling home chores or skipping school while their mother spends the day finding water.

**Social/gender environment.** The Social/Gender Environment refers to the structure of the society and family, specifically related to gender-driven norms that dictate the home labor patterns, public labor options, and locus of control dynamics of motherhood and parenting. Mothers’ responsibilities for the family well-being and their children’s health, development
and schooling form the basis of their lives within their physical, social and economic environments. Because the mother’s role is central to the child’s development, health, and education as she is the primary caregiver for the child, her persistent marginalization due to gender handicaps her. Because of this structure, mothers describe their locus of control as external to themselves, but yet still show evidence of resilience in carrying out their responsibilities in spite of various challenges. Mothers, especially at Noanini when shown the materials in the classroom that children were using to learn be taught to read, also voiced an interest in learning what their children are learning at school about letters, sounds, and basic reading skills. The father’s role is described as bringing home income and food for the mother to prepare in the case of Swahili women. The Giriama mothers at Noanini talk about fathers as absent or dead as with Kabibi on page 200, so that they do not rely on the fathers to fulfill any income or food finding role. Some Swahili and Giriama mothers cite their fathers as the decision maker in why they did not attend school or why they did not seek further treatment for a sick child as with Heela on pages 202 to 203.

Economic environment. The Economic Environment refers to livelihood possibilities that dictate income options and also refers to costs for services, such as hidden school fees as well as health clinic and medicine costs. The economic environment of the home is strongly dependent on the mother’s income-generation responsibilities. As discussed in Chapter 7, mothers describe being the breadwinners and sole caregivers in the home whether due to an absent or deceased husband or sociocultural expectations of women as responsible for all activities related to providing for the children, locating and securing water, and preparing food for family meals.
**Linguistic environment.** The Linguistic Environment refers to the home language environment and its separation from the school language and literacy environment. Language and literacy represent a deep and far-reaching set of issues. The linguistic formation of the child comes from his or her mother, but is ignored by the school. Home literacy practices and events occur in the home, but the child arrives at school and is treated as a blank slate rather than as a student with prior knowledge or background knowledge to be tapped into for learning to read. Being cut off from school literacy due to the language of instruction, the inability to read and perhaps never having attended school, mothers’ involvement in the child’s schooling is hindered and her parenting of her child is compromised. In Chapter 7, mothers described experiences with their child’s growing school literacy through practical functions within their local environment, such as a child reading a label on a can. Mothers also pointed to their own capacity for involvement in schooling and in helping their child by working around their limitations and seeking out siblings and neighbors who can help with homework. Mothers also described an inability to read prescriptions and notes written by health workers. This lack of reading capability led to missing information about their child’s diagnosis and the medicine they had been directed to give.

**Returning to the proximate determinants model.** International development literature pointed to socioeconomic status (SES) as a limitation that spawned entrenched barriers to reading achievement as depicted on page 46 in Figure 3.2. In turn, SES could not increase because of health deficits. The factors that were influenced directly by SES in that model included maternal factors such as education level, childrearing practices including by whom and how children are cared for, nutrition and disease (if SES were higher, then children would increase food consumption and reduce disease incidence), and illness control.
In essence, when applied to this case in coastal Kenya, increasing SES would result in access of Kenyan families to health care centers and better prevention of and resolution of sickness. In this model, each of the variables could be tested to see how it affected learning to read. Since SES also had a direct effect on school attendance in the model, the family’s economic situation could be tested against its impact on the child’s presence at school. Since early childhood nutrition was also a determinant of permanence in school, proclaiming a need for a child to attend school so as to overcome a low socioeconomic background did not address the health-related reasons behind the child’s erratic attendance or lack of attendance.

**Interconnecting environmental layers in the new model.** In building a grounded theory model, I returned to the proximate determinants framework in Chapter 3 on page 46 in order to make changes. The findings from this study, framed by the literature reviewed in Chapter 3, supported the construction of a grounded theory model that connected the environmental layers found within the home with health, and health with schooling-related outcomes that affect literacy formation. The layers of environments in the home affect the health of the child and the mother. Health, as well as all the layers of environment in the home that construct health, also affect literacy. The Mothers’ Perspectives Model as depicted in Figure 8.1 below illustrates the embeddedness of health and literacy in the home and the embeddedness of the home in a series of environments. The new model entitled Mothers’ Perspectives Model does not conform to the linear nature of the proximate determinants framework although it does capture various cause and effect elements of health and literacy in viewing them from the vantage point of mothers’ perceptions of the daily pursuits involved in rearing their children. The new model depicts a cyclical rather than a linear way of understanding the issues involved in health effects on schooling. This new model
emanates from mothers’ descriptions of how they keep their children healthy, which they tied to generating income so that they could buy food and provide basic nutrition. The model places socioeconomic factors into two layers of the home environment: social and economic rather than posing socioeconomic determinants as the driver for all other factors.

The maternal factors (term used in proximate determinants model) were expanded into an exploration of mothers’ perceptions, which have formed the building blocks of the new model. Each layer of the home environment deepens the inquiry into maternal factors. The childrearing situation was embedded in the series of environments of the home. The linguistic environment of the home was determined by the mother’s language and the language she speaks with her child as well as by her access to school languages. The social/gender environment dictated the mother’s gender roles and responsibilities, and the physical environment directly affected the mother’s ability to succeed in attaining water, farming, and participating in an income-generating livelihood. The economic environment involved the mother’s livelihood and ability to bring in adequate income for food. Mothers tied their children’s health to locating and retrieving water for cooking, drinking and bathing. Water was contained in the physical environment layer of the home, but was also part of the social/gender environment in that women were responsible in the social context for getting water for the family.
Figure 8.1. Mothers’ Perspectives Model for Health and Literacy Moderated by Environmentally Determined Factors in the Home.
Nutrition and disease are spread across the environmental layers as both are tied to the economic environment (ability to maintain a standard of health in the home, to pay health clinic and transport costs or to lose potential income-generating time to seek care) of the home as well as the linguistic (ability to navigate health clinics and understand diagnosis, read medication). Likewise, the physical environment grounds nutrition and health in the home as water sources are implicated in endemic illnesses and lack of water leads to poor nutrition. The social/gender environment also determines the mother’s ability to seek care beyond and in tandem with the economic issues related to care-seeking. Access to health care is wrapped in the social/gender environment as well as the physical, economic and linguistic environments.

The social/gender environment is connected to the linguistic environment. The first language of the majority of Malindi District children, Kigiriama, is the one that they learn at home from their mothers: their mother tongue. Women mentioned being excluded from school due to their father’s decision as with Kabibi (see page 197); others had completed some level of primary schooling, but did not consider themselves literate in any language as with Kabibi, Kadii, Sidi, Kache and Neema (see Table 7.1 on page 165). School literacy and language were not accessible to these mothers. Because of being excluded from school-home literacy connections since non-school languages are unwelcome at school (see Chapter 6 description of use of mother tongue at school on pages 150-151), mothers’ gender remains an underlying exclusionary force and limitation on their public involvement and engagement at schools and health clinics.
**Reading parental ethno-theories.** The idea of parental ethno-theories (Super & Harkness, 2002), mentioned previously in Chapter 7 (see pages 183 and 190), informed the analysis of mothers’ perceptions as these ethno-theories provided cultural insight into sickness and health, gender norms and behavior, and funds of knowledge mothers tapped into in the care of their children. Consideration of the meanings of parental ethno-theories regarding their children’s health also underlines my view of health as a sociocultural process, which shapes my data analysis and model building (see pages 205-207). The developmental niche framework described by Super and Harkness contained three operational subsystems: 1) physical and social setting, which includes elements in home and school domains, including water, cleanliness, mosquito nets, etc., 2) historically constituted customs and practices of child care and child rearing, such as the views of Swahili women “moving around” less outside the home and Giriama women outside the home “looking for food” and 3) psychology of caregivers, which would include parental ethnotheories, perceptions of mothers, health of mothers, etc.

The organizational aspects of the developmental niche created development outcomes in the child. Super and Harkness (2002) referred to contemporary redundancy, which is a repetition of similar influences from several parts of the environment during the same period of development. Drivers that repeat themselves within the layers identified in the home environment present this type of redundancy in the new model. Thematic elaboration, the repetition and cultivation of core symbols and systems of meaning, then flows from the redundancy of elements in the child’s environment and reinforce the systems of meaning within the child’s childrearing and accepted societal norms. Chaining, the linking of disparate elements in the environment to create a qualitatively new phenomenon, then emerges. For
example, consider this equation: pathogens in the physical environment (emanating from an uncovered water source) + customs that spread those (practices for retrieving water) + parental ethno-theories that encourage a certain understanding and action (connecting water-borne disease to exogenous factors) = self-perpetuating cycle of illness within the school and community. The self-perpetuating cycle of illness could be the various related symptoms discussed as “devil’s disease” or could be the endemic nature of malaria in the community, or could be the combination of these factors within the local context (see pages 205-207 again). This study has begun to unpack the value of starting from parental ethno-theories in building new theories and models, and has demonstrated the need for future research in this direction.

