



**A CONNECTED PLANET**  
BRIDGING THE DISTANCE FOR EVERYONE'S FUTURE

# **Kobonal Mission School Technology Program Expansion Final Report**

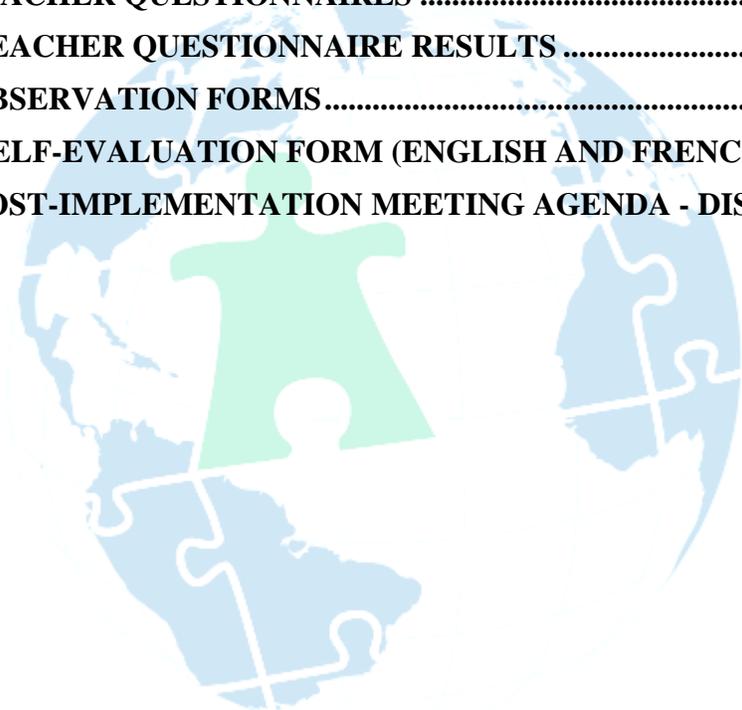


**July 2016**

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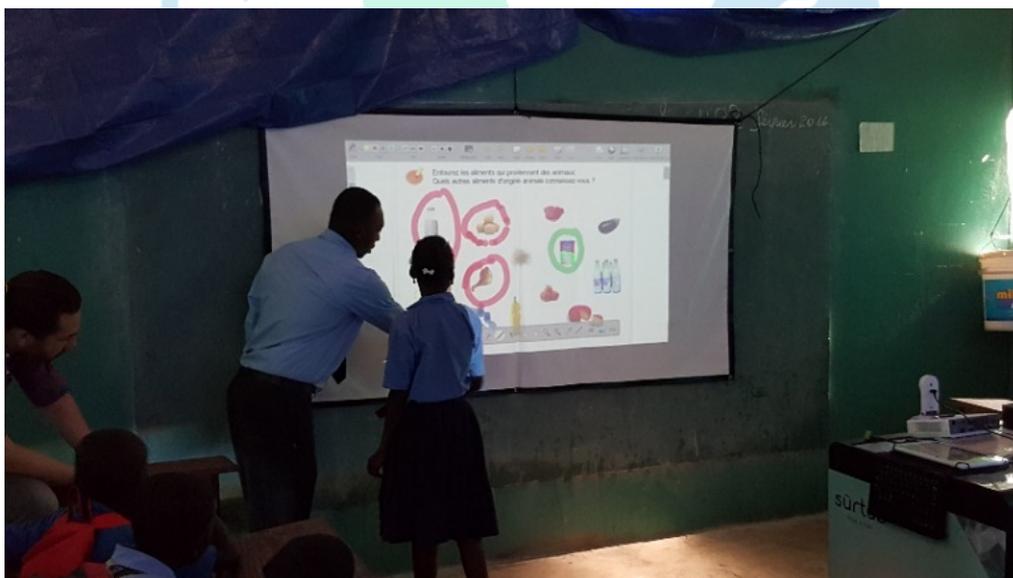
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## **1.0 EXECUTIVE OVERVIEW**

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In 2016, A Connected Planet (ACP) expanded its Technology Integration Program at its partner school Society of Our Lady of the Most Holy Trinity (SOLT) Mission in Kobonal, Haiti. The focus of the Kobonal Expansion Program was the introduction of a Sûrtab Mobile Learning Classroom, a multimedia mobile classroom technology, into the school system. ACP personnel spent a total of nine weeks in the school working to conduct training and collect research on the multimedia mobile classroom technology. The training included technical and pedagogical training for teachers after-school and training with both teachers and students in the classroom. The majority of the Kobonal Expansion Program focused on the use of the interactive whiteboard technology in the classroom with Open Education Resource (OER) digital content obtained from a variety of sources.



The figure above shows students and their teacher participating in a lesson that is utilizing the Mobile Learning Classroom. The methods, procedures, results and findings of the program have been documented in this report and are available as an Open Education Resource.

## 2.0 INTRODUCTION

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In 2014, ACP, in partnership with the SOLT Mission in Kobonal, Haiti, began the Kobonal Technology Integration Program at the Kobonal Mission School. The primary purpose of the program was to conduct research to determine the best practices for implementing tablet technology in the classrooms of developing nations and to distribute the findings, for free, to interested organizations. The program, which was funded by ACP, included the provision of 50 Sûrtab tablets, infrastructure setup for tablet management, and training. Trainings included both technical and pedagogical training on the use of tablets in the classroom. The training was given to pre-selected teachers who were then able to transfer their knowledge to the remaining teachers. The program reached a milestone when the tablets were being used, the full 25 hours of weekly instruction time, across the classrooms. ACP and the Kobonal Mission Administration determined there was a need for more equipment at the Kobonal Mission School and were able to find funding for the Kobonal Expansion Program.



ACP returned, in December 2015 to the Kobonal Mission School, to conduct the first phase of the Kobonal Expansion Program. The first phase consisted of a site visit to the school to gain buy-in for the Kobonal Expansion Program from the teachers and the School Administration, determine and address potential problems before the onsite training, and participate in technical training on Sûrtab's Mobile Learning Classroom. The Sûrtab Mobile Learning Classroom included 50 10-inch Sûrtab Android tablet computers, 1 Windows tablet computer, 1 local server, 2 external batteries, 1 storage & charging cart, 1 IPEVO interactive whiteboard system, 1 ASUS projector, and a 2-year warranty on all equipment.

In January 2016, ACP returned to conduct the second phase of the Kobonal Expansion Program, a 5-week intensive onsite training, which focused on expanding the initial Technology Integration Program to include the Sûrtab Mobile Learning Classroom as well as providing



teacher capacity-building training. During the onsite training, ACP provided technical and pedagogical training on the new equipment focusing primarily on the use of the interactive whiteboard in the classroom and not on the

tablets. Training on the tablets was purposefully not given because the teachers were already familiar with the tablets. ACP explained multiple times to teachers that the pedagogical training being given for teaching with the interactive whiteboard could also be applied to teaching with the tablets.

There were a total of 47 primary teachers and teacher aids who participated in the after-school training sessions totaling 13 hours. Of these 47 teachers, 32 teachers received 3 additional hours of in-classroom training totaling 16 hours of technical and pedagogical training. All of the Kobonal Mission School students, a total of 954 students across 20 classes, from pre-kindergarten to the 6<sup>th</sup> grades, are now using the Mobile Learning Classroom. In addition, a total of 31 Bloom Library spiritual books were converted into Haitian Creole as an initial step in working towards increasing the digital content available in Haiti.

In May of 2016, as the third and final phase of the Kobonal Expansion Program, ACP returned to the Kobonal Mission School for a follow-up visit. The break period between the onsite training and the follow-up visit allowed the Kobonal Mission School two months to take

ownership of the program. ACP reviewed the outcomes the program, made recommendations as needed, and conducted a final in-classroom observation.

The remainder of this report details the methods, procedures, and results from the Kobonal Expansion Program. The last section of this report discusses the conclusions drawn from the program and recommendations for future action. This report will be distributed for free as a guide to interested organizations, across Haiti and other developing nations, who are considering implementing technology in their schools or organizations.



## 3.0 METHODS

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### 3.1 Participants

#### 3.1.1 Kobonal Program Sponsor and Project Manager

The Kobonal Expansion Program Sponsor for the Kobonal Mission School was Father Glenn Meaux. The Project Manager was Philo-Jacques Bernard. Mr. Bernard is responsible for the general oversight of the Kobonal Expansion Program. He is the point of contact for any issues and is held accountable for all of the technology. The Kobonal Mission School Director, is Mr. Luc Fara Jean-Pierre. Mr. Jean-Pierre is responsible for ensuring that the responsibilities of the Technology Administrators and teachers are fulfilled at the school. He was the point of contact for scheduling after-school and in-the-classroom teacher training sessions.

#### 3.1.2 ACP Research Team

The ACP Research Team consisted of a total of five people. The Project Manager, Greg Hearne, was responsible for overseeing the entire Kobonal Expansion Program, and the Senior Methodology Advisor, Dr. Sheila Hearne, was responsible for overseeing the methodology component of the Program. The ACP in-country team included the Country Director, Benjamin Boggess, and the Project Director, Joshua Hearne. Benjamin's expertise is in international development. He has experience in implementing programs and conducting research in Haiti. Benjamin is fluent in English, French and Haitian Creole. Joshua's expertise is in the development and implementation of research methodologies and project management plans in social science-based environments. He also has experience in implementing programs and conducting research in Haiti. An educational subject matter expert, Stephen Edwards, was available to address any concerns regarding educational practices, principles and theories. Stephen's expertise was used in creating ACP's technology implementation approach that is

now used as the initial building block for all of ACP's, project specific, custom developed ACP technology implementation programs.

### **3.1.3 Kobonal Participant Demographics**

A total of 20 classes, from pre-kindergarten to the 6<sup>th</sup> grades, were trained in the Kobonal Expansion Program. The total number of students was 954, with class sizes ranging from 45-50 students. There were 47 teachers, including primary teachers and teacher aids, who participated in the after-school trainings. Of these 47 teachers, 7 teachers were from the Mathebonite Satellite School and did not have the equipment resources for in-classroom training. An additional 8 teachers did not receive in-classroom training because they either worked in the school administration building or did not have a classroom of their own. A total of 32 teachers, who had their own classroom, were able to participate in all of the trainings. All of the Kobonal Mission School participants are under the supervision of the School Director.

### **3.1.4 Technology Administrators**

The Kobonal Mission School has two Technology Administrators. The Technology Administrators are defined as the individuals tasked with the setting up, charging, maintaining, safekeeping, logging, application searching, application loading, and application usage reporting of the technology. They were selected during the initial Kobonal Technology Integration



Program, in 2014, based upon the recommendation of the Project Manager and the School Director, and after approval of ACP. The Technology Administrators are under the supervision of both the Project Manager and School Director.

