Computer Aided Learning in Suriname
As per Annual Work Plan #9 – Education Activity #6

Terms of Reference

Reporting to: Chief of Field Office, UNICEF Suriname
Location: Suriname

Background and Justification:
The quality of and access to education remains the most significant challenge to the development and wellbeing of children in Suriname, especially in the interior of the country. Overall, 38.5% of children aged 3-5 years attend pre-school programmes but it is only 7.8% in the interior.\(^1\) The national net primary school attendance rate is 97%\(^2\) and only 55% for the interior\(^3\). Limited availability and poor quality of pre-schools and the sudden switch from local languages to Dutch is responsible for high repetition rates (19%) and poor net completion rates (51%), especially in the interior (at 34% and 18% respectively\(^4\)). Fewer girls than boys go to school in the interior (gender parity index 0.9), an opposite of the situation in coastal areas with a gender parity index of 1.0\(^5\) where more boys than girls are dropping out. In the interior, 34% of the teachers are not qualified to teach\(^6\). With only 49% of all children of secondary school age attending secondary school (3% in the interior)\(^7\), the prospects for the majority of Suriname’s young people are limited. Vocational training opportunities are limited and the high cost of pursuing such opportunities is prohibitive.

Based on data from other countries with similar education statistics and challenges and on research in Suriname supported by UNICEF in 2010, it is expected that the introduction of Computer Aided Learning, specifically through individual rugged laptops (such as the One Laptop Per Child (OLPC)), will effectively improve teaching and learning for improved performance and retention of children in primary schools. CAL is a learning tool with relevant, child friendly learning content loaded onto individual laptops that children can use both in the classroom and at home with family members.

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\(^1\) MICS3, 2006
\(^2\) SOWC, 2009
\(^3\) MICS3, 2006
\(^4\) MICS3, 2006
\(^5\) MINOV, 2009
\(^6\) MINOV teachers background document 2010
\(^7\) MINOV 2008-2009 Statistics Yearbook
addition, wider social benefits among community members (younger or older siblings, mothers, fathers, and friends) are expected.

The purpose of this pilot is to test this theory in 4 very different community types in Suriname in order to understand if and how results are obtained, what the unintended consequences may be, and if successful, to provide detailed data to support an argument for taking such a project to scale across the country.

The pilot will introduce COMPUTER AIDED LEARNING (CAL) to support the teaching of the primary school curriculum, including - language, writing, computation and critical thinking. This TOR is in line with the stated desired results for Computer Aided Learning in Annual Work Plan 9 [Education], agreed between UNICEF and the Ministry of Education.

**Brief Description of the pilot Schools and Locations:**

<table>
<thead>
<tr>
<th>Village</th>
<th>District</th>
<th>Ethnic Group</th>
<th>Apx. Total Pop.</th>
<th>Pop. Primary School age 6-12yrs</th>
<th>Pop. Primary School 6-12yrs in School</th>
<th>Total # of Teachers</th>
<th>Previous Exposure to Computer (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marienburg</td>
<td>Commewijne</td>
<td>Javanese/Hindustani</td>
<td>3,000</td>
<td>135</td>
<td>120</td>
<td>10</td>
<td>Yes, some</td>
</tr>
<tr>
<td>Washabo</td>
<td>Sipaliwini</td>
<td>Amerindian</td>
<td>500</td>
<td>176</td>
<td>171</td>
<td>9</td>
<td>Yes, some</td>
</tr>
<tr>
<td>Redi Doti</td>
<td>Para</td>
<td>Amerindian</td>
<td>120</td>
<td>60</td>
<td>45</td>
<td>7</td>
<td>Some limited</td>
</tr>
<tr>
<td>Pokigron</td>
<td>Sipaliwini</td>
<td>Maroon</td>
<td>500</td>
<td>165</td>
<td>155</td>
<td>9</td>
<td>no</td>
</tr>
</tbody>
</table>

The selected pilot project schools are from a variety of diverse community typologies, all of which are located in districts which face key socio-economic challenges.