Conclusions and Implications for Theory, Research, Policy and Practice

As education efforts extend beyond focusing on access to concentrating on quality of schooling in interventions such as EGRA, contextual variables that affect schooling need to be incorporated. Literacy approaches must move beyond such de-contextualized, psycholinguistic approaches in order to accommodate “marginalized” (see page 209 and UNESCO, 2010b, para. 2) populations. Reaching marginalized people involves making changes to the education systems that claim to serve them. The very system that has contributed to their marginalization in the first place cannot be expected to free them from marginalization. System soul-searching and smart reforms need to start within literacy intervention to ensure quality education for marginalized populations. Smart or responsive development (Nordtveit, 2010, 2008; Steiner-Khamsi, 2004) requires smart or responsive literacy interventions. Literacy projects that respond to the learner’s and the locality’s needs would not merely point to SES proxy variables, use the term poverty to characterize an entire population and name it as the cause for school failure, but would instead address the deeper
foundations of these labels and the roots of low literacy progress.

The focus on enrollment of children in school has neglected the fact that attendance is a key to student achievement regardless of curricular and teacher issues. In an area like Malindi District in Kenya, known health challenges have not been connected to student attendance or to gauging the effectiveness of teaching and learning practices. Interventions, such as EGRA, that rely on students attending school and being cognitively able to learn have discounted the appreciable impact health and contextual challenges have on student progress. The EGRA teaching approaches advocated in this intervention were useful in that they helped students learn fundamentals of reading and enhanced the teacher-student process of learning. EGRA’s intervention thus countered restrictive pedagogy (Moloi, Morobe & Urwick, 2008) and focused on teacher training, which improved teaching aids, teachers’ knowledge, teacher-pupil interaction, and assessment, four of the areas that move in a positive direction away from restrictive pedagogy. The intervention did not, though, engage health-related constraints, home literacy and multilingual environments, mothers’ involvement in the child’s literacy, and cultural identity around literacy.

The aim of school literacy efforts in this case was not just to get children to read, but to get children to read in two languages they do not speak at home, that they do not hear regularly and that their mothers cannot read. Children, along with their mothers, do not have access to environmental text on shops or signs and they do not have a receptive vocabulary to call on when learning the building blocks of reading. Similar to focusing on enrollment numbers, concentrating on a reading measure such as in this intervention, gauges education system and teacher success with a quantifiable outcome that ignores the context and the multitude of factors contained within it. The context includes linguistic and environmental
contexts, which includes health. These contextual factors characterize children’s and mothers’ lives together. Separating children from their context and from their mothers in the schooling process does not turn off the context itself; rather, it turns off the benefits of building on the child’s context. This type of limited approach will work for only a very small percentage of children.

Gaining Perspective on Quantifiable Reading Measures

Looking at growth is very different than looking at raw scores. Schools that showed growth started at a low point, with many zero scores and very low averages on each of the reading measures. Schools that showed negative growth generally demonstrated considerably higher reading scores in the baseline data than schools that had high growth in scores from baseline to post-treatment. Since growth depends on where the school started, it makes sense that the most rural schools would demonstrate the most growth because they started very low (such as Shadakunu). If no explicit teaching of reading skills was done in some schools prior to EGRA, then the intervention would have more of an effect than in schools where some reading instruction and some minimal reading success was already taking place. It is also of note that, in EGRA, control schools improved more than treatment schools overall.

In addition, establishing an international standard for reading expectations raises questions. Expecting second-grade coastal Kenyan students to test within the same range of words per minute as a U.S. second grader does not account for the vastly different contexts of these locations. The Kenyan students are learning English as a foreign language at school, but are being held to a supposed international standard in reading progress in that foreign language. Kenya is an Outer Circle country, not an Inner Circle country in terms of global Englishes (McKay & Bokhorst-Heng, 2008) as described previously on page 35. The
assessment methods in the EGRA study would be more useful if the children spoke English as a first language. The results of the intervention demonstrate that EGRA reading instruction approaches break down literacy skills in a useful way for reading instruction. Nevertheless, literacy interventions need to also ask what literacy skills in what languages are being investigated, which ones make sense to measure and at what level when entering each context.

Thus, while this mixed methods study recognized that EGRA’s intervention model did have an effect on schools’ reading achievement growth (see Chapter 5) and on teachers’ skills and practice in teaching students the basic building blocks of reading, it also highlights the limitations of the design and assessment used in EGRA. The international standard approach to teaching literacy necessarily ignores the contexts of the children and families who populate the school. Instead of merely trying to improve on that type of intervention, I am advocating the use of a more efficacious approach to intervention that embraces the context. Key aspects of this type of intervention include capitalizing on the mother-child relationship and physical, social, and linguistic environmental interconnections.

**Maternal-Child Literacy and Maternal-Child Health**

The data collected from coastal Kenyan mothers suggest that literacy interventions are missing a major component when they fail to realize that a mother’s literacy is linked to the child’s literacy just as her health is linked to her child’s health. Mothers describe their health as linked to their children in that they suffer from many of the same endemic diseases, but also in that their own health suffers from their energy expenditure and possible deprivation in caring for and feeding their children (see pages 178-80). Meanwhile, the mother and child literacy linkage is defined in the data in terms of its disconnection rather
than its connection. Mothers do not often recount home literacy events or practices they participate in with their children, but rather point out in most cases their own lack of literacy skills while proudly offering observations of their child’s budding literacy skills (see pages 192-93). Furaha, Jumwa, Pendo, all of whom report not being able to read in any language, point out a child being able to read or write one’s name as evidence of their child learning to read. Kadzo, who reports the ability to read in English, Kiswahili, and Kigiriama, gives an example of her child reading a wrapper on a food item as evidence of the child’s literacy skills.

Learning language and developing literacy are lifespan issues. Starting off schooling by divorcing children from their home literacy, then filling them with inputs in two foreign languages has correlated on the macro level with poor educational outcomes and high dropout rates. On the other end of the lifespan, more limited adult literacy opportunities are available than in the 1980s (KNBS, 2007), but are offered in local languages, which is incongruent with the primary school approach to literacy. These literacy efforts need to be coordinated over the lifespan with literacy building across the years. The rigid and high-stakes exam system, expensive and exclusive secondary school system, financial burdens, and regional and ethnic disparities in the Kenyan education system need to be addressed as part of the macrocontext of literacy building. Policy reports such as the 2006 EFA Global Monitoring Report point to building rich literacy environments, including literacy interventions for youth and adults (UNESCO, 2006). Family literacy models also have moved toward not only transmitting school practices to the home, but employing a sociocontextual approach that incorporates not only the family, but culture and community (Auerbach, 1989). The model contained in Figure 8.2 below suggests the need for multi-
generational approaches (mother to child and vice versa) to literacy and health that connect the generations as well as the sectors (health to literacy and vice versa).

Figure 8.2. Maternal-Child Literacy and Health Model.

Programs globally target women for health interventions to improve the health of their children. Literacy interventions could borrow elements of this approach in addressing children’s literacy, while also engaging mother and child health. Maternal and child health perspectives focus on the disparities in health care and health outcomes occurring in varying racial and ethnic groups grounded in social structures and rooted in a mix of cultural, economic, historical and political factors. Understanding the relationships between social processes and health is a driving force of maternal and child health research approaches that try to get at the heart of social determinants of health disparity. Likewise, these sensibilities and goals need to be internalized in a maternal-child literacy perspective. Figure 8.2 above presents the Maternal-Child Literacy and Health Model, which illustrates the multi-generational nature of literacy and health as well as the intersectional nature of literacy and
health as they move within the mother-child relationship.

**The wheels are turning.** Taking into account the moving parts of a child’s life rather than focusing on one skill and one domain in isolation demonstrates how a mother’s literacy is central to the child’s literacy as well as to maternal and child health. In this model, the arrows indicate that a mother’s literacy can drive a child’s literacy, meaning both that a mother educated at school in the languages of schooling will affect a child’s school literacy success positively because she can help her child with homework, read her child’s notes and teachers’ notes, and help her child read environmental texts written in school languages. Mothers from each study site, including Kabibi and Pendo (see pages 195-96), offer commentary on not being able to read the teacher’s notes or marks on the child’s paper and feeling frustration over consequently not knowing how their child is doing at school. In addition, a mother who has not achieved literacy in school languages, but has oral literacy skills and may or may not have written literacy skills in her home language is still forming her child’s early literacy in the home language simply by interacting with the child in the home. A mother’s literacy in both school and home languages directly affects her child’s literacy formation in home and school languages. With these wheels turning, the mother’s and the child’s health status are affected. A mother and a child who form literacy skills in written and oral communication are equipped to talk with health workers, read medicines, read signs at the clinic, and become empowered in navigating and articulating their health status.

The wheels also turn in the opposite order. Maternal-child health status represents a strong force for the child’s literacy in that health and gender affect the child’s school literacy formation moderated by attendance, attaining achievement goals, and environmental scarcity.
that determine water and food availability. The child’s literacy formation also affects the mother’s literacy as she recognizes the evidence of literacy the child gives in the home, such as reading labels, medicines, and helping siblings and neighbors with homework. The mother also may develop oral literacy skills in the school language from contact with her children while the mother remains illiterate in any language in terms of reading and writing a language. The model illuminates the multi-generational pursuit of literacy and health. The mother and the child need to be enlisted as part of a family unit for efforts toward improvement in both areas to be successful and become inculcated in a cyclical manner within the family, society and culture.