## 3.2 Provision of Materials

### 3.2.1 Equipment

The Mobile Learning Classroom package, from Sûrtab, is used in the Kobonal Expansion Program and includes 50 10-inch Sûrtab Android tablet computers, 1 Windows



tablet computer, 1 local server, 2 external batteries, 1 storage & charging cart, 1 IPEVO interactive whiteboard system, 1 ASUS projector, and a 2-year warranty on all equipment. The purchasing of Sûrtab products, a local Haitian tablet manufacturer located in Port-au Prince, helps to boost the Haitian economy, avoid issues with import and custom fees, and simplifies the returns and repairs process. When not in use, the Mobile Learning Classroom is locked in the school administration building. The Technology Administrators are responsible for having the teachers check out all

technology using a logbook system. The Kobonal Mission School has consistent power and reliable wireless internet connectivity (WiFi).

### 3.2.2 Local Server Content

The Mobile Learning Classroom local server was loaded with content to be used with both the tablets and interactive whiteboard.

The tablet content included:

- 11 education-based Android applications in Haitian Creole, developed by ACP
- Android applications in English and French from the internet
- 31 Bloom Library books

The interactive whiteboard content included:

- Wikipedia in French

- Khan Academy in French
- All Children Reading content (USAID)
- French teacher-training resource (IFADEM)
- Teacher-training content from the Lamap Foundation
- Compilation of Mother Tongue Books from the Matènwa Community Learning Center
- 11 education-based Windows applications in Haitian Creole, developed by ACP
- 31 Bloom Library books
- Ministry of Education's national curriculum requirements for 1<sup>st</sup>-6<sup>th</sup> grades
- Haiti Futur content - Ministry of Education's national curriculum that has been turned into interactive digital content in Haitian Creole and French. Content is only available for 1<sup>st</sup> grade and Haiti Futur is working on the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> grades.

### 3.2.3 Bloom Library Content

In response to a mutual interest between ACP and the Kobonal Mission Administration ACP has begun to create digital content using a United States Agency for International Development (USAID) sponsored software called Bloom. Bloom software allows users to



translate existing books into new languages and to create/upload original content. The original content is then available for other users to translate into the language of their choice. Thus far,

ACP has translated a total of 31 spiritual books, Bible stories and Bible excerpts, in the Bloom Library from English into Haitian Creole and loaded the content to the local school server. The Bloom software tool and Bloom Library were developed by the organization SIL International. The Bloom software program is a USAID All Children Reading (ACR): Grand Challenge for

Development competition winner. USAID is heavily promoting the use of Bloom program around the world.

### **3.3 Personnel Training**

#### **3.3.1 Training Overview**

Technical and pedagogical trainings were conducted throughout the 5-week intensive onsite training. The teachers had been previously trained on the technical use of tablets so the technical training provided by ACP for the Kobonal Expansion Program primarily focused on the interactive whiteboard technology. The interactive whiteboard technology was also used as primary focus for the pedagogical training. It was explained multiple times to teachers that the pedagogical training being given for teaching with the interactive whiteboard could also be applied to teaching with the tablets.



The 32 teachers who were able to participate in all the trainings received a total of 16 hours of training each: 13 hours after-school and 3 hours in-the-classroom. All of the training sessions included a combination of technical and pedagogical training. After-school trainings took place two times a week, in the afternoons, for two hours. In-classroom trainings took place daily based on a schedule created by ACP and the School Director. A record of teacher attendance was kept. Training days with teachers were not consecutive or longer than 2 hours to allow for the absorption and retention of knowledge.

#### **3.3.2 Kickoff Meetings**

A School Administration Kickoff Meeting was conducted to discuss the prerequisite tablet training, training plan, training schedule, teacher expectations, preliminary post-

implementation plan, additional smaller items, and any additional concerns from the School Administration. The School Administration Kickoff Meeting Agenda can be found in Appendix A. A Teacher Kickoff Meeting was also conducted to discuss the training plan, training schedule, teacher expectations, and any additional teacher concerns. The Teacher Kickoff Meeting Agenda can be found in Appendix B.

### **3.3.3 Tablet Technical Training Prerequisite**

The Kobonal Mission School was required to fulfill a Technical Tablet Training prerequisite. This prerequisite required that all of the teachers and students must have used the tablets in the classroom once and have an intermediate level of tablet technical understanding by



the beginning of the Kobonal Expansion Program. To ensure the prerequisite was fulfilled, the Technology Administrators conducted teacher tablet technical trainings after school, at the beginning of the January

2016, before ACP returned for the 5-week onsite training. The teachers were then required to use the tablets for at least one lesson before the beginning of the Kobonal Expansion Program. Four teachers had not used the tablets in the classroom when ACP returned to conduct the Kobonal Expansion Program. These four teachers were required to use the tablets at the beginning of the Kobonal Expansion Program before ACP would start the new training. This prerequisite ensured that the teachers were to some extent comfortable using technology and allowed ACP to focus on integrating the new Sûrtab Mobile Learning Classroom tool in the classroom.

### **3.3.4 Technology Administrator Technical Training**

During the site visit in December 2015, the ACP in-country team and the two Technology Administrators attended a six-hour Sûrtab technical training session, at the Sûrtab plant, in Port-au-Prince. The training was conducted in Haitian Creole.

The topics covered included:

- Explaining the purpose of the local server
- Explaining how the local server works
- Setting up the local server
- Loading the local server
- Navigating the tablet (Technology Administrators had 2 years of prior experience)
- Setting up and navigating the local server content on the tablet
- Setting up the interactive whiteboard
- Explaining how the interactive whiteboard works
- Navigating the interactive whiteboard
- Navigating the Wind006Fws tablet

The Technology Administrators continued their training during the 5-week onsite training. The Technology Administrator Technical Training was conducted through informal meetings and hands-on training in the classroom.

The Mobile Learning Classroom topics covered in the trainings included:

- External battery setup, configuration, use and charging
- Projector setup, configuration, use and charging
- Windows tablet setup, configuration, use and charging
- Local server setup, administration and use
- Interactive whiteboard setup, configuration and use
- Maintenance
- Distribution
- Safekeeping

- Security
- Logging
- Additional management topics

Technology Administrators were required to attend all teacher after-school training sessions and, when possible, the in-classroom teacher-training sessions. This ensured the Technology Administrators received a sufficient amount of experience in addressing concerns or issues with the Mobile Learning Classroom. A document was created to assist the Technology Administrators with setting up the Mobile Learning Classroom and can be found in English in Appendix C and in French in Appendix D.

### **3.3.5 Teacher Technical Training**

The Teacher Technical Training acclimated teachers to the Mobile Learning Classroom equipment. The training focused on what the teacher needed to know technically in order to use the system in the classroom.

The Mobile Learning Classroom topics covered in the trainings included:

- External battery setup, configuration, and use
- Projector setup, configuration, and use
- Windows tablet setup, configuration, and use
- Local server setup, administration and use
- Interactive whiteboard setup, configuration and use.
- Maintenance
- Distribution
- Safekeeping
- Security
- Logging
- Additional management topics



The Teacher Technical Training was conducted in combination with the Teacher Pedagogical Training over 3 after-school training sessions. The training plans for each of these 3 sessions can be found in Appendices E, F, and G.

### **3.3.6 Teacher Pedagogical Training**



The after-school Teacher Pedagogical Training focused on training teachers how to incorporate the Mobile Learning Classroom technology and content into their lesson plans and classroom. Teachers were given discussion questions and exercises during training sessions that required teachers to think and actively participation. An example assignment that was used in the training was to split the trainee teachers into groups, have them develop a lesson plan that incorporated using the mobile learning classroom content, and then have them present and teach the lesson to the other trainee teachers. Homework was also given to be completed outside of the training sessions. The Teacher Pedagogical Training was conducted in combination with the Teacher Technical Training over 3 after-school sessions. The training plans for each of these 3 sessions can be found in Appendices E, F, and G. An additional 4 after-school training sessions were held with teachers to work on finding content, integrating the content into a lesson plan, and sharing their lesson plan ideas with their peers.

The in-classroom Teacher Pedagogical Training focused on acclimating teachers to the use of the technology, demonstrating teachers the abilities of the technology, and the integration of the technology and content into their lesson plans. During the onsite training and follow-up visit, ACP worked three times with each of the 32 teachers who had a classroom. ACP

conducted and recorded observations during this time (See Section 3.1.2 for additional information).

### **3.3.7 Onsite Training Closeout Meetings**

A Teacher Closeout meeting was also conducted to discuss the onsite training that occurred, the pedagogical relationship between tablets and interactive whiteboards, content, equipment obstacles, the short-term plan for the program and ongoing training, the long-term plan for the program, and any additional teacher concerns. The Teacher Closeout Meeting Agenda can be found in Appendix H.

A School Administration Closeout Meeting was conducted to discuss the onsite training that occurred, the pedagogical relationship between tablets and interactive whiteboards, content, equipment obstacles, the short-term plan for the program and ongoing training. The School Administration Closeout Meeting Agenda can be found in Appendix I. A separate Post-Implementation Plan Meeting to discuss the long-term plan and goals was held at the end of the May 2016 follow-up visit (See Section 3.3 for additional information).

## 4.0 PROCEDURE AND RESULTS

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Primary Research Question:

What are the best practices for implementing multimedia mobile classroom technologies in developing nations?

Secondary Research Question:

Does implementing multimedia mobile classroom technologies increase student success in developing nations?

### 4.1 Overview

A research-based process was used to collect research regarding the implementation of the Mobile Learning Classroom in the Kobonal Mission School. Qualitative data including questionnaires and observations was collected to address the primary research question and develop a list of best practices. This data was also used to make changes to the program as need. Quantitative data including questionnaires, exam scores, and content tracking was and is still being collected to answer the secondary research question.

### 4.2 Data Collection

#### 4.2.1 Teacher Questionnaires

A pre-program and post-program questionnaire was given to all of the teachers at the beginning and at the end of the Kobonal Expansion Program. The questionnaires measured teachers' attitudes towards and expectations of expanding the Kobonal Technology Integration Program (includes the interactive whiteboard system) before and after the onsite training and follow-up visit. A total of ten questions were asked, five rating scale questions and five open-ended questions. Rating scale questions were measured using a 10-point rating scale. Responses were grouped for data analysis 0-3=low (not at all), 4-7=medium (some), and 8-10=high (a great deal). The open-end questions were guided and phrased in a way that required teachers to respond in detail. Demographics (sample size, age, gender, highest level of education, and number of years of teaching experience) were collected but are not included in the question

count. The questionnaire wording was reviewed for language barrier discrepancies and translated into French. The pre-program and post-program teacher questionnaires can be found in English in Appendix J.