All four pilot schools are located outside of the Paramaribo area in the districts and the Interior where access to quality education is the biggest challenge.

**Baital Rochman Primary School (Marienburg, Commewijne District)**

The Baital Rochman Primary School is located in Marienburg in the District of Commewijne. The predominant culture in the area is Javanese. There are 120 students in grade 1-6 with a staff of 10 with two Peace Corps Volunteers in the area. The school draws its students from the communities of Marienburg and Ellen. The Stichting der Islamitische Gemeenten in Suriname (SIS) directs the school. The headmistress is Ms. Chung (phone: 8953954).

Commewijne is a district of Suriname, located on the right bank of the Suriname River. Commewijne’s capital city is Nieuw Amsterdam. The district has a population of 30,000 and an area of 2,353 square kilometers. Commewijne is one of the most populated of Suriname’s districts. Commewijne relies primarily on agriculture and fishing for its income, with plantations dating back
to the first Dutch colonization of the area in the 1600s. Many people who live in Commewijne commute to Paramaribo for work.

Marienburg and Ellen have suffered greatly in recent years due to the closing of the Marienburg Rum Factory. Unemployment remains high. Drug use among its youth has also been on the rise.

**Redi Doti Primary School (Redi Doti, Para District)**

The Redi Doti Primary School is located in Redi Doti in the District of Para. The predominant culture in the area is Amerindian. There are 45 students in grade 1-6 with a staff of 7. There are two Peace Corps Volunteers in the area. The school draws its students from the communities of Pierre Kondre, and Cassipora.

Para is a district of Suriname, located on the right bank of the Suriname River. Para’s capital city is Paranam. Redi Doti is known for its production of pineapples. It is also known for the Joden Savanne synagogue ruins and sugar plantation ruins dating back to the first Dutch colonization of the area in the mid 1600s.

**Pokigron E.B.G.S. (Pokigron, Sipaliwini)**

The Pokigron School is located in Pokigron in the District of Sipaliwini on the Upper Suriname River. The predominant culture in the area is Maroon (Saramaccan). There are 155 students in grade 1-6 with a staff of 9. There are two Peace Corps Volunteers in the area. The headmistress is Michella Joop (phone: 7152615, 8814630). The school draws its students from several small communities between Pokigron and Atjoni. The area has a population of approximately 500.

Pokigron is a 3-4 hour drive from Paramaribo on a partially paved and mud road. Pokigron sits within walking distance of Atjoni, port to the Upper Suriname River villages. Many Pokigron residents work 5-6 days a week in Atjoni as store clerks, bus drivers, dishwashers, cooks, construction workers and cleaning persons. Electricity comes to Pokigron from a village generator and typically runs every day 7 p.m. to 11 p.m.

Recently the government began work on a secondary school and boarding house so children from the Upper Suriname River will no longer have to leave their region and move to Paramaribo to continue their education.

People of Pokigron are hard-working and dream of their children having the same opportunities as children in Paramaribo and around the world. They are beginning to recognize the importance of computers across the globe. Though they know very little themselves, the parents understand that their children must learn how to use computers if they are to be a productive citizen in a modern society.

**St. Thomas Moore School (Washabo, Sipaliwini)**

The St. Thomas Moore Primary School is located in Washabo in the District of Sipaliwini. The predominant culture in the area is Amerindian. There are 136 students in grade 1-6 with a staff of 9. There are two Peace Corps Volunteers in the area. The school draws its students from communities in the area with a population of approximately 500. The school is a Catholic school and the
headmaster is Asruf, Reshma. The St. Thomas Moore Primary School is located in Washabo in the District of Washabo. The predominant culture in the area is Amerindian. There are 136 students in grade 1-6 with a staff of 9. The school draws its students from communities in the area with a population of approximately 500. The school is a Catholic school and the headmaster is Asruf, Reshma (phone: 6803030).