In the study data, the mother’s health was tightly linked to the child’s health just as her literacy was described as linked to, yet disconnected from, her child’s literacy (see page 178 and page 229). As explained previously, the mother in particular plays a critical role in building the child’s early literacy in the home, equipping the child with oral language and receptive vocabulary that the child then relies on when learning to read. Achievement in school literacy, meaning the process of learning to read at school, is linked cognitively to home literacy, which refers to the process of learning to listen, speak and develop a pool of receptive and productive vocabulary in the home language. Early readers rely on these skills when they are learning to read (Collier & Thomas, 1989; Snow, Burns & Griffin, 1998; Tabors & Snow, 2004). When school literacy is completely divorced from home literacy as is the case with Kenyan pupils, the process of learning to read does not unfold in this manner. Because of the home language being primary for the child, when that language is not used in teaching the child to read in any way then the child is faced with a difficult task of learning to read in a second and third language without connection to the first.
Policy, Practice and Research Implications and Contributions

This study makes contributions to academic literatures at the intersection of discipline areas that have bearing on literacy, health and development in sub-Saharan Africa and other parts of the developing world, including development theory, sociolinguistics, reading research, cultural anthropology, cultural psychology, feminist theory, and research methodology. The study reinforces the close relationship between adult literacy and child literacy, and particularly the need to work with mothers when aiming to improve child literacy. The study also illustrates women’s crucial space within the family and community in tying together health and education. The Mothers’ Perspectives Model on page 222 demonstrates that for health and literacy to advance, the two must be considered together in their grounded nature within mother-child relationships and home environments. The disjunctures found between mothers’ realities and development discourses result in a foundational critique of the best practices and evidence-based wave of development approaches. Instead of importing outside models that may not meaningfully interrogate local contexts, communities, families, mothers, and children need to be the place where development starts so that people develop on their own locally sustainable terms. The economic, social/gender, linguistic, and physical layers of environment within the home determine mothers’ ability to provide basic health and education for their children. By departing from the socioeconomic determinants prism and arriving at a sociocultural processes lens, the study recasts the ways literacy, health and development approaches should move forward.

The main components of the literacy model considered in this study included a psycholinguistic approach to teaching reading skills in two school languages that were not
the home language of the majority of the students in the intervention. What was missing was an investigation of the context and a reckoning with what this type of intervention was asking students to do. Students without any recourse to home support, either through solicitation of background knowledge in the classroom or involvement of mothers or mother tongue in early reading, were being asked to learn to read in two foreign languages by second grade. Areas that could be added and changed in curriculum, teacher training and stakeholder intervention are discussed in the following pages. Table 8.1 contains a model for literacy intervention that starts from the EGRA inputs and sums up what is missing both in those input areas and inputs that were not part of EGRA, including what to add and curriculum changes to make.

**Capture home-school and mother-child connections.** Children do better when parents become more involved in schooling. EGRA data shows that sisters and mothers have the most positive effect on children’s reading growth. My qualitative data also show mothers’ interest in EGRA approaches to reading instruction are and how to help their children succeed in school. Family literacy models include mothers in literacy efforts for children by helping them develop reading skills and also gain knowledge on how they can teach their children at home with simple tools and insights. Early childhood intervention using letter recognition and sound recognition in the child’s home language would be engaging and beneficial for mothers and children, both for initial building blocks of reading and for strong comprehension skills as the child continues in school.
<table>
<thead>
<tr>
<th>Current Inputs</th>
<th>What’s Missing</th>
<th>What to Add</th>
<th>Programmatic Areas</th>
</tr>
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<tbody>
<tr>
<td>Teacher</td>
<td>Language Learning Continuum</td>
<td>Acquisition and reading in first and second languages</td>
<td>Teacher Training: Coaching/Mentoring Model</td>
</tr>
</tbody>
</table>
| Bilingual & Dual Language Research | Transfer of skills across languages | Models/Examples  
Songs, Letter-Sound Connections, Receptive Vocabulary |                                                                     |
| Assessment      | Home-based Literacy Skills of Students | Authentic Assessment in Early Literacy Skills    | Assessment: Prior & Background Knowledge  
Home Literacy Practices/Events                                                      |
| (New Inputs)    | Parent Involvement                      | Mothers (esp.) engaged in reading intervention   | Adult & Family Literacy: Basic & Functional Literacy Skills,  
Language Comparisons/Connections  
Literacy, Income Generation, Health                                                |
| Home-School Connections  
Literacy | Using home literacy to build initial reading skills | Curriculum: Describe examples (Snow, et al.,1991) |                                                                     |
| Health          | Home- and Community-based Assessment    | Sector Integration: Development Resource Checklist,  
(water crops, school population,  
local, govt, judicial & extra-judicial action)  
Livelihoods Assessment  
(jobs, income-generating options, skills) |                                                                     |
Parents are not equipped to help children learn to read when they are not themselves armed with literacy skills or support tools. This study contributes to the literature on the relationship between adult literacy and child literacy. To improve child literacy, education initiatives need to work with mothers as well. Participatory dialogue needs to seek out mothers, the primary caregivers of children who are learning to read. Rather than remaining exogenous to mothers, literacy can become indigenous when children’s first literacy models, their mothers, become involved. The ideological model of literacy (Street, 2001) and the delineation between language socialization and language education (LeVine, 2003) contest the psycholinguistic approach to literacy that targets a linear progression of reading skills, disconnects the home language of the child from the literacy initiative, and approaches the child in a vacuum rather than as part of a family or mother-child dyad. This study has pointed further to the critical nature of a mother’s involvement in the child’s reading and literacy formation. Adult literacy program components that could be added to child literacy efforts include the Spanish government’s approach to literacy in Latin America. In this model, adults meet in literacy circles in three cycles each of six to eight months after which they have completed the equivalent of primary education (Cortina & Sanchez, 2007).

Staking a claim to “principles of justice” and working to build “capacity and autonomy” means that women need access to language (Enslin & Tjiattas, 2004, p. 514). To be able to engage in discussions about “human rights, health education and an informed and critical perspective on domestic and international politics” (Enslin & Tjiattas, 2004, p. 514), women must be talking and thinking in their own language (Freire, 1970/2000). This gaining of skills and knowledge in their own language does not preclude them from learning second and third languages, rather it enhances their potential to take on more languages, make
connections between and among them, and harness them for building a stable life for themselves and their families.

**Accommodate home environments.** To become responsive to mothers’ and children’s environments, made up of situational givens that moderate children’s school-related outcomes, literacy initiatives can institute a home assessment process that focuses on health by examining food, disease, and childrearing. This area will help develop a balanced approach: a reading program, with instructional practices imparted through teacher training, balanced with an examination of home environments, which identify resources, practices, and critical issues. The literacy intervention could then act on these insights, such as mothers’ hunger, “looking for food” and a dearth of livelihood and income-generating options, scarcity of water, and the ramifications for children’s lives. An uncovered well at school versus a tank of water at school, both of which are affected directly by amount of rainfall, affect the health of the child and mother, which affects attendance at school. Health issues such as older girls’ “devil’s disease” could also be investigated and discussed in ongoing group meetings of mothers, which may yield a connection between the onset of the disease in anticipation of caning or as a symptom of malaria (see pages 206-207). More information about and more investment in health and home would enhance literacy interventions.

Mothers also can be plugged into local groups with an income-generating focus or literacy focus that they may not know about or have access to join. Women need to know about ways in which they can support their children, which they describe as the central occupation and motivation of their lives. As they learn about how to help their children’s literacy formation through home support and through their own literacy learning efforts, they can also participate in microfinance initiatives and income-generating pursuits, which will
not only provide food and fees for their children, but will help engender a more internal locus of control. Development occurs within communities and through the agency women have to take part in changing the community. For education and health to both advance, the two sectors move forward together, which will happen through the empowerment and action of mothers and women (Waage et al., 2010).

Sectors need to be connected within a literacy intervention. Sector blindness and siloing, as when education projects and health projects exist separately in a vacuum at the planning and implementation levels, hinder educational interventions due to persistent issues in water and sanitation that exist in the culture and directly or indirectly influence children’s schooling. Health is heavily stressed in policy goals and discussed as going hand in hand with education, but not addressed with further depth. By borrowing traditional health frameworks and sensibilities to model education effects in literacy, this study has tried to establish a give and take between the two sectors at the conceptual level. The study has pointed to the fact that health is implicitly contextual and determined by the physical, social, economic, and linguistic environments. Home assessment will answer items on a checklist that are musts for a school community to have a sound and successful literacy intervention, such as water source, food security, school feeding, and a health baseline.