The teacher questionnaire results were used to help make decisions regarding the Kobonal Expansion Program, gauge the success of the Kobonal Expansion Program, and make changes for future programs.

The rating scale questions were grouped into five categories, with one pre-program and one post-program question per category, including:

- 1) Experience and comfort with using technology
- 2) Interest in using the Mobile Learning Classroom
- 3) Attitude that the Mobile Learning Classroom assists in student learning
- 4) Attitude that the Mobile Learning Classroom assists in teaching
- 5) Attitude that the Mobile Learning Classroom assists in student achievement

Overall there was an increase in each rating scale question category from the pre-program to the post-program questionnaire. When teachers responded with a rating of 8-10 or ‘a great deal’ to questionnaire questions (on the 10-point rating scale), teacher experience and comfort using technology increased from 45% to 61% on the rating scale questions. Teacher interest increased in using the MLC increased from 65% to 84% (when responding ‘a great deal’). Teacher belief that the MLC assists in student learning increased from 71% to 94% (when responding ‘a great deal’). Teacher belief that the MLC assists in teaching increased from 77% to 97% (when responding ‘a great deal’). And finally, teacher belief that the MLC will assist in students’ achievement over time increased from 81% to 97% (when responding ‘a great deal’).



The open-ended questions from the pre-program and post-program questionnaires allowed the teachers to express their thoughts on the Mobile Learning Classroom.

The open-ended questions were grouped into four categories including:

- 1) Expectations of using the Mobile Learning Classroom
- 2) Obstacles with using the Mobile Learning Classroom
- 3) Subjects to be taught using the Mobile Learning Classroom
- 4) Additional general questions regarding the use of the Mobile Learning Classroom

Beyond general and typical responses, teachers are concerned about technical issues with the equipment, needing additional practice and training, and having sufficient support from the school administration. The questionnaires also indicated that teachers understand the benefits of using the Mobile Learning Classroom and that it can be used across multiple subjects to help their students learn. The results of the teacher pre-program and post-program questionnaires can be found in Appendix K.

#### **4.2.2 Teacher Classroom Observations**

The Teacher Classroom Observations were conducted in conjunction with the in-classroom teacher pedagogical training. The purpose of the observations was to observe the changes from the introduction through the full integration of the Mobile Learning Classroom into a classroom setting, as well as to develop a list of best practices. The observations were conducted in the classroom, during the onsite training and follow-up visit, following the first 3 after-school (core) technical and pedagogical training sessions. Observation template forms were created for ACP team members to take notes. These template forms detailed expected changes to look for and questions to answer for each observation. They were created for each of the lesson plan observations in order to keep observers focused and minimize observer biases. The observation template forms can be found in Appendix L.

The ACP team coordinated with the School Director to schedule the observation times. A total of 40 observations were conducted during the onsite training, at a rate of 3 observations per school day, by the two in-country ACP team members. An additional 20 observations took place during the follow-up visit, at a rate of 4 observations per school day, by the same ACP team members.



A total of three lesson observation sessions, with feedback at the end, occurred per each teacher in the classroom. The first observation focused on acclimating the teacher, in the classroom setting, to the Mobile Learning Classroom. A Haiti Futur lesson, which comes with pre-built out instructions and exercises, was used. The second observation was of a lesson plan that was created by the teacher in the after-school training sessions and taught in the classroom. A third observation of a lesson prepared on the teachers' own time was conducted during the follow-up visit. Teachers were required to complete a written self-evaluation after each observation to reflect on the outcomes of their lesson. The self-evaluation form can be found in Appendix M. Additional days were built into the program schedule to account for school holidays and unexpected delays. An ACP team member served as the translator during the observations.

Teacher classroom observations, teacher self-evaluations and feedback from all of the participants, including the ACP team, were used to create a list of best practices for implementing the Mobile Learning Classroom in the classroom.

These best practices can be broken down into five categories including:

- 1) Teacher training – Training the teachers on the Mobile Learning Classroom

- 2) Classroom management – Managing the Mobile Learning Classroom in a classroom setting
- 3) Pedagogical implementation – Teaching (how to teach) using the Mobile Learning Classroom
- 4) General Management – Additional information to assist in future implementation projects
- 5) Equipment – Setting up and maintaining the equipment

The best practices, grouped into their five categories, are detailed below.

*Note: The best practices focus on implementing the interactive whiteboard system and not the Android tablets. The “ACP Tablet Implementation Pilot Program Final Report” from 2014 references best practices for implementing tablet technology in the classroom.*

#### 4.2.2.1 Teacher Training

<p><b>1. Smaller groups</b> – When training a large school, it is easier to work with smaller groups of 10-15 teachers that are split by grade. This allows trainers to focus more on individual teachers and allows for more hands-on training when introducing the MLC.</p>
<p><b>2. Taking notes</b> – Requiring teachers to take notes ensures that trainers will not have to repeat the training. If possible, providing folder, pens, and papers is ideal.</p>
<p><b>3. Phone policy</b> – Having a no-phone policy ensures minimal distractions during training.</p>
<p><b>4. Tablets vs Interactive whiteboards</b> – If a teacher already knows how to use a tablet then it is easier to teach them how to use the MLC. The pedagogical training given for tablet use can also be applied to the use of interactive whiteboards.</p>
<p><b>5. First lesson</b> – When introducing the interactive whiteboard for the first time in the classroom, start off with a prepared lesson, such as a Haiti Futur lesson specific to the grade level, that the teacher will teach. The trainer should lead off the first exercise and then have the teacher take over. The lesson should focus on having the teacher practice using the new tool as opposed to teaching the students new content. This will help ease teachers out of their comfort zone and into using the new technology.</p>
<p><b>6. Co-Teacher</b> – If there is a second teacher or teaching assistant, ensure that they also participate in practicing teaching using the interactive whiteboard.</p>
<p><b>7. MLC Setup</b> – It is important that teachers know how to setup and calibrate the MLC, specifically the interactive whiteboard. This way if a problem occurs the teacher knows either how to fix it or when to contact the Technology Administrators. Having extra time built into lesson plans for the MLC setup is ideal.</p>
<p><b>8. Teacher proficiency</b> – Teachers need to be fully proficient with the technology and the various content that they will use to complement their lesson plans in order to effectively and efficiently teach their students. Teacher proficiency is a key milestone in creating a successful technology integration program.</p>

*MLC=Mobile Learning Classroom*

### 4.2.2.2 Classroom Management

<p><b>1. Provide rules to protect the MLC</b> – Students should enter the classroom in a single file when the MLC is set up. No food or drink should be consumed while using the MLC. All pencils should be put away when using the MLC.</p>
<p><b>2. Managing the classroom layout</b> – Sometimes classes were too crowded, noisy, disorderly and/or students could not see the interactive whiteboard because of other students or the MLC cart blocking the board. Re-arranging the classroom by moving the desks around and mixing up the boys with the girls helped to alleviate the issues. Having an attentive and symmetrical classroom led to better concentration, less distractions and brought students closer together to participate in collaborative learning.</p>
<p><b>3. Call on volunteers</b> – Calling on students, switching between boys and girls, to volunteer rather than having students rush to the front of the classroom also helped keep order in the classroom. Having students erase the interactive whiteboard after an exercise created less work for the teachers and another way for students to actively participate.</p>
<p><b>4. Starting the lesson with a ‘fun’ activity</b> – Begin lessons with a song or ‘fun’ physical activity excites and energizes the students for the lesson while also focusing attention on the teacher.</p>
<p><b>5. Giving step-by-step instructions</b> – Teachers who were most effective in incorporating the technology in their lesson were those who gave explicit step-by-step instructions for their exercises and navigating the technology. This helps to keep the students’ attention and provides a structure, order and timely lesson plan.</p>
<p><b>6. Teacher modeling</b> – When giving step-by-step instructions on something new, teachers need to model each step using the technology on their own before instructing students to do so. This allows students to visually comprehend the instructions.</p>
<p><b>7. Allow sufficient ‘wait time’</b> – When teachers were giving and modeling step-by-step instructions, it is necessary to allow students enough ‘wait time’ between giving an instruction and allowing students to complete the instruction otherwise students will get lost. ‘Wait time’ amount varies from grade level to grade level.</p>
<p><b>8. Define a common tablet language</b> – A common language for specific words and tools that are used throughout all classrooms should be developed. As students’ progress through school, having each teacher use the same common language will eliminate confusion during lessons. Effective teachers reinforced this common language at the beginning of every class.</p>
<p><b>9. Drawing instructions on the chalkboard</b> – At times, when modeling instructions, students found it difficult to see what the teacher was instructing. Improvising by drawing instructions on the chalkboard allowed students to visualize the teacher’s instructions.</p>
<p><b>10. Collaborative learning</b> – Students were able to help each other when someone was confused using the interactive whiteboard. Instructing students to work collaboratively and help others out, will increase learning and problem-solving skills.</p>
<p><b>11. Teacher directives</b> – Teachers should develop a clear directive for transitioning students’ attention to and from the MLC. For example, when the teacher wants to have student focus on them, they can instruct the students by saying, “, hands on your lap, eyes on me!” By giving students a directive for focusing attention to and from the MLC, teachers can better instruct the class and keep the attention of all the students.</p>

### 4.2.2.3 Pedagogical Implementation

<p><b>1. Lesson plans</b> – Lessons using the MLC needed to be thought out and prepared beforehand. Thinking outside of the box to create a lesson plan is encouraged. Lesson plans that include using the technology should be relevant to the curriculum. The technology must be integrated into the lesson plan and used appropriately. Teachers must ensure that adequate time is allotted for the lesson plan and content that is being used. Student abilities must also be considered. For example: content that requires reading skills should not be used if students cannot read yet.</p>
<p><b>2. Server content review and preparation</b> – It is important to allocate time for teachers to review the content available on the server as well as prepare their lesson plans.</p>
<p><b>3. Lesson language</b> – The language used for the content and lesson need to be based upon the abilities of both the teacher and students. If a teacher cannot speak French, they should not be using French content.</p>
<p><b>4. Content requirements</b> – Content is sometimes not ideal for the interactive whiteboard and is better suited for the tablets. For example – the Khan Academy content can be hard to see on the interactive whiteboard because it uses a black background but is clearly visible on a tablet.</p>
<p><b>5. Technology uses</b> – Teachers used a majority of content to serve as visuals for students (human body visual for anatomy, and geometric shape visuals for geometry.) Although these visuals proved to be advantageous for the students, there are several applications that could be used to apply content knowledge and show understanding. Moving forward with the implementation of technology, teachers should not only use the technology as visual aids, but they should try to use them to assess students understanding of content knowledge. The Annotator Toolbox, which accompanies the IPEVO system and acts as a digital crayon or stylus, is a tool that can assist in this. The use of technology also teaches problem-solving skills by showing students something they are not used to and having them figure out how to use it.</p>
<p><b>6. Review lesson when using technology</b> – Technology is meant to be supplemental to the lesson plan taught by the teacher. Though technology provides many forms of independent student learning, it is important that the teacher reviews the lesson, being taught using the technology, and ensures that all of the students fully understand the lesson. This is recommended throughout the lesson using tools such as the Annotator.</p>
<p><b>7. Physical exercise as practice</b> – As the lesson is concluding, exercises and practice are important for solidifying the lesson taught. Physical exercise (having students come to the front of the class for example) will bring more attention and focus, and will reinforce what the students just learned.</p>
<p><b>8. Student technology navigation</b> – Once students appear to understand how to use the technology teachers should challenge and test student understanding without teacher instructions.</p>

