LIFEWATER INTERNATIONAL
UGANDAN WASH CURRICULUM

laurel komos
IIT INSTITUTE OF DESIGN // MDes, 2019
how might we...

educate rural Ugandan primary students about the dangers of unsafe water and encourage them to adopt better sanitation and hygiene practices?

My team of designers teamed up with Lifewater International and Chicagoland creative agency Rule29 to create a new primary school curriculum teaching Ugandan students about safe water access, sanitation, and hygiene (WASH). Using Lifewater International’s existing WASH program as a starting point, we were tasked with improving the content and format of the existing 200+ page curriculum and corresponding educational tools to better suit the needs of teachers and young Ugandan students using research, design strategy and information architecture. Ultimately, we had the opportunity to travel to Gulu, an impoverished rural region in northern Uganda, to test our prototype in two district primary schools. After our return, we synthesized our research and presented our findings to Lifewater and Rule29 with the intent to implement them in the future.
In order to build a prototype, we needed to conduct a vast majority of our research on the Ugandan educational system and existing WASH curriculum from a distance. We relied heavily on thorough online investigations into the culture and academic systems of Uganda, personal interviews with Ugandan contacts and American teachers in Uganda, and secondhand accounts from Justin Ahrens, Principal at Rule29, and Pamela Crane, the Director of International Programs at Lifewater International. Our research associate, Penina Acayo, a native Ugandan, also became the subject of many of our personal interviews about education and life in the East African nation.

Our questions were both culturally-focused and academically-focused, as we wanted to get a holistic sense of the experience of a Ugandan student and how this new curriculum could serve them both in and out of the classroom setting.

1 // STATESIDE RESEARCH

After conducting a thorough investigation of Lifewater’s existing curriculum, we collectively decided that we wanted to explore the implementation of an overarching theme that would better capture students’ attention and empower them to make a change in their communities. This theme would liken students to respected leaders and would be evident in the activities and stories found throughout the curriculum.

We chose to work with a football (soccer) theme because most children worldwide can relate to a love of physical activity. This also presented many creative thematic options, such as “playing against the bad germs that play for Team Unsafe Water,” yellow cards for failing to practice safe habits, scoring goals, and friendly competition.

2 // STRATEGIC DEVELOPMENT OF THE CURRICULUM PROTOTYPE

THEME

The existing Lifewater International curriculum was written to last all day for five days and left no time for other classes. Additionally, it was structured into ten loose “building blocks” and was not grouped thematically by the key issues addressed (water access, sanitation, hygiene).

We chose to restructure the curriculum to span the course of three weeks, with each week focusing on one of the three themes. The WASH curriculum would be taught for 40—50 minutes each day Monday through Thursday, then would focus on a special community outreach initiative each Friday in the hopes that the children would feel empowered to spread WASH knowledge in their homes and communities. Friday would also include a team-based oral examination, ensuring that the teacher can keep track of the students’ progress.

STRUCTURE

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ACTIVITIES

We wanted to ensure that the curriculum provided teachers with a wide array of learning activities in order to accommodate many different learning styles. Our curriculum included interactive group activities, storytelling, blackboard activities, oral group examinations, demonstrations, miniature field trips, and individual workbook pages.

Our team proposed the creation and distribution of workbooks (known as playbooks, in keeping with the football theme) for each student. These would be used as silent activities while in class, but could also be taken home and used as a tool with which to educate others about WASH concepts.
Bearing in mind that color printers are rare, if not impossible to access, in rural Uganda, we designed a black and white curriculum using Lifewater’s new brand standards, as developed by Rule29. In order to get the WASH curriculum delivered to the broadest audience, it needs to be easily reproduced. Since we opted against using color to organize our curriculum elements, we relied heavily on different type treatments, a basic icons set, and call-outs to place emphasis, provide supplemental materials, and mark transitions.