Rethink school literacy curriculum. To be an indigenous process, reading has to become an indigenous process. Indigenous implies ownership by those who are doing it, it implies a natural inclination towards it, it implies becoming a common, habitual part of the culture. In order to make health practices indigenous, and with a belief that improved health practices come about through literacy, then program designs and implementation models must return to literacy to make literacy itself indigenous. Unless some barriers are removed
to secondary school, such as exams and the high cost of secondary school, the low number of Kenyan students completing school will persist. In addition, most students who start primary school will not spend enough years in school to become fluently or functionally literate in English or Kiswahili and will conduct their lives as an illiterate person in those languages, while using their home language for daily interactions and transactions as seen with focus group participants (see Table 7.1 on page 165 and also page 223). Since the system of schooling has systemic issues of exclusion as noted above, until these are eliminated, only a small percentage of people will stay in school long enough to become literate and fluent in English.

How do you make literacy indigenous? Numerous voices have called for the inclusion of local or home languages or mother tongue in early schooling for building literacy skills in both the home language and the official languages (Bunyi, 1999; Ntarangwi, 2003; Trudell, 2009; Robinson, 1996; Djite, 2008; Adegbija, 1994). I echo those voices, but also offer policy recommendations for school literacy efforts that go beyond making the cultural and linguistic case for home languages. The multilingual, multiethnic context of literacy represents a strength rather than a hindrance. Rather than sidelining mothers who are merely expected to get their children to school and promote their schooling while being effectively cut off from it, literacy interventions would draw in mothers, use their input and include them in literacy education by connecting home literacy to school literacy in concrete ways.

Trepidation about using home languages in primary education in Africa is based on perceived costs as well as an embrace of the national integration effects they associate with education in an official language. A counterargument is that, with languages recognized and
shared within each region, ethnolinguistic differences and similarities would be open for all to see and consider instead of being ignored and stifled. The students would still be working toward the goal of becoming literate in the official languages of Kiswahili and English while using their home languages in the early educational process. This process would start an authentic schooling experience for children of each region. When human-driven discourses on development, such as Sen and Nussbaum’s capabilities approach, mention “promoting basic education, especially literacy” (Enslin & Tjiattas, 2004, p. 514), they must grapple with what literacy or literacies this type of admonition is referring to. To be human driven is to take up the mantle of multilingualism and indigenous language literacy as a goal and as a gateway to multiple literacies and as a critical cog in the development of literacies for the child.

Rework teacher training alongside school literacy curriculum. First, policymakers and practitioners would look at the region of language use. This process would include cultural context exploration as well as predominant and minority home languages as measured by which languages mothers of primary school children are speaking, singing, and teaching to their children from birth to early primary age. The program would enlist both teacher leaders and mother leaders who would attend a national training. The plethora of languages represented at the training would not hinder the training as it would be conducted in English and Kiswahili, but would focus on the use of home language practices. Government-employed primary school teachers are posted all over the country in Kenya and could be teaching in an area where the local language is not their own native language, so this issue would have to be resolved. Meanwhile, most early childhood teachers are locally hired and supported, so they tend to be native speakers of the local language.
The methods and approaches of teaching a language apply for any language one could teach, but also are shaped by whether students are in an English as a Foreign Language or English as a Second Language situation. The difference between teaching a foreign language in which the locally dominant language is different than the one you are teaching (such as in teaching French to students in the U.S. or teaching English to students in Afghanistan), or teaching a second language in which the locally dominant language is the one you are teaching (such as teaching English in the U.S. to recent immigrants from a non-English-speaking society), is the context in which the language is being taught. In the case of ESL, the teacher has the advantage of having students surrounded by the target language. It is not spoken in their homes, but it is around them in environmental text, in stores, media, among students at school and in workplaces. In the case of EFL, such as in an Outer Circle country like Kenya (McKay & Bokhorst-Heng, 2008), context has to be constructed in the classroom to make the language authentic and alive to the students. As an Outer Circle country, English is not the language surrounding students in stories, media, workplaces and among friends.

In both EFL and ESL cases, the use of culturally based songs and rhymes and active learning approaches, such as Total Physical Response, appeal to the student kinesthetically and spatially to build early literacy first through listening and speaking, then through reading and writing. The students would be learning in their home languages as a bridge to learning Kiswahili and English. Transition to the school languages of Kiswahili and English would be the goal rather than structured immersion or maintenance (Tsung & Cruickshank, 2009). Students would learn basic early literacy skills in their native language and would transfer these skills to their second and third languages. Teachers and mothers would come together
to chronicle native literary practices, to write them down and make charts about them. They would develop language lessons for the second language learner rather than continue on the track in which the child’s home languages are ignored and forbidden. The Foss science curriculum\(^{20}\) and dual language education models in the U.S. and other countries could provide insights. The ethos to pass along to teachers would be: use what the students know in teaching them. Teachers need to understand the continuum of language learning – that they are aiming to begin a sound process that will make their students sophisticated users of language by the age of 16.

**Investigate and incorporate inclusive models.** While I have referred to Western developers and the Western development paradigm as quite limited in inclusive approaches to literacy interventions, I have not yet discussed current models coming from that same community of developers that are inclusive of indigenous literacy components. Save the Children UK\(^{21}\) published a guide (Pinnock, 2009) to language issues in schooling in multilingual environments specifically discussing global contexts in which the home language is not the same as the language of instruction. Drawing from Malone’s (2008) progression plan for using both languages across the primary years, Pinnock (2009) includes a mother-tongue-based-multilingual-education model, which is depicted in Figure 8.3. The L1 is the home language and the L2 is the school language or language of instruction.


\(^{21}\) Save the Children UK, an independent children’s rights organization, is a member of the International Save the Children Alliance.
In addition, Save the Children USA implemented Literacy Boost in Malawi, a development project that aimed to strengthen children’s reading ability through both community and teacher-focused components. The intervention included parent workshops, which both literate and illiterate parents attended. Children whose parents were involved in at least one workshop demonstrated greater gains in reading. When asked how to improve the parent workshops, a common response from parents was to teach parents to read and write so that they could better help their children (Dowd, Wiener & Mabeti, 2010). RTI International also studied the use of mother tongue in primary schools in Central and Nyanza Provinces of Kenya, finding that in spite of policy stating that mother tongue would be used in early grades, very little classroom instruction occurred in the mother tongue even in the earliest grades. The report recommended adding mother tongue elements to the KCPE exam (Kenya Certificate of Primary Education) so that the school and community would place importance
on learning the home language at school (Piper, 2010). As a result of EGRA experiments in Kenya and other countries, RTI International has begun looking further at L1 in recognition of L2 scores being low and difficult to improve without any L1 use in the teaching of reading.

**Balance research methods.** International development projects are also research projects. Donors and organizations locate models, adapt them to a country and a population, and try them out to see how they work. Donors and organizations train local development partners so that they can collect data after an intervention. The goal is to improve an identified outcome, such as student learning, in a certain area by focusing on some aspect of the problem, then measuring to see if the intervention worked. Project staff report the results and then the organization and development community use the outcome data and lessons learned to increase the body of knowledge about how to combat that particular development issue. Considering in more depth the theoretical and historical point of view project designs and results come from as well as expanding the accepted methods of going about development research will enhance these primarily quantitative approaches.

**Account for quantitative data limitations.** Assessment and evaluation of student outcomes drives educational knowledge creation and reform efforts. A focus on quantitative approaches to development and education research represents a faith in numbers and what they can tell us. If projects and interventions can make the numbers go up (reading scores, math scores) or go down (dropout rate), then the problem will be solved. This research method can be classified as an etic approach as it necessarily derives from an outsider’s perspective (Pike, 1967; Goodenough, 1970). A team comes to the school site, administers the assessment measures, and reports the results.
I focused first on the etic approach used in EGRA by working with the quantitative data to discern what results emerge that are defensible statistically and theoretically. I explored how to make the most of quantitative data limited by its research design and constraints. I inspected the veracity of quantitative results by questioning the design, structure, and assumptions (Klees, 2008) made in carrying out a quantitative reading achievement study. In pursuit of results that make amends for the flaws in the quantitative design, such as in sampling, I used statistical methods to account for the sample switch. Some aspects of the quantitative study represented symptoms of the Western-centric etic approach to reading achievement and disregarded key elements of the contextual reality, such as reading achievement in this context being characterized by second language acquisition rather than learning to read in the native language. A claim of objectivity by an etic research approach cannot stand because no development approaches are objective as a result of being shaping by the outsider’s own context and how the reading of developing world problems derives from that contextual grounding and way of problematizing the observable deficits (see Chapter 3, pages 26-29).

Use both etic and emic approaches. While an etic approach is and wants to be an outsider’s account, an emic approach involves by definition an insider’s viewpoint. Rather than trying to understand why coastal Kenyans behave in the ways that they do in terms of school literacy by finding out about their “perceptions and interpretations of their social reality” (Ogbu, 1990, p. 522), researchers have focused on evaluating and assessing coastal Kenyans’ behaviors in terms of white middle-class U.S. perceptions and interpretations of the social reality of white middle-class U.S. populations and the social reality of coastal Kenyans as white, middle-class U.S. citizens understand it (Ogbu, 1990). A U.S. population sees
Kenyan children then as another example of a minority population failing at school, rather than as a majority population minoritized by the post-colonial school system and focus on the former colonial power’s language and culture.