### 4.2.2.4 General Management

<p><b>1. Technology lesson time length</b> – The average lesson time in the school was between 30-45 minutes. Instruction time should be no less than 30 minutes.</p>
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<p><b>2. Smaller classrooms</b> – The smaller the classroom the easier and faster the implementation program.</p>
<p><b>3. Collection of content</b> – Collecting and/or building additional digital content in Haitian Creole and French is needed. There is a limited amount of content at all grade levels.</p>
<p><b>4. Stand to the side of whiteboard</b> – Teachers and students must stand to the side of the interactive whiteboard in order for the IPEVO sensor to work and for the classroom to see what is occurring.</p>
<p><b>5. IPEVO stylus red light</b> – The IPEVO stylus is shaped liked a large crayon. The tip of the stylus has a red light that illuminates when a small amount of pressure is put on it. If the stylus isn't lit red then the IPEVO sensor will not pick up its movements or actions. This can become confusing when drawing or dragging items using the interactive whiteboard. It is recommended to train teachers and students on the first day of training.</p>
<p><b>6. Explaining tools</b> – When using the interactive whiteboard it is important to show and stress the importance of the tools to the teachers and students that can be used within the lessons. For example – the Open-Sankoré software (used by Haiti Futur) and the Annotator Toolbox have a large selection of tools to help assist in teaching the lesson. Students tend to grasp the new tools as fast as or quicker than the teachers.</p>
<p><b>7. IPEVO stylus and tool practice</b> – When introducing the IPEVO stylus and available tools to teachers and students, have them practice picking different tools including colors, pens, and erasers when completing an exercise. In order to pick a tool from Open-Sankoré or Annotator Toolbox, you have to tap the item you want quickly.</p>
<p><b>8. IPEVO tool pen colors</b> – When selecting colors to use from the Annotator Toolbox, pen colors such as yellow and lime green are not visible from the back of the class. It is suggested that one used darker colors while teaching.</p>

#### 4.2.2.5 Equipment

<b>Setup</b>
<p><b>1. Classroom lighting</b> – The classroom needs to be dark in order for the interactive whiteboard to function correctly. If you do have lighting issues, use the MLC early in the morning or late in the afternoon when the sunlight is not as intense.</p>
<p><b>2. Rotate Classrooms</b> – If a designated MLC classroom is not available, and you cannot move the MLC in a timely manner due to issues such as needing tarps for lighting, then have a moving designated MLC classroom that rotates every few days between different classrooms.</p>
<p><b>3. MLC Setup</b> – Labeling the equipment cords and where they plug into will help minimize setup time. The MLC should be setup at the beginning of each day before school starts in order to not waste valuable class time.</p>
<p><b>4. Protecting the equipment</b> – The MLC equipment is placed on top of the cart when in use. To protect it students were told that the cart as well as the equipment on top of it should not be touched and to pretend it was electricity.</p>
<p><b>5. Equipment Issues</b> – If the MLC equipment is malfunctioning as a result of software issues the first troubleshooting step is to restart the equipment. For example: If the</p>

<p>projector and windows tablet refuse to sync but have been setup according to ACP training and the MLC Setup instructions, then try restarting the equipment.</p>
<p><b>6. Projector screen</b> – If a board is not large enough to project on, it is dirty, or in general not an ideal surface on which to use the interactive whiteboard system, a projector screen can be used. The projector screen should be hung centered with the room and/or board. Low cost projector screens are available online.</p>
<p><b>7. Bluetooth speaker</b> – A Bluetooth speaker can be used to increase the volume on the Windows tablet or the Sûrtab tablets. Low-cost battery powered Bluetooth speakers are available online.</p>
<p><b>8. Charge equipment daily</b> – The equipment (projector, tablet, external batteries) needs to be charged when it is not in use including daily and during breaks. The battery life for the equipment is about 2.5-3 hours.</p>
<p><b>9. Power off equipment when not in use</b> –The equipment should be powered off at the end of every lesson as soon as you are done using it. This saves battery and ensures the maximum daily use of the equipment.</p>
<p><b>Cart</b></p>
<p><b>10. Secure the equipment</b> – When not using the MLC equipment during the day, it should be placed inside of the cart and the cart should be locked for security. The cart should be locked in a school administration or classroom when school is not in session.</p>
<p><b>11. Place the cart 8-11 feet from board</b> – The cart must be 8-11 feet away from the board. See IPEVO System best practices for additional information.</p>
<p><b>12. Create a backup transportation plan</b> – The cart provided by Sûrtab is not ideal for rough terrain (ex: rocks, roots, or mud). During the site visit, determine if upgraded wheels or another form of transportation for the equipment, is needed. If another form of transportation is needed, a table can be built for the equipment to sit on in the classroom. The cart can still serve as a charging and secure storage space.</p>
<p><b>Projector</b></p>
<p><b>13. French language</b> – When setting up the projector initially, change the language setting to French. This helps teachers to comprehend instructions.</p>
<p><b>14. Zoom and focus dial</b> – The zoom setting and focus dial setting should be used to ensure that the project fits on the board and that the image being projected is clear.</p>
<p><b>15. WiFi capability</b> - Purchasing a projector with WiFi capabilities allows for the windows tablet to be projected wirelessly. Note: A low cost Wi-Fi dongle, which plugs into the back of the projector, might need to be purchased.</p>
<p><b>16. HDMI cable</b> – An HDMI cables should be provided for back-up purposes. Check whether you need a micro-HDMI or mini-HDMI connector, depending on the tablet.</p>
<p><b>Windows Tablet</b></p>
<p><b>17. Adjust screen time out</b> –The tablet has a default screen time out setting of only a few minutes. This resulted in an interruption to lessons and required reconnecting the tablet to the projector. Switching the tablet to a 1-hour screen lock setting resolved the issue.</p>
<p><b>18. Adjust screen brightness</b> – The tablet has a high default screen brightness that drains battery. Adjust the screen brightness down to save battery life.</p>

<p><b>19. French language</b> - When setting up the tablet initially change the language setting to French. This helps teachers comprehend instructions.</p>
<p><b>20. Protective case with Bluetooth keyboard</b> – To protect the tablets and navigate the tablet easier, purchase a protective case and Bluetooth keyboard if they are not provided with the tablet.</p>
<p><b>21. Clean the tablet</b> – The tablet should be cleaned on a bi-weekly basis. Special inexpensive cleaning clothes are available for both the front screens and backs of the tablet.</p>
<p><b>22. Navigation</b> – Use the Windows tablet to navigate the screen if you are having trouble navigating on the interactive whiteboard.</p>
<p><b>23. Zoom</b> – Use the zoom in/out feature directly on the Windows tablet to increase the font size of a webpage being displayed on the interactive whiteboard.</p>
<p><b>IPEVO System</b></p>
<p><b>24. Place the IPEVO sensor 8-11 feet from board</b> – The IPEVO interactive whiteboard system requires that the IPEVO sensor and projector must sit on the cart (or table) 8-11 feet away from the board.</p>
<p><b>25. Classroom lighting</b> – The IPEVO sensor is extremely sensitive to light. Ensure there are no light rays between the IPEVO sensor and the board.</p>
<p><b>26. Sensor position</b> – The IPEVO sensor should be placed on top of the projector for best results. The sensor should be facing and parallel to board.</p>
<p><b>27. Sensor calibration</b> – The sensor is extremely sensitive when calibrating. Instructions are provided on the Windows tablet when calibrating.</p>
<p><b>28. Power</b> – The IPEVO sensor must be plugged into the external battery pack to power on. However, it requires very little power so plugging in a second item to charge, such as the local server, ensures the external battery pack stays on.</p>
<p><b>29. Stylus batteries</b> – The IPEVO stylus uses two AAA batteries. Be sure to provide back-up batteries.</p>
<p><b>Other MLC Equipment</b></p>
<p><b>30. External battery voltage</b> – If a battery is shutting off, it might not be broken but rather an issue with voltage. Try plugging in a second item to charge to increase the voltage. The external battery used was made by Aukey and it is the only external battery available that has the needed ports for charging the MLC.</p>
<p><b>31. External battery backup</b> – Purchase an external battery backup. If something happens to the original battery, a backup ensures that the MLC is still able to function. However, the projector will not work with the external battery because of the voltage and the Windows tablet cannot use the external battery because the micro USB charging port (which allows the Windows tablet to charge) is already being used by the IPEVO System. This is why daily charging is important.</p>
<p><b>32. Local server</b> – The local server must be plugged into the external battery pack to power on. However, it requires a second item to be plugged in and charging in order for the external battery to stay on. When not being used with the IPEVO System, charge a tablet to keep the battery on. This is an issue with the voltage output on the external battery.</p>

### **4.2.3 Exam Scores**

Student exam scores are being tracked and collected for the entire 2015-2016 school year. Data collection will continue, for future school years, until each class reaches the end of the 6<sup>th</sup> grade. This data will be used to compare exam scores over time providing a quantitative answer to the secondary research question. There is currently not enough data to draw sufficient conclusions regarding a change in student scores as a result of learning using the Mobile Learning Classroom.

### **4.2.4 Content Tracking**

The content used on the Sûrtab tablets is tracked by the 'App Usage' application that has been loaded onto every tablet. The application tracks every application used, how many times it was used, when it was used, and the time spent on the applications. The data is stored to each tablets hard drive and will be downloaded during ACP's follow-up visits. The Technology Administrators are responsible for ensuring that these applications are loaded to each tablet and tracking usage data at all times.

The content used for the interactive whiteboard is tracked using the logbook. Every time a teacher uses the interactive whiteboard (Mobile Learning Classroom), they are required to check the equipment in and out and detail what content they used. This process was covered during the onsite training sessions.