Sipaliwini is a district of Suriname encompassing a majority of the rainforest of the country and is the least developed of the districts. Unemployment is high and test scores in schools in the area remain low. Opportunities for youth, especially, are limited without a good comprehensive education.

**Purpose:**

The goal of the two year pilot is to have extensive evidence collected and analysed to support the theory that CAL can significantly improve learning among children in primary school in Suriname and to enable the Government to plan for taking CAL to scale across the country.

**The expected outputs are as follows:**

1. Development of a content list of all open source software that is relevant for the primary school curriculum and available in Dutch.
2. Training conducted for all teachers and Peace Corps Volunteers in the four pilot communities, as well as key Ministry of Education personnel and personnel from the teacher training college on the use of the CAL.
3. Delivery of laptops to all students and teachers and Peace Corps Volunteers in the 4 pilot communities.
4. Follow up training of teachers, PCVs and Ministry staff.
5. The development of a detailed M&E plan, including tools for data collection that demonstrate how the laptops are being used and how learning is being improved or not.
6. Monthly monitoring reports on indicators within the M&E plan
7. Annual synthesized analysis report and final analysis report of results of the pilot, based on the M&E plan.
8. A national policy and plan for CAL developed.

**Expected key deliverables:**

We are seeking the services of a suitably qualified company with a proven experience of implementing CAL in developing countries.

Specifically, the vendor is required to deliver the following results:

1. **Content List and Pre-Load Options**
   - Present a menu of educational content recommended for inclusion on the school servers and/or computers and suggest methods to update and utilize such content.
   - The software must be open source

2. **Rugged Laptops:**
   **Physical dimensions**
   - Small
   - Light
Core Electronics
- At least 1 GHz processor
- At least 4 GB solid state storage
- USB connectors

Display
- Low power consumption display
- Sunlight readable

Integrated peripherals
- Microphone
- Speakers
- Keyboard
- Touchpad
- Wireless networking
  - Must be able to connect to networks and other laptops wirelessly

External connectors
- Appropriate power connectors for low-power-consumption needs

Battery and power conversion
- Must have a battery with at least 4 hours capacity
- Must be able to charge from Mains or Solar power.

Environmental specifications
- The unit should seal well enough that children walking to and from school need not fear rainstorms and dust
- Shock absorbent and can withstand random vibration

Regulatory and safety requirements
- The laptop and related hardware must meet electronic safety and regulatory requirements for electronics used by children in Suriname and also adhere to global and regulatory standards for safe electronics and hardware.

3. **Training Sessions:**

Provide two separate five day trainings.

The first training to include (but not limited to):
- The hardware
- How to pull apart laptop and put back together
- The software
- Open source
- Designed for children
- Power issues
- How to use/access power in the various circumstances
- Sharing content
- Sharing activities

The second training to include (but not limited to):
- Summary of all the above - mainly led by the needs of the community
- Discussion on issues, blockers
• Discussion on unexpected consequences (positive and negative)
• Discussion about progress, usefulness, how to improve

4. **M&E Report Reviews:**

Provide committed point of contact for general M&E support. Contact will review M&E data reports collected in Suriname and provide feedback/recommendations to help better reach Suriname specific outcomes. Meetings will be monthly and begin after the first three months of implementation, they will continue through the two-year pilot.

5. **Plan for Roll Out**

Provide solid plan for taking the project to scale.

**Estimated Duration of the Project:**

Time Frame for Pilot:

2 years – begin 3 September 2011 to 3 September 2013

**Deliverables with due date:**

Content Recommendations: 9 September 2011
Laptops arrive in Suriname: 9 December 2011
First Training Session: 12 December 2011
M&E Reports Feedback Begins: 15 March 2012
Second Training Session: 15 December 2012
Plan for taking project to scale: 1 May 2013

**UNICEF’s Obligation**

UNICEF working together with Ministries and Peace Corps Volunteers will provide support for trainings, as well as provide the training venues. UNICEF and counterparts will provide approval of content to upload onto laptops. UNICEF and counterparts will also provide monthly M&E reports for discussion.