### 3 // DESIGN DEVELOPMENT OF THE CURRICULUM PROTOTYPE

#### 1.1 WATER

**Why is water so important?**

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
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<tbody>
<tr>
<td>1. Understand the importance of water in our world.</td>
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<tr>
<td>2. Identify various ways our bodies need water.</td>
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<tr>
<th>MATERIALS</th>
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<tbody>
<tr>
<td>- Playbooks, 1 per student</td>
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<tr>
<td>- Chalk and chalkboard or flipchart</td>
</tr>
<tr>
<td>- Wash colorable paper (source Packet pg. xx)</td>
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<tr>
<td>- Football player placard (source Rule29 pg. 65)</td>
</tr>
<tr>
<td>- Piece of watercolor paper for writing and coloring, if available</td>
</tr>
<tr>
<td>- One white and one yellow dry erase pen for hub</td>
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<tr>
<th>PREPARATION</th>
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<tbody>
<tr>
<td>Prepare Visual Aids Demonstration: Cut out plants for half the class of the lesson and color in a dot-dash. For another pair of the cards, print the variety and keep in a water bottle (for the age of the kids). Hang the Aces One, Where books. Hand out the football player placard.</td>
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<thead>
<tr>
<th>BACKGROUN INFORMATION</th>
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<tbody>
<tr>
<td>- Human beings can live about 2 months without food, but less than a week without water.</td>
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<tr>
<td>- Our body needs 2–3 liters of water a day, 12 liters drinking and 17 liters comes from the food we eat.</td>
</tr>
<tr>
<td>- A person 1.5m and 20cm tall weighing 60 kg will have over 40 liters of water in his body at any given time.</td>
</tr>
<tr>
<td>- The amount of water in our bodies varies according to age and body part. An infant is 75% water, a pregnant woman is 55% water, an adult is 60% water. An elderly adult is 50% water.</td>
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<tr>
<td>- Water is as important as the air we breathe. Water our body consumes every day is primarily by the water we drink, so choosing to drink safe water is important.</td>
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<tr>
<th>PHOTONIC WATER</th>
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<tbody>
<tr>
<td>An active ingredient found in some states, large amounts of phosphates and other protein in 4 drops dissolve a white sheet of paper in 2 days and removes salt from our bodies. Small amounts of this can be found in rice, which drive, water, or cocoa, which help your body get enough water.</td>
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<tr>
<th>DETERMINATION</th>
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<tbody>
<tr>
<td>Deterioration: occurs when a plant or person loses a significant amount of water.</td>
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</table>

#### Lifewater International Ugandan WASH Curriculum
What is a latrine?

**SANITATION**

Why should you always use a latrine?

- **Draw an X through the methods that are unsafe and should get a yellow card.**

**BACKGROUND**

**Course Schedule**

- **Monday**: Recap
- **Tuesday**: How can we make a tippy tap and when do you use it?
- **Wednesday**: How do we make a tippy tap and when do you use it?
- **Thursday**: How can we prevent and treat water-borne illness?
- **Friday**: Lesson 2.5 is a day about Community Outreach.

**Objective 1:** List and sequence the steps to using a latrine.

- **Knock on door before entering**
- **Draw footprints and a hole (to look like the floor of a latrine) on flipchart**
- **Optional: Write out the steps for cleaning a latrine on the board. Choose space—either outside or in an open space in the room.**

- **Once you are done reviewing the steps for the first time, have students to list the steps for the whole class.**
- **Close the door behind you when you leave the latrine.**
- **Leave the latrine clean and safe. Our bodies need safe water to stay healthy and to help us get well when we are sick.**

**Recap**

For purposes of the football theme throughout this curriculum, Team WASH will learn about hygiene as a critical tool to beating the bad germs that play for Team Poor Hygiene.

Students can score goals as they spread what they have learned about hygiene as a critical tool to beating the bad germs that play for Team Poor Sanitation.

**WASH-RELATED DISEASE DRAMA**

**PLAYER #1: SCABIES**

(enter scratching the head)

I am Scabies. I love to live on skin and in the blood of people.

**PLAYER #2: DIARRHEA**

(enter running with tissue)

I am Diarrhea. I spread so fast. I make you have to run to the bathroom all the time.

**PLAYER #3: MALARIA**

(Pretending to spit out fruit or vegetable)

I am Malaria. I love to live in mosquitoes and in the blood of people.

**PLAYER #4: TYPHOID**

(Don’t you just relieve yourself in that field?)

I am Typhoid. I spread even faster. I make you have to run to the bathroom all the time.