## **4.3 Post-Implementation Plan**

A Post-Implementation Meeting between the Kobonal School Administration and ACP was held, at the end of the follow-up trip in May 2016. The meeting included discussions of next steps for the technology, reminding the School Administration of their continued data collection requirements, and addressing other concerns of the School Administration.

The specific topics discussed in the meeting included:

- Overview of observations
- Availability of content
- Equipment items
- This school year plan: May and June 2016
- Next school year plan: August and September 2016
- Concerns & questions

The detailed School Administration Post-Implementation Meeting Agenda can be found in Appendix N.

ACP will conduct an informal follow-up visit to Kobonal to ensure the program is continuing successfully. The follow-up visit will be conducted, depending on funding, during the beginning months of the 2016-2017 school year. ACP will examine both the Technology Administrators and teachers' responsibilities and progress at this time. Recommendations will be made for changes, if needed. Although the program has ended, ACP is in contact with the Technology Administrators weekly.

## 5.0 DISCUSSION

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### 5.1 Findings and Recommendations

#### 5.1.1 Overview

ACP has summarized the key findings and recommendations of the Kobonal Expansion Program observed during the onsite training and follow-up visit. During the Post-Implementation Plan Meeting, these items were discussed with the Kobonal School Administration. ACP suggests that these findings and recommendations are reviewed by stakeholders, possible solutions are discussed and the necessary measures are taken to ensure the Kobonal Technology Integration Program continues to grow.

#### 5.1.2 Continue Use of Technology

ACP recommends that teachers and students continue to use the technology. The Kobonal School Administration must ensure that a schedule is in place for teachers to use the technology through the end of the school year and start again at the beginning of the next school year. During the teacher summer training sessions and afterschool weekly meetings in the school year technology trainings should be incorporated as a topic to reinforce teachers training. The Technology Administrators and experienced teachers should be leveraged to lead this effort.

#### 5.1.3 Solve the Classroom Lighting Problem

ACP recommends that a solution to the classroom lighting problem using alternative projector and interactive whiteboards technologies be researched and then piloted. The physical classrooms at the Kobonal Mission School are unique and built to allow as much sunlight as possible. This is not ideal for a



technology classroom because it impacts the projector and interactive whiteboard system. Tarps and a weekly rotating classroom are being used as a temporarily solution. However, too much light is still entering the classroom and one classroom each week is being displaced by this solution. New products are coming onto the market which should be evaluated.

#### **5.1.4 Expand Program to Mathebonite Satellite School**

ACP recommends that the Kobonal Technology Integration Program be expanded to the Mathebonite Satellite School. The Mathebonite Satellite School has received the after-school training but not in-classroom training from ACP. The school needs its own equipment and additional training because it is too far away (1.5 hours) to use the main schools equipment. Teachers from the school have expressed a strong desire to be part of the program.

#### **5.1.5 Allocate Money in the Budget for Equipment**

ACP recommends that the Kobonal Mission School continue to allocate money in the budget for additional equipment and repairs, outside of the two-year warranty period. As the school transitions towards a more technology-centered teaching approach more technology is going to be needed. As equipment is used more there is a higher possibility of it breaking.

#### **5.1.6 Develop Catholic Digital Content in Haitian Creole**

ACP recommends supporting all efforts which will expand available OER. More specifically though, ACP recommends piloting a project at the Kobonal Mission School to



develop Catholic curriculum based education resources to include videos, whiteboard lessons and software applications. This effort would directly benefit the Kobonal Mission School and

numerous other Catholic teaching institutions across Haiti. After the addition of the Mobile

Learning Classroom, the need for content is increasing. The teachers utilize the current content to the best of their abilities but they can only do so much.

ACP has been working to address the content issues by building the infrastructure to scale the production of digital content in Haiti. ACP is currently piloting a program in Port-au-Prince that trains Haitian university students how to create digital content. ACP would like to have these university student work as interns to convert more of the Bloom Books into Haitian Creole and develop mobile applications. ACP would work with Kobonal Mission and/or the General Vicar of the diocese of Hinche (where the Kobonal Mission is located) to develop a proof of concept for religious based digital content in Haitian Creole.

## **5.2 Conclusion**

The Kobonal Expansion Program, based upon the observed results and feedback given by the Kobonal Mission School Administration and teachers, has been a success. The Kobonal School Administration was instrumental in ensuring that the Kobonal Expansion Program was successful. The Kobonal Expansion Program not only benefits the Kobonal School Mission but, on a global scale, the outcomes including the findings and research collected from the program, as well as the digital content that was created, will be shared for free across Haiti and other developing nations. This knowledge will be used to help others efficiently and effectively implement a sustainable technology program, with a sense of ownership, in their organization.

## **APPENDIX A: School Administration Kickoff Meeting Agenda**

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### School Administration Kickoff Meeting Agenda

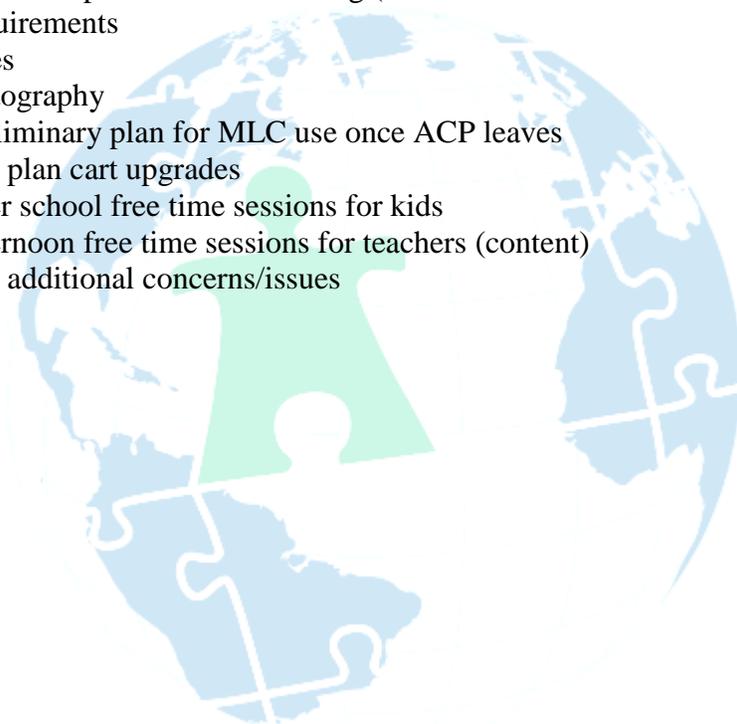
#### *Attendees*

ACP: Josh and Ben

Kobonal: Luc and Bingo (optional)

#### *Agenda*

1. Discuss tablet training that started at beginning of new year
2. Discuss schedule
  - a. If we go past school dismissal is that ok?
3. Discuss teacher expectations for training (See Teacher Kickoff Meeting Agenda)
  - a. Requirements
  - b. Rules
  - c. Photography
4. Discuss preliminary plan for MLC use once ACP leaves
5. Discuss and plan cart upgrades
6. Discuss after school free time sessions for kids
7. Discuss afternoon free time sessions for teachers (content)
8. Discuss any additional concerns/issues



## APPENDIX B: Teacher Kickoff Meeting Agenda

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### Teacher Kickoff Meeting Agenda

#### *Attendees*

ACP: Josh and Ben

Kobonal: Teachers and TAs

#### *Agenda*

1. Discuss tablet training that started at beginning of new year
2. Discuss schedule/plan
  - a. More intense and serious than previous trainings
  - b. Mandatory sessions every Tuesday/Thursday for the next 6 weeks
    - i. Starting after carnival in week 4, sessions will be half discussion/learning and half presentations
3. Discuss teacher expectations for training
  - a. Teacher folder is portfolio
    - i. Give folders and pens to teachers
  - b. Rules
    - i. No cell phones
    - ii. Sit with grade and next to teacher aid
    - iii. Attendance - all trainings are mandatory
      1. Need pre-approval to miss from ACP and Luc/Bingo?
      2. Make-up will be required during a free session (does NOT count as their weekly free session)
    - iv. Must take notes and participate
  - c. Requirements
    - i. Take notes
    - ii. Complete HW and self-evaluations
    - iii. Write essay at end – How do you integrate the MLC into your daily lessons?
    - iv. Write down ACP observation feedback
    - v. Have with you at every training session, free session, and observation session
  - d. Must pass written or oral exam?
  - e. OBV 3 must be at acceptable level or we will retest on follow-up visit
    - i. This might all change into an OBV 4 to be completed on our follow-up visit – depends on schedule/progress
4. Photography and videos will be taken – is this ok?
  - a. It helps ACP tell a story to help find people to help us grow the program here in Kobonal and throughout the country
  - b. Helps specifically with our research
5. Discuss any additional concerns/issues

## APPENDIX C: MLC Setup Instructions (English)

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### MLC Setup Instructions

0. Classroom Setup
  - a. Hang whiteboard
  - b. Make sure no light is entering classroom
  - c. Place cart 2.4m-3.4m (8ft-11ft) from chalkboard
1. Unplug charged batteries from school administration building and take to classroom. Place on top of table (away from edge). Do not unpack or hook up anything.
2. Setup server
  - a. Put antennas up for reception
  - b. PLUG
    - i. **CABLE S** with yellow tip into “DC-IN” socket on back of server
    - ii. **CABLE S** with black tip into “DC OUT” socket on *first* external battery
3. Setup IPEVO sensor
  - a. PLUG
    - i. **CABLE I** micro USB (smaller) tip into back of IPEVO sensor
    - ii. **CABLE I** with USB (larger) tip into “USB 1 OUT” socket on back of *first* external battery
4. Setup projector
  - a. Remove from case, remove lens lid, and place facing board on top of batteries
  - b. Turn on Projector
  - c. Place IPEVO sensor on top of projector with black circle facing board
5. Turn on
  - a. External battery
  - b. Server
6. Turn on Windows tablet and make sure windows tablet is open
7. Connect to C3 Server
  - a. Go to bottom right of Windows tablet and click on “WiFi”
  - b. Select C3 server and it should automatically connect
  - c. If not, the password is “*mydemokey*”
8. Setup Screen Casting
  - a. On projector go down to bottom option and select “WiFi”
  - b. Once in “WiFi” list on projector - go down one option to “Receive screen cast” and press ok
  - c. On windows tablet slide over from right of screen (by Windows flag) and press “devices”
  - d. Once in “devices”> Press “project” and select ASUS-PSB-9219 – It should say connecting and then the tablet should be projected on the board
9. Adjust projector
  - a. Go to projector settings, digital zoom out to 50%
  - b. Center/align with white projector board
10. Setup IPEVO Stylus