**Required Competencies**

1. Minimum 5 years work experience in ICT
2. Experience working with open source software
3. Proven previous experience in similar project
4. Previous experience working in middle-income country context, preferably in South America
5. Dutch proficiency desirable but not required

**Submission of Proposals**

Interested and qualified vendors are requested to submit a detailed proposal with the following information:

1. Profile of expertise; including experience in handling similar projects, especially with UN agencies or other international organizations (portfolio and proof of previous and current relevant experience)
2. Curriculum vitae of person(s) to be engaged
3. Proposed methodology, work plan outlining key milestones, responsible persons, timeline, monitoring plan and budget (costs involved in terms of personnel, time requirements and software requirements)
**Penalty Clause**
The standard penalty and exit clause as stipulated at the back of the Special Service Agreement form shall be applied if found appropriate by either party.

Interested vendors are invited to submit their written proposals online no later than **August 29, 2011** at: vacancyguyanasuriname@unicef.org

Addressed to:

The Representative  
UNICEF Guyana & Suriname  
72 Brickdam  
Georgetown  
Guyana

**CAL Suriname Budget**

<table>
<thead>
<tr>
<th>Baital Rochman School, Marienburg (Commewijne)</th>
<th>Redi Doti Primary School (Para)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predominant Culture - Javanese/Hindustani</td>
<td>Predominant Culture - Amerindian</td>
</tr>
<tr>
<td>Enrollment</td>
<td>Enrollment</td>
</tr>
<tr>
<td>120</td>
<td>45</td>
</tr>
<tr>
<td>Number of teachers/admin/PCV's</td>
<td>Number of teachers/admin/PCV's</td>
</tr>
<tr>
<td>12</td>
<td>9</td>
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</table>

<table>
<thead>
<tr>
<th>St. Thomas Moore, Washabo (Sipaliwini)</th>
<th>Pokigron E.B.G.S. Primary School (Sipaliwini)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predominant Culture - Amerindian</td>
<td>Predominant Culture - Maroon</td>
</tr>
<tr>
<td>Enrollment</td>
<td>Enrollment</td>
</tr>
<tr>
<td>171</td>
<td>155</td>
</tr>
<tr>
<td>Number of teachers/admin/PCV's</td>
<td>Number of teachers/admin/PCV's</td>
</tr>
<tr>
<td>11</td>
<td>11</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Item</th>
<th>Unit</th>
<th>Quantity Needed</th>
<th>Unit Cost/SRD</th>
<th>Total SRD</th>
<th>Unit Cost/USD</th>
<th>Total USD</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop</td>
<td>Each</td>
<td>635</td>
<td>$</td>
<td>0</td>
<td>$</td>
<td></td>
<td>Current need approx. 535/100 for growth.</td>
</tr>
<tr>
<td>Computers</td>
<td>Each</td>
<td>635</td>
<td>$</td>
<td>0</td>
<td>$</td>
<td></td>
<td></td>
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<tr>
<td>Shipment to Suriname major port</td>
<td>Each</td>
<td>635</td>
<td>$</td>
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<td>$</td>
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<tr>
<td>Spare Parts</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>International Training Costs for PCVs /Teachers/Admin</td>
<td>Each</td>
<td>2</td>
<td>$</td>
<td>0</td>
<td>$</td>
<td></td>
<td>Training in Suriname for Teachers, Peace Corps and Administration (2 separate trainings, 5 days each)</td>
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<tr>
<td>Suggested additional laptops (shipment included)</td>
<td>Each</td>
<td>40</td>
<td>$</td>
<td>0</td>
<td>$</td>
<td></td>
<td>To keep in inventory</td>
</tr>
</tbody>
</table>
Other costs (additional costs the vendor anticipates)  

TOTAL $ -

SIGNATURE
Suleiman Braimoh, Ph.D  
Area Representative  
UNICEF  
Guyana and Suriname

SIGNATURE
Mary Louise- Eagleton  
Chief of Field Office  
UNICEF  
Suriname