**PLAYER #5: HOOKWORM**

(Pretending to bite)

I am Hookworm. I love to live in the blood of people.

**PLAYER #6: PARASITES**

(Ooh! I don’t want to get sick.)

I am Parasites. I spread when they don’t wash their hands before handling food.

**PLAYER #7: MICOBADE**

(Enter)

Yes I did, but I didn’t poop on your back side)

I am Micoeba. I live in the blood of people. I spread slowly.

**PLAYER #8: PINWORM**

(Pretending to bite)

I am Pinworm. I live in the blood of people.

**PLAYER #9: CIVET**

(Enter)

I am Civet. I can lead to a loss of appetite, caused by bacteria.

**PLAYER #10: MANGA**

(Pretending to bite)

I am Manga. I can lead to a loss of appetite, caused by bacteria.

**PLAYER #11: PRETORIA**

(Enter)

I am Pretoria. I can lead to a loss of appetite, caused by bacteria.

**PLAYER #12: MALARIA**

(Pretending to bite)

I am Malaria. I love to live in mosquitoes and in the blood of people.

**PLAYER #13: SCABIES**

(Enter)

I am Scabies. I love to live on skin and in the blood of people.
RESEARCH PLAN

During our time in northern Uganda, we had the opportunity to visit two different schools: smaller Mother Teresa Primary (private, Catholic) and larger Laiyibi Primary (public). The difference in size and government funding between these two schools made for an interesting contrast that enhanced our research even further.

We arranged to have group interviews with primary teachers at both schools. While our focus was more on upper primary (Ugandan P4-P7), we welcomed teachers of younger students as well. We were mostly concerned with learning more about the Ugandan education system and how safe water, sanitation, and hygiene is currently taught in schools; however, we wanted to ask some questions about the design and organization of our curriculum prototype if time permitted.

After our group interview sessions, we went on tours of the school grounds and had further, more personal interactions with the teachers. These informal sessions helped us get a better understanding of the school culture and the resources they had available for use in the classroom.
The proposed design research process is intended to assist us in developing a **stronger empathy for the extreme cultural differences** between privileged American designers and rural northern Ugandan schools through observation, interviews, and ethnographic research. By using cross-cultural and cross-disciplinary **collaborative techniques with teachers in rural Ugandan communities** near Gulu, we hope to develop a greater understanding of the nuances of using design thinking in an unfamiliar context, ultimately **producing a WASH curriculum that best suits the needs of our friends in Uganda, from a content-based, verbal, and aesthetic perspective.**
At the completion of our research, we clustered and synthesized our findings. Ultimately, we presented Lifewater International and Rule29 with a research report document that detailed our process, findings and recommendations for moving forward with a new curriculum design.

**INSIGHTS**

- **Government-mandated syllabus renders our prototype teacher’s manual useless.** Despite all of our remote research when preparing the curriculum prototype, we never encountered the government-mandated syllabus in Uganda that instructs the teachers when and how they are supposed to teach each element of water, sanitation, and hygiene education.

- **Teachers are always looking for resources to supplement their lessons.** Teachers are given a copy of the mandatory syllabus for their grade level, however, they have to purchase separate books that provide more in-depth lesson plans and teaching resources. Because of the lack of funding given to schools (particularly private schools), teachers often have to pay for these tools with their own money, therefore relying on inexpensive or free resources and activities whenever possible.

**IDEAS**

- **Rework our curriculum into a supplemental resource packet to use with the syllabus.** After talking to teachers and conducting our own additional research on the government-mandated syllabus, we recognize that there is an opportunity to create a set of supplemental materials that work in conjunction with the national requirements. These materials could include stories, field trip ideas, test questions, community outreach project suggestions, coloring pages, workbook pages, songs, dramas, and demonstrations. Many of these elements were already incorporated into our initial prototype and would just need reorganization to translate into this type of resource packet.

- **Encourage the creation of a WASH club in primary schools.** At many schools, students are required to participate in at least one after-school club or activity. Schools can help encourage WASH behaviors by creating and promoting a WASH club that focuses on keeping the school compound clean and spreading the word about safe water, sanitation, and hygiene. Positions in this club can be held in high esteem and leadership roles will be coveted.
i’m excited to share more work with you