Emic approaches need to be included to give the perspective of those who live within the soup of the identified problem, those who live inside the context and can reflect on the issue from within. When studying culture through emic approaches, I am aware of the multiple perspectives within a single mother’s responses. Her situatedness within the soup of her culture does not preclude the competing perspectives within the group or within one respondent, for example. Also, any emic approach includes the interpretation of insider’s words by an outsider, whether native to the culture or not. The study of a cultural context is never monolithic, but rather multi-faceted and steeped in gradations of understandings and beliefs about various problems or issues within the culture. Feminist thinkers, such as Harding (1991, p. 212), implore us further to “start from women’s lives”. She takes this stance on standpoint epistemology to reduce the “partial and distorted accounts” (p. 212) of culture that arise from research that does not attune to this sensitivity to multiple accounts. The lives of women within varying societies provides a place for “a woman of European descent to start her thought” (p. 212). Likewise, insight comes from analyzing Western knowledge and accepted practice from the perspective of the lives of women of Third World origin. This brand of women-centered research can address the central questions of the education system, such as literacy, and literacy’s connections to health and home as well as future livelihood options.

My qualitative research effort supplemented the etic with an emic approach by listening to voices from within the culture and the local context. Taking a mixed methods
approach in this study, I sought to augment and explain the quantitative results through the use of qualitative methods in the field. The quantitative data then became contextualized, richer and more useful in guiding educational inputs (Courtney, 2008). The qualitative research incorporated the perceptions of coastal Kenyans involved in the reading study, namely mothers of second grade children who were receiving the EGRA treatment and testing. Development data on health and education in Kenya and in Coast Province informed the lines of questioning employed with focus groups of mothers. Since early health as well as current health of the second grade child had an impact on their educational outcomes (Lloyd & Hertzman, 2009), mothers were asked about their second graders’ health from birth until age 5 as well as current health issues, and health practices in the home.

Literacy and health conditions on the ground informed the quantitative data in very concrete ways. The data served an explanatory purpose of making sense of the constraints on the reading scores that were inherent in the environments the children and families inhabit. The qualitative findings also reinforced how the dominant development paradigm does not take into account second language acquisition and second language reading literature, such as sociolinguistic reading theory and reader-response theory (Rosenblatt, 2004)). But even beyond these literatures, the quantitative data do not take into account that the child goes to school and learns in second and third languages with no recourse to the first or home language; the child’s receptive vocabulary is not being used to build reading skills.

**Future Research**

The paradox of a literacy decade to reach the “most marginalized” (UNESCO, 2010b, para.2) when marginalizing practices inherent in the school system are used to reach those very people needs to be investigated further. In what ways have aspects of the education
system in Kenya, in Coast Province, and in Malindi District marginalized people? The social structures of the society may marginalize various populations, but the marginalization is also a result of the colonial system, which often reinforced ethnic separations and served to harden the boundaries between groups. The colonial era tinkered with what were once fluid categories and established systems situated in power and intractable lines of ethnic, religious and language differences (Brantley, 1981; McIntosh, 2009). If Giriama people or coastal Kenyans in general are marginalized due to their lower rates of schooling and achievement, then going to the area and doing the same things – no schooling in their language and little access to continuation in secondary and university education – cannot be expected to demarginalize them. This lack of address of the isomorphic model of colonial and societal marginalization results in continuing disregard for sound language learning and reading instruction within particular contexts.

Nevertheless, in Kenya, the country’s history has shaped the people and the systems that were created in the colonial and post-colonial eras. The education system cannot be simply dismantled by a new idea or suggested improvements brought in by a donor as another outside way of seeing. The Kenyan government and populace voice an ownership of the school system evidenced by the respect for exam-driven achievement. The perception of poverty on the part of donors and the national government in areas like coastal Kenya may turn the problem into one seen as too endemic to address, as deprivation of basic needs such as water, food, and health care can be acute. This viewpoint on poverty may then neglect the locally held indigenous strengths and the slight gradations in SES that can make appreciable differences in children’s and families’ lives. The origins and objectives of the education system in Kenya need to be interrogated with political will and buy-in from the government.
and the population. Further research is needed on educational pathways of students and what works best at this point in history for Kenyan children in specific cultural contexts across the country, with informed soul-searching about the building of basic skills in reading and the goals of literacy. Additional questions to consider include: What family literacy models would make sense in coastal Kenya? How is early childhood development (ECD) linked to primary schooling and how can the transition between the two serve the interests of the home, school, and community? Are early grade standards compatible with ECD objectives in the building blocks of reading, early literacy activities, and health? Future research needs to home in on the child’s multiple environmental layers within the home and their impact on schooling, multiple generations and languages that are brought to bear on the child’s health and early literacy, and the mother’s capabilities in particular in forming foundational health and literacy status in and with the child.
English Instrument

Section 1: Background information
Division………………………………………..
Zone………………………………………..
1. School name____________________________________
2. Name of child ___________________________________
3. Class: _________________________________________
4. Age: ___________________________________________
5. Gender: ________________________________________
6. Did you go to any nursery/pre-school:_______________
7. What language do you mostly speak at home?___________
8. Who helps you with school work at home? ______________
9. What materials do you read at home?:____________________
10. Do you watch TV at home? __________________________
11. Do you listen to radio at home? _______________________

Section 2: Letter recognition (use with letter sheet)

Instructions

Give the sheet of paper with written letters on it and then follow with instructions as shown below. The assessor will say:

“Look at the letters written on your paper. Read them aloud starting from here. If you don’t know a letter go on to the next one. I will tell you when to start and when to stop. Get ready. Start.”

or

Section 2: Marking Sheet: Letter recognition
Mark the letters incorrectly recognized and read with a slash (/).
At one minute, mark the last letter read with a [ ]

V L H G S Y Z W L N /10
L K T D K T Q D Z W /10
H W Z M U R J G X U /10
G R B Q I F I Z S R /10
S N C B P Y F C A E /10
Y S Q P M V O T N P /10
Z A E X F F H U A T /10
W G H B S L G M I I /10
L L O O X N E Y P X /10
N K C D D Y B J R V /10
V M W Q V L H G S Y /10

Count and write the total correct letters read: _____________

Section 3: Word recognition (use with word list)
Instructions. Give the sheet of paper with words written on it and then follow with instructions as shown below. The assessor will say:

“Read the words written in English on your paper. Read them aloud correctly and as fast as you can. For example, this word, (point at the word) “pot”, is read as “pot”. This word, (point at the word) “bell”, is read as “bell”. Now look at the words written on your paper. Read them aloud starting from here. Start.”

or


Section 3 Marking sheet: Word recognition

Note: The word should be read in acceptable formal pronunciation.

Mark the words incorrectly recognized with a slash (/).

At one minute, mark the last letter read with a ]

Examples:  pot  bell

sad  dog  red  do  eat  fire /6
and  us  to  girl  then  he /6
as  hat  if  seem  get  too /6
Section 4: Passage Reading

Instructions: Give a sheet of paper with the comprehension passage to the pupil and then follow with instructions as shown below. The assessor will say:

“I am going to ask you to read aloud the passage written on your paper and then, I will ask you some questions on it. Read as fast as you can. Ready. Start (start the stop-watch as soon as you say ‘start’)”

Or


Section 4 Marking Sheet: passage reading

Instructions

1. Stop the child at one minute, unless they only have one sentence left.
2. Put a “]” mark after the last word read at the one minute mark.
3. Note the following:
   a. Mark incorrect words with a slash.
   b. Mark words omitted with a slash.
   c. Do not count words repeated/inserted.
4. If the child finishes more than three sentences, let the pupil proceed to answer the comprehension questions.

Comprehension Passage
Kazungu had a little dog. The little dog was fat. One day Kazungu and the dog went out to play. The little dog got lost. But after a while the dog came back. Kazungu took the dog home. When they got home Kazungu gave the dog a big bone. The little dog was happy so he slept. Kazungu also

Count the words read correctly: ________________
If completed in less than one minute, write down the number of minutes and seconds to completion: ____________________
went to sleep.

If the pupil completed reading the passage in less than one minute, record time at completion: 

__________

**Comprehension Questions**

**Instructions:** After the pupil has read the passage, you take away the passage sheet before asking the questions. Translate the question(s) into Kiswahili for the pupil if s/he shows hesitation.

The Assessor will say: “Now I am going to ask you a few questions about the story you have just read. Try to answer the questions as best you can”

“Sasa ningependa kukuuliza maswali kuhusu habari ambayo umesoma. Jaribu kujibu haya maswali kadiri ya uwezo wako.”

(For every right answer give one mark. The answers provided are to facilitate quick marking.)

The assessor will ask the questions below: correct answer

1. Who had a dog? Kazungu
2. Was the dog big or little? Little
3. Was the dog thin or fat? Fat
4. Where did Kazungu take the dog? Home
5. Why was the dog happy? He was given a big bone

**Section 5: Phoneme Segmentation.**

**Instructions:** There is no student sheet for this, as they read nothing. They only listen to the word the assessor reads. The assessor will say:

“I am going to say a word. After I say it, tell me all the sounds in the word. If I say “Hen” you would then say /h /e/ /n/? Now you try it. Let’s another word “hat”. Tell me the sounds in “hat”.

If the child responds correctly say: Very good, the sounds in “hat” are /h/ /a/ /t/.