- a. PLUG in IPEVO micro-USB with Dongle
  - b. Turn on IPEVO Stylus and Sensor (green light)
  - c. Go to bottom right of windows tablet, select 'up arrow', select 'black IPEVO icon', select 'Start Calibration'
  - d. Once in Calibration, you will need to move the sensor around to ensure that when you touch each corner a red dot appears and it is within the 4 marked corners, once complete, press the 'spacebar'
  - e. On the next step of the calibration, you must follow the targets in each corner and press the red dot to make the target disappear, once complete press "finish calibration"
11. Start teaching your lesson

**Tips:**

1. CHARGE BATTERIES EVERY AFTERNOON!!!
2. Setup and calibrate the cart and IPEVO at the beginning of the day if you ensure no teachers or students move the cart then calibration before every lesson that day should be easy.
  - a. Reinforce daily to students not to touch or go near cart
  - b. Remind teachers that if they move the cart then the IPEVO stylus won't work
3. Too much sunlight will cause the IPEVO sensor to jump all around the interactive whiteboard.
  - a. Use tarps to block out the sunlight
  - b. Pick classrooms to use that have the least sunlight – take into account the changing position of the sun throughout the day
  - c. Try getting all lessons done early in the morning before the sun comes out
    - a. Ex: 7:30am-10:30am
4. If you have issues with the WiFi and projector screen cast.
  - a. First, make sure tablet is on and open
  - b. Second, try restarting projector
  - c. If that doesn't work try restarting tablet
5. EQUIPMENT SECURITY
  - a. Do not leave MLC equipment unattended
  - b. Do not let students play, push, etc near MLC equipment
6. When using only the server (ex: for tablet use) in the classroom a tablet needs to also be plugged into the external battery with the server to ensure the external battery doesn't turn off. We believe this is a voltage issue.
7. USE THE LOG BOOK
  - a. This allows ACP to track usage and report back to cross
8. REPORT ISSUES TO ACP the day they occur so we can work through them together and ensure the program doesn't stop

**At the end of everyday (and if possible during recess) you need to:**

1. Charge
  - a. Windows tablet
  - b. Windows tablet keyboard
  - c. Projector
  - d. 2 External Batteries
  - e. Bluetooth Speaker
2. Plug in and turn on server so teachers can find content



## **APPENDIX D: MLC Setup Instructions (French) - Distributed**

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**A CONNECTED PLANET**  
BRIDGING THE DISTANCE FOR EVERYONE'S FUTURE

**sūrtab**

# INSTALLATION RAPIDE CLASSE NUMERIQUE MOBILE



**DEVELOPPE PAR A CONNECTED PLANET  
EN PARTENARIAT AVEC SURTAB S.A.  
MARS 2016**

## CONTENU

La Classe Numérique Mobile est composée de:

- 50 tablettes numériques Sûrtab
- 1 tablette numérique Windows
- 1 serveur local
- 1 tableau blanc interactif
- 2 batteries externes (une batterie supplémentaire)
- 1 chariot mobile

## ETAPE 1 : PREPARATION DE LA SALLE DE CLASSE

- A. Accrocher le Tableau Blanc au mur
- B. Assurer que la salle de classe est bien dans l'obscurité
- C. Placer le chariot mobile ou la table entre 2.4 m et 3.4 m de distance du tableau

## ETAPE 2 : RETIRER LE MATERIEL

- A. Retirer tout le matériel et placer le sur le chariot ou la table
  1. Le serveur
  2. Le Câble S (serveur)
  3. Le projecteur
  4. Le capteur IPEVO
  5. Le crayon IPEVO
  6. L'USB IPEVO
  7. Le Câble I (IPEVO)
  8. Les batteries externes



## ETAPE 3 : INSTALLATION DU SERVEUR

- A. Positionner les antennes du serveur vers le haut
- B. Connecter le bout jaune du Câble S dans le port « DC-IN » au dos du serveur
- C. Connecter le bout noir du Câble S dans le port « DC OUT » de la première batterie externe



## ETAPE 4 : INSTALLATION DE L'IPEVO

- A. Connecter le micro-USB (le petit bout) du Câble I au dos du capteur IPEVO.
- B. Connecter l'USB (le gros bout) du Câble I au port « USB 1 OUT » de la première batterie externe



## ETAPE 5 : INSTALLATION DU PROJECTEUR

- A. Retirer le projecteur de sa pochette de protection
- B. Retirer la lentille de protection
- C. Placer sur les 2 batteries externes face au tableau
- D. Placer le capteur IPEVO sur le projecteur
- E. Allumer le projecteur



## ETAPE 6 : ALLUMAGE

- A. Allumer :
  1. La batterie externe
  2. Le serveur
  3. La tablette Windows



## ETAPE 7 : SE CONNECTER AU SERVEUR C3

- A. Chercher le symbole du Réseau Sans Fil (Wi-Fi) dans le coin en bas à droite de la tablette Windows
- B. Sélectionner le Serveur C3
- C. Cliquer sur « Se connecter »



Note: La tablette devrait déjà être connectée au serveur.

Note: Le mot de passe pour la connexion au Serveur C3 est : « mydemokey »

## ETAPE 8 : RELIER LA TABLETTE WINDOWS AVEC LE PROJECTEUR

- A. Sur le projecteur:
  1. A l'allumage du projecteur, sélectionner l'option « Wifi »
  2. Sélectionner l'option « Receive Screen Cast »
  3. Ensuite toucher « ok »
- B. Sur la tablette Windows:
  1. Glisser votre doigt sur le bord droit vers la gauche et appuyer sur « Devices »
  2. Appuyer sur « Project »
  3. Sélectionner « ASUS-PSB-9219 »



## ETAPE 9 : AJUSTEMENT DU PROJECTEUR

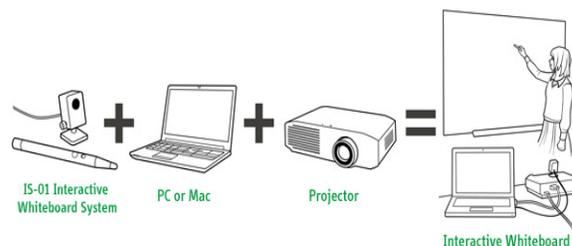
- A. Toucher le bouton « Paramètres » sur le projecteur
- B. Toucher le bouton « Image Position »
- C. Toucher le bouton « Digital Zoom » pour qu'il soit à 50% (toucher bouton 2 fois)
- D. Centrer et aligner le projecteur avec le tableau blanc



le

## ETAPE 10 : CONNECTER LE CAPTEUR IPEVO AVEC LA TABLETTE

- A. Connecter l'USB IPEVO dans le port USB de la tablette Windows
- B. Allumer le Crayon IPEVO et le Capteur (lumière verte)
- C. Double-cliquer sur l'application « IW Driver » et ensuite « Start Calibration »
- D. Une fois la calibration commencée, déplacer le capteur IPEVO de sorte à ce que le point rouge apparaisse et soit à l'intérieur des 4 rectangles blancs. Ensuite, toucher la barre d'espace
- E. Avec le crayon IPEVO, appuyer sur chaque point rouge sur les quatre côtés, et ensuite appuyer sur « Finish Calibration ».



## ETAPE 11 : COMMENCER VOTRE LECON

Vous pouvez maintenant commencer votre leçon !



## ASTUCES

- A. Charger toutes les batteries et le projecteur chaque après-midi !
- B. Installer le matériel et calibrer le capteur IPEVO chaque matin avant la rentrée des élèves. Si personne ne touche au chariot mobile, la calibration du capteur IPEVO devrait se faire sans problèmes.
  1. Renforcer aux élèves l'importance de ne pas toucher ou de s'approcher du chariot
  2. Renforcer aux professeurs l'importance de ne pas bouger le chariot
- C. Ajuster la lentille du projecteur si besoin
- D. Les rayons du soleil perturbent le capteur IPEVO
  1. Utiliser les bâches pour bloquer la lumière du soleil
  2. Choisir les salles de classe qui ont le moins de lumière du soleil – ne pas oublier que le soleil change de position durant la journée
  3. Faire en sorte que toutes les leçons soient dispensées avant la levée du soleil

Exemple : Ex: 7:30am-10:30am

4. Si vous avez des problèmes avec le Wifi et le projecteur
  - i. Vérifier que la tablette est allumée
  - ii. Redémarrer le projecteur
  - iii. Redémarrer la tablette
- E. La sécurité du matériel
  1. Ne pas laisser la Classe Numérique Mobile sans surveillance
  2. Ne pas laisser les élèves jouer autour du matériel
- F. Lors de l'utilisation du serveur seulement dans la salle de classe, une tablette doit être aussi connectée à une batterie externe pour assurer que la batterie externe ne s'éteigne pas. C'est un problème de voltage de la batterie.
- G. Utiliser le haut-parleur Bluetooth si besoin
- H. Utiliser le journal d'utilisation du matériel
  1. Ceci nous aidera pour faire le rapport pour Cross Catholic International.
- I. Rapporter tout problème à ACP le même jour pour résoudre le problème tout de suite sans interrompre le programme.

A la fin de chaque journée (et pendant la récréation si besoin) :

- A. Charger
  1. La Tablette Windows
  2. Le Clavier de la Tablette Windows
  3. Le Projecteur
  4. Les 2 Batteries Externes
  5. Le Haut-Parleur Bluetooth
- B. Allumer le serveur pour l'utilisation des professeurs

## APPENDIX E: Teacher Training Plan – Session 1

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### Teacher Training Plan – Session 1

1. Discussion: Self Evaluation and Feedback (Peer and ACP Classroom)
  - a. What is feedback?
    - i. When someone else (ACP/ peer teachers) looks at your performance, in this case the lesson you just taught, and provides helpful and constructive ideas on how you can do better next time
  - b. What is self-evaluation?
    - i. When you look at your own performance, in this case the lesson you just taught, and point out what went right, what went wrong, and in detail how you plan to improve next time
  - c. How do you do it?
    - i. Saying “everything went great” is not an acceptable answer
    - ii. Saying “you need to improve your lesson plan” is not a detailed enough answer
      1. What happened to make you say this?
      2. How can you or your peer improve for next lesson plan?
    - iii. Feedback is supposed to help not offend or hurt others
      1. Feedback givers be polite
      2. Feedback receiver be open to help
  - d. Discuss purpose and importance
  - e. Quick exercises

*Instructions: pretend we are half way through our six-week training program and you or your peer have just completed a lesson. Maybe have teacher come up and act out each example/*

    - i. Your lesson was awful. Next time do a better job at planning your lesson. *(not good feedback)*
      1. Is this good or bad feedback?
      2. Can we better this feedback? If so how? Does everyone agree?
        - a. You just gave great feedback on how to better feedback – this is exactly what we are looking for
    - ii. Next time I think you could explain the instructions on how to work the application better. I felt like some people got lost here during your lesson. *(good feedback but look for teacher insight)*
      1. Is this good or bad feedback?
      2. Can we better this feedback? If so how? Does everyone agree?
    - iii. You did an awesome job! *(not offensive but doesn't help)*
      1. Is this good or bad feedback?
      2. Can we better this feedback? If so how? Does everyone agree?