If the child does not respond correctly, say: The sounds in “hat” are /h/ /a/ /t/. Now tell me the sounds in “hat”. Make sure the child understands the instructions if necessary translate in Kiswahili.

The child should be allowed two minutes to finish as many items as possible. Pronounce the word twice. Allow 10 seconds for the child to respond. Provide the number and sounds of the words, mark it incorrect and move on. Score both the number of sounds (correct / incorrect).

**Section 5 Marking Sheet: Phoneme Segmentation**

Put a slash ( / ) through incorrectly said phonemes

shop /sh/ /o/ /p/ __________/3
stand /s/ /t/ /a/ /n/ /d/  ___/5
thank /θ/ /a/ /ŋ/ /k/  ___/4
bat /b/ /a/ /t/  ___/3
seen /s/ /ea/ /n/  ___/3
should /ʃ/ /u/ /d/  ___/3
up /u/ /p/  ___/2
at /a/ /t/  ___/2
top /t/ /o/ /p/  ___/3
if /i/ /f/  ___/2

Count and write down the total number of correctly pronounced Phonemes
________________

**Student Sheets for English:** These were handed out to students during the assessments. The font used for the handouts was Arial 20.

```
V L H G S Y Z W L N
L K T D K T Q D Z W
H W Z M U R J G X U
G R B Q I F I Z S R
S N C B P Y F C A E
Y S Q P M V O T N P
Z A E X F F H U A T
W G H B S L G M I I
L O O X N E Y P X
N K C D D Y B J R V
V M W Q V L H G S Y
```

Examples:

```
sad dog red do eat fire
and us to girl then he
as hat if seem get too
house sun stop lots ear pencil
food at they big the some
last run fly we on our
saw walk school best time cow
boy wall chair all me good
will blue size fall go ride
hope far man her was fun
```

Kazungu had a little dog. The little dog was fat. One day Kazungu and the dog went out to play. The little dog got lost. But after a while the dog came back. Kazungu took the dog home. When they got home kazungu gave the dog a big bone. The little
dog was happy so he slept. Kazungu also went to sleep.

Kiswahili Instrument

**SEHEMU YA KWANZA**

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<thead>
<tr>
<th>Division ......................................</th>
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<td>1. Shule: _______________________________</td>
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<td>2. Darasa: ______________________________</td>
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<td>3. Jina la Mwanafunzi _____________________</td>
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<td>4. Umri: ________________________________</td>
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<td>5. Jinsia : (Msichana / Mvulana)__________</td>
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<td>6. Ulienda shule ya Nasari:_______________</td>
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<td>7. Nyumbani mwatumbi lugha gani:__________</td>
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<td>8. Nani hukusaidia kufanya kazi ya shuleni ukiwa nyumbani? ________</td>
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<td>9. Wewe husoma vitabu vyovyote au magazeti ukiwa nyumbani?____________________________</td>
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<td>10. Kuna TV ama Runinga nyumbani kwenu? ______________________________</td>
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<td>11. Na radio je? __________________________</td>
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Sehemu ya Pili: Kutambua Herufi

**Maagizo kwa Mhojaji:** Onyesha mwanafunzi chati ya herufi kisha useme: “ Katika ukurasa huu kuna herufi ningepeenda uzisome. Tamka herufi hizi kwa njia bora uwezavyo. Tutaanzia hapa.”

Tia alama kama / kwa kila herufi ambayo haikutambuliwa vizuri. Baada ya mwanafunzi kusoma kwa muda wa dakika moja weka alama [ mahali ambapo atakuwa ameachia.

“**Angalia herufi zilioko kwa karatasi yako.** Kama hujui kusoma, soma herufi ifuatayo..**Soma herufi hizi kwa sauti ya juu kwanza hapa. Jitayarishie kusoma.Sasa anza kusoma.**”

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Andika idadi ya herufi zilizosomwa sawasawa: ______________________

Andika idadi ya herufi zote zilizosomwa: ______________________

Iwapo mwanafunzi alitumia muda usiozidi dakika moja, onyesha huo muda alioutumia__________________
Sehemu ya Tatu: Kutambua Maneno


Ikiwa mwanafunzi hatasoma maneno ya mstari wa kwanza mwachishe kusoma.

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Andika idadi ya herufi yaliyosomwa sawasawa: ____________________

Andika idadi ya herufi zote yaliyosomwa: _________________________

Iwapo mwanafunzi alitumia muda usiozidi dakika moja, onyesha muda aliotumia_____________________________________________

Sehemu ya Nne: Ufahamu


Jumamosi iliypita Katana na dada zake, Kadzo na Fatuma, 9
walienda kuogelea baharini. Kabla ya kuondoka walibeba 16
mahamri, maembe, samaki na maji ya machungwa. Walibeba
24
pia nguo zao za kuogelea. Wote waliingia kwenye 32
matatu kuelekea huko. Walipofika baharini waliona watu 39
wengi sana. Katana aliikuwa na hamu sana ya kuogelea. Maskini
49
Katana, aliingia baharini bila kubadili nguo zake! Dada
57
zake walimcheka sana.

60

Kumbuka: Iwapo mwanafunzi amesoma chini ya nusu ya kifungu, usimwuûize maswali ya ufahamu.

Mweleze mwanafunzi, “Nitakuuliza maswali kuhusu habari ambayo umesoma. Jaribu kujibu maswali kadiri uwezavyo”.

256
Maswali

1. Katana na dada zake walienda wapi
2. Taja majina ya dada zake Katana?
3. Je walibeba sambusa?
4. Waliona nini baharini?
5. Kwanini dada zake Katana walimcheka?

Majibu

Baharini kugeleza
Kadzo na Fatuma
La, walibeba mahamri, maembe, samaki na maji ya machungwa.
Watu wengi sana.
Kwa sababu aliingia baharini bila kubadili nguo zake

Student Sheets for Kiswahili: These were handed out to students during the assessments. The font used for the handouts was Arial 20.

Jumamosi iliyopita Katana na dada zake, Kadzo na Fatuma, walienda kugeleza baharini. Kabla ya kuondoka walibeba mahamri, maembe, samaki na maji ya machungwa.
Walibeba pia nguo zao za kugeleza. Wote waliingia kwenye
Appendix B: Focus Group Protocol

Session 1

1. Opening: As an introduction, let us go around the group and each person can give her first name and tell us how many children she has and their ages. *Vivi funahenza kila mmwenga afambire dzinare na ni aho ho angahi anao, aa kiche na aa kilume.*

2. Introductory: When you hear the word “health”, but what does this term mean to you? *Mkisikira nene afya, munaona maanaye ni noni.*
   a. Probe: How do you define health? *Maana ya afya ni noni*
   c. Probe: How is your health as it relates to other women in the community? *Vidze yo afya ya kwako inhalanadze na afya ya anaaache angine ho laloni*
   d. Probe: How is your child’s health compared to other children in the community? *Ukilinganisha afya ya mwanao na ya anzie ho laloni unayonadze?*
   e. Probe: Do you see your health as a mother linked closely with your children’s health? *Unaona yo afayo dza here mimutu ina uhusiano wa hehi na anao? Kihizho*

3. Transition: I would now like to talk about health issues that arise in your community.

What do you think are the major health issues you face in your community? *Vikara nihahenza husumurire kuhusu mautu ga afya ho henu laloni/mudzini.*

*Munafikiri ni matatizo gani mabomu ga kifya mugapatago hano laloni?*
What do you think causes ill health? Mnafikiri ni noni kisabishacho ukongo?

a. Probe: Undernutrition? Kukosa chakurya muhimu?

b. Probe: Malaria? Malaria?

c. Probe: Diarrhea? Kumwaga?

d. Probe: A combination of diseases? Mutsanganyiko wa makongo?

e. Probe: Water sources? Vituo zha madzi?

f. Probe: Sanitation? Usafi?

g. Probe: unsanitary water sources ---diarrhea, parasites? Madzi machafu---

kumwaga,,adudu?

h. Probe: mosquitos --- malaria? Usunye----malaria?

i. Probe: snails--- schistosomaisis? Vivonyongwe----kipicho

j. Also: causes of convulsions, “devil’s sickness”, ringworms, TB, cholera, etc.

4. How do mothers in your community handle these health issues? Vidze ani mama ko laloni managashuhulikiradze gano matatizo ga afya .

a. Probe: Do mothers deal with them in the home? Vidze managashuhulikira midzini?

b. Probe: How? kihizho?

c. Probe: Do mothers seek help outside the home? VidzeJe, ni kupata usaidizi nze ya midzi?

d. Probe: Where? Hiko?

e. Probe: What are the health issues that especially affect girls? Vidze kuna thabu za kiafya zibujazo asichana?
f. Probe: What about adults, what are health issues that especially affect adults? Je, na atu azima, vidze kuna matatizo ga kiafya gaabujago atu azima?

g. Probe: Do these illnesses affect adults who would normally provide care for children in the home? Vidze gano makongo ganabuja hatha atu azima maararisa ano aho ho nyumbani?