- iv. I found that it took a long time to set up the MLC. Then I had some technical issues throughout the lesson. For example: the projector seemed blurry and some students could not see). I plan to ask Jean-Pierre to see if he can help me during a free session, after school, to improve my technical understanding of the MLC. *(this is a great self-evaluation)*
  - 1. Is this a good or bad self-evaluation?
  - 2. Can I improve my self-evaluation? If so how? Does everyone agree?
- v. I don't think I need to change anything in my lesson plan. *(not a good self-evaluation there is something you can always change especially since you only have 3 weeks' experience with the MLC)*
  - 1. Is this a good or bad self-evaluation?
  - 2. Can I improve my self-evaluation? If so how? Does everyone agree?
- f. Case study
  - i. Ben does a 2-3 minutes mock lesson plan where he is struggling
    - 1. Ask the teachers to provide peer feedback, together as a group, to Ben
    - 2. Ben also conducts a quick self-evaluation on anything the teachers may have missed.
- 2. Hands on MLC Setup and practice
  - a. Test teachers understanding
- 3. Collect pre-program questionnaires

## **APPENDIX F: Teacher Training Plan – Session 2**

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### **Teacher Training Plan – Session 2**

1. MLC technical understanding
  - a. Oral Test
  - b. Review MLC Setup
2. Tablet setup and introduction for server content
  - a. Clear homescreen apps
  - b. Connect to C3 Server
    - i. Password: 'mydemokey'
  - c. Go to <http://mycontent>
    - i. Create Bookmark
      1. Press the 'star' between web address and magnifying glass
        - a. Label it: 'Contenu'
        - b. Add to: Home Screen
        - c. Press 'Ok'
      2. Kahn Academy
      3. Haiti Futur
      3. ACP Apps
    - ii. Open up and go over the mycontent page – if it asks, tell them to use the “browser” to open it up and select “always use this app”
  - d. Go to <http://wikipedia>
    - i. Create bookmark
      1. Press the 'star' between web address and magnifying glass
        - a. Label it: 'Wikipedia'
        - b. Add to: Home Screen
        - c. Press 'Ok'
      - ii. Open up and go over the Wikipedia page
3. Exercise: Explore the content and begin thinking of how you can use it in your lessons
4. Homework: Next week we will start having teachers, in groups of 4, develop and teach a 15 min lesson plan using this technology to their fellow peers. This will be officially assigned next session.
5. Next session: We are meeting again and will discuss teaching/lesson plans

## APPENDIX G: Teacher Training Plan – Session 3

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### Teacher Training Plan – Session 3

1. Discussion: Teacher led
  - a. Teaching
    - i. What teaching is and what are teaching methods?
    - ii. What makes a good/bad teacher?
  - b. Lesson Plan
    - i. What is a lesson plan? Its importance?
    - ii. What makes a good/bad lesson plan?
    - iii. Please provide a brief example of creating one
    - iv. When someone else (ACP/ peer teachers) looks at your performance, in this case the lesson you just taught, and provides helpful and constructive ideas on how you can do better next time
2. Exercise
  - a. *Instructions: As a group develop a mock lesson plan in 10 minutes, to be read out loud in 2-3 minutes, that incorporates using the tablets with the server content*
    - i. Split the teachers into 10 groups based upon class and grade
    - ii. Have each group read off their lesson plan ideas

Peer OBV: Teachers in groups of 4ish (same grade levels) to develop a 15 min lesson to teach to their fellow peers using the interactive whiteboard and local server content

- b. Please make lesson interactive (ex: don't just show a movie)
- c. We will start with younger grades who have already used the interactive whiteboard starting next Tuesday
- d. Pre-k – 3<sup>rd</sup> grade teachers to teach a HF lesson to peers
- e. Ben and Josh will be available Monday, wed, Friday after school for help

In-Class OBV: Teachers with their assistant teachers will develop a 30-35 minutes lesson plan

- a. Please make lesson interactive (ex: don't just show a movie)
- b. We will start with younger grades who have already used the interactive whiteboard starting next Tuesday
- c. Pre-k - 3<sup>rd</sup> grade teachers to teach a non HF lesson
- d. Ben and Josh will be available Monday, wed, Friday after school for help

## APPENDIX H: Teacher Closeout Meeting Agenda

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### Teacher Closeout Meeting Agenda

1. Tablet vs interactive whiteboard
  - a. The pedagogical training we have given over the past 6 weeks can also be applied to tablets
  - b. Some lessons are better on tablet and others are better on interactive whiteboard
    - i. Ex: Khan academy video's – if you want your students to see the whole video tablets might be a better choice
  - c. Need to use tablets and interactive whiteboard with correct interactive pedagogical technique
    - i. Ex: Don't use tablet to show something you can show on the board
    - ii. Ex: If your using a video make sure to have an exercise/lesson to go along with it
2. Content
  - a. There is content on the server.
    - i. Please take the time to look at it and work with Bisson/Michelot to get what you need loaded on the Sûrtab tablets and Windows tablet
    - ii. We will be working with Luc this week to develop a plan for when/where you can come look at content to prepare lessons
  - b. ACP is continuing to work on finding this with partners including MENFP – it's a process that takes time
  - c. We need teacher input on what content they'd like to see
  - d. Haiti future content – is available for all of 1<sup>st</sup> grade curriculum in French/Creole and 2<sup>nd</sup>/3<sup>rd</sup> Science in French – they are making more now through 4<sup>th</sup> grade
3. Equipment
  - a. Cart – tell them it's like electricity and it shouldn't/can't be touched
    - i. Remember to have students file in one by one so that they do not knock anything of the cart or move the sensor – we don't want a broken projector
  - b. IPEVO Sensor
    - i. If IPEVO sensor is moved after calibration, then the stylus won't be accurate or just won't work
    - ii. If too much light is coming into the classroom the IPEVO will start jump around the board
  - c. Battery powered items
    - i. We can do 3 lessons or 2.5 hours of lessons – we are trying to find ways to extend this but PLEASE remember to turn off batteries/tablet/projector/server to save battery
4. Short term plan
  - a. Over the next two months you will be practicing using both the interactive whiteboard and tablets in your classroom
    - i. You will use each piece of technology an estimated 2-3 times
    - ii. We will be working with Luc on a schedule
      1. We will recommend to do it in the AM before recess due to less light

- b. The next two months are about practice and building up both your technical and pedagogical skills
  - i. Also want each teacher to know how to setup MLC –thinking about having teachers come in (1-2 times) and help Bisson/Michelot setup the MLC in the mornings
  - ii. Need to make sure you are helping other teachers out who are struggling
  - iii. ACP will be in contact with Bisson/Michelot about any issues
- c. ACP will be returning in May
  - i. Check on the progress
    - 1. We use the brown leather book to track and report back usage to cross – so PLEASE use it to track both tablet and TNI usage including content
    - ii. Make small corrections as needed
    - iii. Provide additional training as needed
    - iv. Bring additional content
  - d. We will come back next year with a strong focus on the technology program
- 5. Long Term plan
  - a. We are in a “proving this program works” phase to cross and donors
  - b. Hopes for future
    - i. Solution for lighting/classroom but can’t make any promises
    - ii. Continue to collect/build more content
- 6. Self Evaluation 2
  - a. We need this back tomorrow or else we are coming around again
- 7. Questions, concerns, etc?

**APPENDIX I: Close-Out Meeting Agenda - Distributed**

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**A CONNECTED PLANET**  
BRIDGING THE DISTANCE FOR EVERYONE'S FUTURE

**KOBANAL SCHOOL  
ADMINISTRATION  
CLOSE-OUT MEETING**



**MEETING BETWEEN A CONNECTED PLANET & KOBANAL  
SCHOOL ADMINISTRATION  
MARCH 4, 2016**

## TRAINING OVERVIEW

1. ACP conducted training on the following:
  - a. Teacher Kick-Off Meeting: January 28 (1 Hour)
  - b. Mobile Learning Classroom Installation & Setup: February 1, 2, 3, 4 (2 Hour)
  - c. Content Setup: February 19 (1 Hour)
  - d. Lesson Plan Integration: February 19 (1 Hour)
  - e. Observation 1: February 17 – 24 (1 Hour)
  - f. Observation 2: February 24 – March 2 (1 Hour)
  - g. Content and Lesson Planning: February 22 and 24 (4 Hour)
  - h. Peer Presentations: February 23 and 25 (4 Hour)
  - i. Observation 3: TBD (1 Hour)

## TABLET VS. INTERACTIVE WHITEBOARD

1. The pedagogical training given over the past 6 weeks can also be applied to tablets
2. Some lessons are better on tablet and others are better on interactive whiteboard
  - a. Ex: Khan academy video's – if you want your students to see the whole video, tablets might be a better choice
3. Need to use tablets and interactive whiteboard with correct interactive pedagogical technique
  - a. Ex: Don't use tablet to show something you can show on the board
  - b. Ex: If your using a video make sure to have an exercise/lesson to go along with it

## CONTENT

1. There is content on the server.
  - a. Please make sure that you have Bisson/Michelot work with the teachers to get what they need loaded on the Sûrtab Tablets and Windows Tablet
  - b. We need to develop a plan for when/where teachers can come look at content to prepare lessons
2. ACP is continuing to work on finding content with partners including MENFP – it's a process that takes time
3. We need teacher input on what content they'd like to see
4. Don't let this be an excuse for teachers not using the technology there is plenty of content for them to use and practice with

## EQUIPMENT

1. Sûrtab broken tablets
  - a. Still waiting on the quote
2. Table
  - a. Having a table built to use in the classroom
  - b. Will have to transport equipment in a box
3. Tarps
  - a. Bisson and Michelot know how to setup

4. IPEVO Sensor
  - a. If IPEVO Sensor is moved after calibration then the stylus won't be accurate or just won't work
  - b. If too much light is coming into the classroom, the IPEVO will start to jump around the board
5. Battery-powered items
  - a. Batteries need to be plugged in everyday
  - b. Unfortunately you can't use external batteries with the projector or with the windows tablet
  - c. We can do 3 lessons or 2.5 hours of lessons – we are trying to find ways to extend this but we asked teachers to please remember to turn off batteries/tablet/projector/server in order to save battery