5. I would like to talk about how you perceive your role in keeping your child health and what you do when your child becomes ill. How do you perceive your role in keeping your child healthy? Vikara nahenza fusumurire jinsi uhalirazho jukumuro ra kuhakikisha mwanao ana afya mbidzo na uhendazho akikala mkongo. Unahaliradze jukuro ra kuhakikisha mwanao ana afya mbidzo.

a) Probe: teaching good health practices? handwashing? Vidze ni kuafundisha aanao thabia mbidzo za kiafya? Here kouga mikono?

b) Probe: providing food and nutrition? Ni kumpa chakurya cha nguvu?


Key Question: What do you do when your child becomes ill? Ni kukala unahendadze mwanao akikala mkongo?

a) Probe - Fever, convulsions, Diarrhea, TB, Signs of malnutrition? Here akikala na mwiri moho,akifitika,akimwaga,akikala na TB, upungufu wa afya? 

c) **Probe:** Do you mix and use ORT? *Ni kuhumira irya dawa ya kapakiti ya kutsanganya na madzi?*

I would now like us to talk about the health of your 2\textsuperscript{nd} or 3\textsuperscript{rd} grade child at ____________ school. Could you tell me about your experiences in raising this child? *Vikara nahenza husumurire kuhusu afya ya athithe enu Mario kilasi cha hiri na cha hahu. Vidze ni mautu gani murigo gakirira muri hokala munaarera ano aho ho?*

a. **Probe:** Think about that child’s health during the years before he or she went to school and tell me about that. *Ririkana/fikiria afya ya mwanao arihokala kadzangwe kwend asikuli kasha unambire irizhokala ama kuihusu.*

b. **Probe:** Think about that child’s health during the years he or she has been attending school and tell me about that. *Na hangu aanze sikuli,yo afiaye idze?*

c. **Probe:** What helps children stay healthy? *Ni kitu chani kidimacho kusaidia aho ho makale na afya midzo?*

d. **Probe:** What contributes to poor health? *Ni kitu chain kisababishacho aho ho masikale na afya midzo ama kuzoroteka kiafy a?*

**Session 2**

1. **Opening:** We probably remember one another, but to refresh our memories, let us go around the room and say our names again and tell how many children we have. *Bila shaka huchere kukumbukirana ela hamwenga na vizho kila mutu naanene dzinare.*

2. In our first session, we discussed your views on health and we had a very nice discussion about all of your opinions. In this second session, we would like to explore
more of your views on schooling and education and how health might play a role in your child’s learning.

3. **Key Question: When your child was sick, could he or she go to school?** *Vidze, ho mwanao arihokala mokongo, kishe wadima kwenda sikuli?*

   a. **Probe:** Does getting sick affect your child’s attendance at school? *Vidze akikala mukongo, ni kumtatiza kwenda sikuli?*

   b. **Probe:** Is your child often staying home due to illness? *Ye mwanao ni kukala mudzini mara kwa mara kwa sababu ya ukongo ama unyonge?*

   c. **Probe:** Is your child able to concentrate on his or her studies at school? *Vidze, mwanao anadima kubwaga akili na akasikiza mwalimu na akaelewa?*

   d. **Probe:** Is your child able to concentrate on his or her homework? *Vidze mwanao akigerwa kazi ya mudzini ni mwalimu, ni kukala anabwaga akili?*

   e. **Probe:** Describe how, where and with whom your child does his or her homework. *Hedu nambire, mwanao akigwerwa kazi ya mudzini ni mwalimu, ni kukala anaihenderahi, kihizho na anaihenda na hani?*

4. **Key Question: What can a mother do to help her child learn at school?** *Mimutu anadima kuhendadze kumwaviza mwanawe kimashomo?*

5. **Key Question: How do you perceive your role in your child’s schooling?** *Vidze unaronadze ro jukumuro kahiza kushoma kwa mwanao?*

   a) **Probe:** What about your role for a girl child in particular? *Na je jukumuro haswa kwa mwanao wa kiche?*
b) Probe: Teaching certain things at home? *Here* kumufundisha mautu Fulani *ho nyumbani?*

c) Probe: Are there special issues about what you teach for girls? *Kun* mambo maalumu kuhusiana nago umfundishazho mwanao?

d) Probe: Getting your child to school each day? *Here* kumfisha mwanao sikuli?

e) Probe: Are there special issues about getting to school for girls? *Je, kuna* mambo maalumu gatatizago asichana kufika sikuli?

f) Probe: Are parents ready to pay tuition fees for girls in the same way they can for boys? *Je azhazi* mathayari kuriha pesa za tushoni kwa asichana ao here zho mahendazho kwa avulana?

g) Probe: Making money to pay for school needs or other resources (books, etc.)? *Kutengeza* pesa za kurihira mahitaji ga sikuli na mautu mangine (here vithabu, etc.)?

h) Probe: Are there special issues about making money to pay for school needs for girls? *Je, kuna* mautu maalumu kuhusu kutengeza pesa za kurihira mahitaji ga sikuli ga asichana?

6. What do you think schools in the community do well? (Can be primary school/madrassa, etc.)

   a) Probe: What do you think is good about your school. *Vidze, munafikiri ni noni kidzo kuhusu ino sikuli yenu?*

   b) Probe: What do the schools need to do better or differently. *Vidze unafikiri sikuli zinahitaji kutengezani ili zitengeze tototo zaidi ama tofauti kimashomo?*
c) Probe: Is what your child does at school important for his or her well-being and success? Vidze unaona zho atengezajo mwanao ko sikuli vina umuhimu wowosi kwakwe au andafaulu na aishi tototo?

7. Do your children learn about these diseases and causes at school? Vidze anaenu manafundishwa gano makongo na kigasababishago makikala sikuli?

8. Key Question: In the previous discussion, you mentioned a dispensary. Is it affordable to all? Please list the services you get there. What is the fee you pay to get these services? Kahiza masumuriro gehu ga dzuzi, mwahadza dispensary. Je kila mmwenga ana wadimi wa kwenda kwa matibabu? Tafadhali fuhadzireni huduma muzipatozo. Kuna mariho gogosi mulazhago ili kupata zino huduma?

9. What role does the local school play when a child gets sick? Ino sikuli ni kukala ina jukuma rani mwana akalaho mukongo?

a) Probe: Does your child’s teacher or head teacher inquire about your child when he or she is absent? Is there follow-up from the school about his or her health? Vidze ye mwalimu wa mwana au mwalimu mkuu ni kuuzira kuhusu mwanao akithira sikuli?

Ni kukala yo sikuli inathuiriza afya ya mwanao?

10. Do mothers like you in your community have access to resources needed to help your children thrive? Vidze animama dzanwi hano laloni nikupata vitu zha kuasaidia anaao kuenderera?

11. How are leaders in your community working with families to improve health outcomes for children? Vidze o vilongozi enu holaloni manahala jukumu rani kusaidia famili zenu ili kuboresha hali ya afya ya aho ho sikuli?
12. And to improve school outcomes for children? Nakuhusu kuboresha matokeo ga anaenu ga sikuli?

13. Key Q: What do you know about the reading program at your child’s school? Vidze unamanyani kuhusu urya mpango wa kuhenda ahoxo mamanye kushoma ko sikulini kwa mwanao?

   a) Probe: Have you noticed changes or improvements in your child’s reading? Je, udzaona mabadiliko au maenderero kahiza kushoma kwa mwanao?

14. Key Q: What do you most mothers expect their children to do when they complete primary school? Ani mama anji ni kukala manatharajia anaa makigonya mashomo ya premari?

15. Ending Q: Considering all the issues discussed in our two sessions together, which do you think have the biggest impact on your children’s learning at school and on his/her reading skills in particular? Kuririkana na mambo fudzigosumurira kahiza masumuriro gehu, ni higo ambago munafikiri ganatsanngira habomu kahiza kushoma kwa mwanao?
Appendix C: One-on-one Interview Protocol

A. Mother

1. Did you eat breakfast this morning? *Vidze, udzafungula?/Ulikula chakula cha chamshakinywa asubuhi?*

2. How many meals do you usually eat per day? *Unarya mara nyingahi kwa siku?*

3. Do you usually wash your hands before eating a meal? *Vidze, ni kukala unaoga mikono kabla ya kurya chakurya chochosi?*

4. Does your stomach hurt most days, some days, very few days, or never? *Yo ndaniyo ni kuluma mara nyinji, mara kiasi, mara kidogo sana ama kailuma kamare?*

5. Does your head hurt most days, some days, very few days, or never? *Kitswacho ni kuluma mara nyinji, mara kiasi, mara kidogo sana ama kakiluma kamare?*

6. Describe your household: your children, whether they are boys or girls, and their ages, co-wives and their children, your husband. *Fuambire kuhusu nyumbayo, ahohoo ache kwa alume na miaka yao, ache anzio, ana ao, na mulumeo. Una watota wangapi, pamoja na mtoto wako wa darasa la pili au tatu, ambao wakaa nyumba yako? Tafadhali orodhesha wote kuonyesha wako kikie au kiume, na umri wao.*

7. What languages do you speak in your home? *Vidze munahumira lugha yani kusumurira ko mudzini? Mnasema lugha gani katika nyumba yenu?*

8. What religion does your family practice? *Je dini yenu ni hiyo?*

Ulimaliza darasa ngapi?

___None. Kushomere kamare/Hamna

___Some primary school. Kumarigizire premari/Kiasi cha shule ya msingi.

___Completed primary school. Wamarigiza premari/Malizika shule ya msingi.

___Some secondary school. Kumarigizire sekondari/Kiasi cha shule ya sekondari.

___Completed secondary school. Wamarigiza sekondari/Malizika shule ya sekondari.


Kwa kizungu? Kwa Kiswahili? Kwa kigiriama? Tafadhali fuelezere.


11. You mentioned stress, what do you do to relieve stress? Mwahadza kukala ni kubujwa ni maazo, vidze ni kukala munahendadze kuhuriza akili?

12. What activities do you enjoy doing? Ni shuhuli zani ambazo zinakufahiza?

13. Please mark the responses that most closely describe what you have in your home:

Tafadhali ika alama kwenye majibu ambago ganaeleza vitu ambazho unazho nyumbani:

___Number of household members per room. Idhadi ya atu kwenye kila chumba/Namba ya watu ambao wanakaa nyumbani kwa kila chumba.

___Has pit latrine. Ina choo cha shimo/Ana choo cha shimo.

___Has own flush toilet. Ina choo cha kupiga madzi cha ndani/Ana choo cha shimo.

___Uses water from a tanker truck. Inahumira madzi kula kwa gari ra madzi/Anatumia maji kutoka lori.

___Piped drinking water in residence. Ina madzi kula miferejini ndani ya nyumba/Maji yamo nyumbani kutoka bomba.
Inside well drinking water. *Ina madzi madzo ga kunwa /Maji yamo nyumbani kutoka kisimo.*

---

Has radio. *Ina redio/A na redio*

Has television. *Ina t.v/A na televisheni.*

Has telephone. *Ina simu/A na simu.*

Has car. *Muna gari/A na gari.*

Has motorcycle. *Muna pikipiki/A na pikipiki.*

Has bicycle. *Muna baisikeli/A na bisekeli.*

Has refrigerator. *Ina friji/A na friji.*

Has electricity. *Ina stima/A na stima.*

Cement floor. *Ina sakafu ya simiti/Sakafu ya simenti.*

Tile or brick floor. *Ni ya sakafu ya matofali/Sakafu ya matofali au vigae.*

Adobe floor. *Ni ya mitsanga/Sakafu ya udongo.*

Parquet or polished wood floor. *Ni ya sakafu ya mbao/Sakafu ya ubao.*

Other type of flooring. *Ngira yoyosi nyingine ya kuika sakafu/Sakafu ya aina nyingine.*

14. At what age did you marry?

*Wahalwa na miaka mingahi?/Uliolewa na miaka mingapi?*

**B. Class 2 or 3 child**

1. Does your Class 2 or 3 child wash his or her hands at key times: *Vidze,ye mwanao wa kilasi cha hiri ama cha hahu ni kuoga mikono wakati muhimu:*

1. a. Before eating? *Kabla ya kurya?*

1. b. After using the latrine? *Akimbola chooni?*
2. Do you have soap available in the home? _Vidze, muna sabuni ho mudzini?_

3. Is soap affordable for you? _Yo sabuni inagulika?_

4. What types of activities does your Class 2 or 3 child like to participate in? At school? At home? _Ni mautu gani mwanao wa kilasi cha hiri ama cha hahu anahenza kudzishuhulisha nago akilkala/ Sikuli? Mudzini?_

5. Has your Class 2 or 3 child been sick during the past year? If yes, please list sicknesses. _Je, mwanao wa kilasi cha hiri ama cha hahu wakala mukongo mwaka udziokira? Tafadhali nihadzira makongo gani._

6. Please name illnesses your Class 2 or 3 child had from birth to age 5. _Tafadhali nambira nimakongo gani garigombuja mwanao wa kilasi cha hiri ama cha hahu hangu kuzhalwa hadi miaka mitsano._

7. Does your Class 2 or 3 child miss more than 2 days of school per month? _Vidze ye mwanao wa kilasi cha hiri ama cha hahu ni kukala anamaanisha sikuli kutsakosa zaidi ya siku mbiri kwa mwezi?_

8. Please list the main reasons your child misses school. _Tafadhali nihadzire sababu bomu za kumuhenda mwanao akose sikuli._

9. Does your Class 2 or 3 child care for adults or siblings in your home? _Vidze ye mwanao wa kilasi cha hiri ama cha hahu ni kukala mkazi wa anzie ho nyumbani?_

10. Does sickness of any person in your home affect your child’s attendance at school? _Je ukongo wa mutu yeyosi mo nyumbani ni kumtatiza mwanao wa kilasi cha hiri au cha hahu ni kwenda sikuli_

11. Do you feel that your Class 2 or Class 3 child has learned to read at school? _Je, unaona mwanao wa kilasi cha hiri ama cha hahu wadzifundisha kushoma ko sikuli?_
C. Health services

1. You mentioned a dispensary, how far from your home is the dispensary you prefer?

*Mwahadza kituo cha afya (dispensary), kula henu tho dipensari, hana ure wani?*

2. You mentioned a traditional healer in our discussion, how far from your home is the traditional healer that you prefer?

*Mwahadza muganga kahiza masumuriro gehu, hana ure wani kula ho hako tho ko kwa muganga ambaye unenda kwakwe mara kwa mara?*

D. School

1. Does your child’s school have a school-feeding program?

*Vidze yo sikuli endayo mwanao ina mpango wa kuapa chakurya aho ho?*

2. If yes, has your child recently benefited from this program?

*Kala ee, ye mwanao adzafaidikadze kula kwa uno mpango?*

3. Does your child’s school have a canteen where students can purchase food?

*Yo sikuli endayo mwanao, hana kidhuka ambacho aho ho manadima kugula chakurya?*

4. Does your child purchase food from the canteen daily? Several times a week?

*Infrequently? Never?*

*Je, ye mwanao ni kugula chakurya kul aho kidhukani kila siku? Mara nyinji kwa wiki? Si sana sana? Kagula kamare?*

5. Are you required to pay school fees of any type, such as for paper, books, pens, uniform or anything else? If so, how much money are you required to pay?
Appendix D: Stakeholder Interviews Conducted

<table>
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<tr>
<th>Name</th>
<th>Organization</th>
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<th>Date(s) interviewed</th>
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<td>Aga Khan Foundation</td>
<td>EMACK II staff</td>
<td>March 20 and 27, 2009</td>
<td>Non-governmental</td>
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<td>Nicholas Thairu</td>
<td>Ministry of Planning and Development, Government of Kenya</td>
<td>Malindi District Development Officer</td>
<td>March 20, 2009</td>
<td>Governmental</td>
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<tr>
<td>George Ogandoh</td>
<td>Ministry of Education, Government of Kenya</td>
<td>Malindi District Education Officer</td>
<td>March 27, 2009</td>
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<tr>
<td>Mr. Mwanandu*</td>
<td>Noanini* Primary School</td>
<td>Head Teacher</td>
<td>March 14, 2009</td>
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<tr>
<td>Mr. Waluji*</td>
<td>Shadakunu* Primary School</td>
<td>Head Teacher</td>
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<tr>
<td>Mr. Gamora*</td>
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<td>Senior Teacher Head Teacher</td>
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<td>Mr. Donda*</td>
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<td>Mr. Mulala*</td>
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*Pseudonyms used for all schools and school personnel.
Appendix E: Governmental and Nongovernmental Interview Protocol

1. What NGOs are working here in Malindi District?

2. What is each focusing on?

3. What does your organization focus on?

4. Who is supporting/sponsoring school-feeding programs in Malindi District?

5. Are school fees required of parents in Malindi District?
   Book fee?
   Paper/pen fee?
   Teachers’ salaries fee?
   Lunch fee?

6. What is your contact information?

7. Who funds your NGO?

8. What is your role in the organization?

9. Do you have maps, reports, data or other materials about Malindi District that I can review or get a copy of?

10. Have any of your programs benefited any of the following villages or school sites:
    Noanini
    Shadakunu
    Vikidi
Appendix F: Head Teacher Interview Protocol

1. What are handwashing practices at school?
   a) Prior to eating?
   b) After going to the latrine?
   c) Is water available for washing hands?
   d) Is soap available or apparent at the hand-washing location?

2. What are drinking water practices at school?
   a) Well water or other source?
   b) Only one cup available that all students are using?
   c) Cups for each student?

3. Electricity?

4. Existence of secondary school?

5. # of pupils in primary school?

6. # of teachers in primary school?

7. Population of village?

8. Religious/ethnic breakdown?

9. List of school sponsors/donors

10. Industries?

11. Tell me about your EGR teachers

12. Is primary school free here?
   a) Is there a paper/pen fee?
   b) Is there a book fee?
   c) Is there a teachers’ salary fee?
d) Is there a school lunch fee?

13. Where is *madrassa* and when does it meet? For what ages?

14. Is there religious education in the school?
Appendix G: Exact Sample Match Tables

Table G.1

*Descriptive Statistics for Exact Sample Matched Control Students*

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<th>Pair</th>
<th>Correct Kswh. letters, zero scores as zeros+time adjusted</th>
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Table G.2: *Paired t-test Results for Control*

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Table G.3: *Descriptive Statistics for Treatment Students*

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