## SHORT-TERM PLAN

1. Over the next two months we want teachers to practicing using both the interactive whiteboard and tablets in your classroom
2. The next two months are about practice and building up both the teachers technical and pedagogical skills
  - a. We want each teacher to know how to setup MLC –thinking about having teachers come in (1-2 times) and help Bisson/Michelot setup the MLC in the mornings –need to make plan for this
  - b. There are a few “floating teachers” that will need extra practice – we need to make sure ALL teachers are including in this 2 month practice
  - c. Need to make sure we utilize teachers who are really good to help other teachers out who are struggling
  - d. Make sure Bisson/Michelot contact ACP about any issues
3. How often do we want each teacher to use each piece of technology
  - a. We are thinking 2-3 per piece of technology
  - b. We need to make a schedule for this
    1. Starting next week?
    2. We recommend doing it in the AM before recess due to less light
4. ACP will be returning in May
  - a. Check on the progress
    1. We use the brown leather book to track and report back usage to cross – so PLEASE make sure it is being used to track both tablet and TNI usage including content
  - b. Make small corrections as needed
  - c. Make sure teachers are using content correctly
  - d. Provide additional training as needed
  - e. Bring additional content
5. We will come back next year with a strong focus on the technology program

## QUESTIONS?

## APPENDIX J: Teacher Questionnaires

### Pre-Program Teacher Questionnaire

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Gender: \_\_\_\_\_

Highest Education \_\_\_\_\_ Total Years Teaching: \_\_\_\_\_ Grade You Teach Now: \_\_\_\_\_

**This questionnaire gauges your attitude towards the Mobile Learning Classroom. Please rate and then circle on a scale of 1-10 (low to high) the following questions:**

0	1	2	3	4	5	6	7	8	9	10
Not At All			Some				Alot			

1. What is your experience with the use of tablets or smartphones?

0    1    2    3    4    5    6    7    8    9    10

2. How much interest do you have in using the Mobile Learning Classroom?

0    1    2    3    4    5    6    7    8    9    10

3. How much do you think the Mobile Learning Classroom will assist students in learning?

0    1    2    3    4    5    6    7    8    9    10

4. How much do you think the Mobile Learning Classroom will assist your teaching?

0    1    2    3    4    5    6    7    8    9    10

5. How much will using the Mobile Learning Classroom assist your student's future achievements?

0    1    2    3    4    5    6    7    8    9    10

**Please answer the following questions in detail.**

6. What do you anticipate using the Mobile Learning Classroom for in your lessons?

7. Do you see any obstacles to using the Mobile Learning Classroom?

8. Do you have any concerns about using the Mobile Learning Classroom in your lessons?

9. Which subjects do you think the Mobile Learning Classroom will assist you in teaching?

10. How do you think students will adapt to learning with the Mobile Learning Classroom?

## Post-Program Teacher Questionnaire

Name: \_\_\_\_\_ Grade You Teach Now: \_\_\_\_\_

**This questionnaire gauges your attitude towards the Tablet Program. Please rate and then circle on a scale of 1-10 (low to high) the following questions:**

0	1	2	3	4	5	6	7	8	9	10
Not At All			Some				Alot			

1. How comfortable are you with using the Mobile Learning Classroom now compared to your first week of using them?

0    1    2    3    4    5    6    7    8    9    10

2. How interested would you be in using the Mobile Learning Classroom next year?

0    1    2    3    4    5    6    7    8    9    10

3. How much do you think the Mobile Learning Classroom assisted students in learning?

0    1    2    3    4    5    6    7    8    9    10

4. How much do you think the Mobile Learning Classroom assisted your teaching?

0    1    2    3    4    5    6    7    8    9    10

5. How much will using the Mobile Learning Classroom assist your student's achievement over time?

0    1    2    3    4    5    6    7    8    9    10

**Please answer the following questions in detail.**

6. How did the Mobile Learning Classroom meet or not meet you expectations?

7. What obstacles arose in your classes when using the Mobile Learning Classroom?

8. Did the Mobile Learning Classroom help you teach? What specific subjects? How?

9. What type of support and/or resources would be most beneficial for you to further implement the Mobile Learning Classroom into your classroom?

10. Please provide other comments for A Connected Planet on our Mobile Learning Classroom Program. We need both positive and negative input in order to better help others in need.

## APPENDIX K: Teacher Questionnaire Results

Table 1. Teachers Interest and Attitudes Towards MLC Use (Rating Scale)

Category	Question	Low	Med	High
Experience/ Comfort	What is your experience with the use of tablets or smartphones?	7%	48%	45%
	How comfortable are you with using the MLC now compared to your first week of using them?	3%	36%	61%
Interest	How much interest do you have in using the MLC?	6%	29%	65%
	How interested would you be in using the MLC next year?	0%	16%	84%
Assist Learning	How much do you think the MLC will assist students in learning?	6%	23%	71%
	How much do you think the MLC assisted students in learning?	0%	6%	94%
Assist Teaching	How much do you think the MLC will assist your teaching?	7%	16%	77%
	How much do you think the MLC assisted your teaching?	0%	3%	97%
Assist Student Achievement	How much will using the MLC assist your student's future achievements?	6%	13%	81%
	How much will using the MLC assist your student's achievement over time?	0%	3%	97%

*n=31, MLC=Mobile Learning Classroom*

Table 2. Teachers Interest and Attitudes Towards MLC Use (Open Ended)

<b>Category</b>	<b>Time</b>	<b>Question</b>	<b>Response</b>	<b>Percent</b>
Expectations	Pre	What do you anticipate using the MLC for in the classroom?	Help students learn Content for lesson Better my teaching Lessons - general Other/ NA	29% 19% 16% 10% 26%
	Post	How did the MLC meet or not meet you expectations?	Yes - helps learning Yes - general Teacher needs personal tablet	48% 39% 13%
Obstacles	Pre	Do you see any obstacles to using the MLC?	None Technical issues with equipment Different levels of understanding Other/ NA	32% 23% 10% 35%
	Post	What obstacles arose in your classes when using the MLC?	Technical issues with equipment None Need to practice Other/ NA	36% 29% 16% 19%
Subjects	Pre	Which subjects do you think the MLC will assist you in teaching?	Science Math, Science, Social Studies All Language Arts Math Math and Science Science and Social Studies Social Studies Math, Science, Language Arts Other/ NA	23% 16% 13% 10% 10% 10% 6% 6% 3% 3%
	Post	Did the MLC help you teach? What specific subjects? How?	Math and Science Math Science Language Arts Social Studies Yes - general Science and Social Studies Math, Science, Social Studies Math, Science, Language Arts Science and Language Arts	23% 16% 16% 10% 10% 10% 6% 3% 3% 3%

*n=31, MLC=Mobile Learning Classroom*

Table 2. Continued

<b>Category</b>	<b>Time</b>	<b>Question</b>	<b>Response</b>	<b>Percent</b>
Additional Questions	Pre	Do you have any concerns about using the MLC in your lessons?	Yes - general	42%
			None	16%
			Equipment - general	7%
			Time allotted for lesson	3%
			Other/ NA	32%
	Pre	How do you think students will adapt to learning with the MLC?	Yes - with practice	36%
			Yes - general	32%
			Yes - quickly	10%
			Yes - with teacher help	10%
			Yes - because it's multisensorial	6%
Post	What type of support and/or resources would be most beneficial for you to further implement the MLC into your classroom?	Dedicated classroom, more equipment, administration support	48%	
		Practice, preparation, additional training	29%	
		Teacher needs personal tablet	23%	

*n=31, MLC=Mobile Learning Classroom*

## APPENDIX L: Observation Forms

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Date: \_\_\_\_\_

### Observation 1 - ACP & Teacher Led

Teacher: \_\_\_\_\_ Grade: \_\_\_\_\_ Student Count: \_\_\_\_\_

Time Start: \_\_\_\_\_ Time End: \_\_\_\_\_

Day: M T W R F

Subject: Math L. Arts Science Soc Stud Tab Inst Other \_\_\_\_\_

Observer(s): Ben Josh Other: \_\_\_\_\_

#### **Objectives:**

- Introduce MLC in the classroom - Teachers have completed MLC setup training recently
- Work with the teacher's to build a relationship
- Offer any assistance we can outside of their class time - record any assistance we provide

#### **Questions to answer:**

- On a scale from 1-10 (low to high), how much does the teacher know about setting up the MLC?
- What issues did the teacher have setting up the MLC? Any specific questions from the teacher?
- How long did it take to setup the MLC? What are the students doing while we are setting up?
- How much is the teacher assisting Ben in leading the lesson? Is the teacher taking initiative?
- How is the teacher reacting to using the MLC?
- How are the students reacting to using the MLC?

**End of class follow-up:** *Provide feedback and recommendations to teacher*

**Observations:** *Star items to follow-up on at end of class*

Date: \_\_\_\_\_

## Observation 2 - Peer Presentations

Teachers: \_\_\_\_\_ Grade: \_\_\_\_\_

Time Start: \_\_\_\_\_ Time End: \_\_\_\_\_

Day: M T W R F

Subject: Math L. Arts Science Soc Stud Other \_\_\_\_\_

Observer(s): Ben Josh Other: \_\_\_\_\_

### Objectives:

- Teachers (grouped by grade) will present a quick lesson to their peers using interactive whiteboard
- Objective is to get teachers thinking about different ways they can use the MLC in the classroom
- At end have teachers provide input on lesson and ways they might have done it different

### Questions to answer:

- What content is being used and how is it being used?
- Any issues with the interactive whiteboard?
- Are all the teachers participating in teaching the lesson? Frustrations?
- Are all the other teachers participating in receiving the lesson?
- What input are the teachers giving at the end of the lesson?

**End of class follow-up:** *Provide feedback and recommendations to teacher*

**Observations:** *Star items to follow-up on at end of class*

Date: \_\_\_\_\_

## Observation 3 - Teacher Led

Teacher: \_\_\_\_\_ Grade: \_\_\_\_\_ Student Count: \_\_\_\_\_

Time Start: \_\_\_\_\_ Time End: \_\_\_\_\_

Day: M T W R F

Subject: Math L. Arts Science Soc Stud Tab Inst Other \_\_\_\_\_

Observer(s): Ben Josh Other: \_\_\_\_\_

### **Objectives:**

- Teacher to teach lesson on their own using interactive whiteboard
- ACP will only observe and interfere minimally

### **Questions to answer:**

- On a scale from 1-10 (low to high), how much does the teacher know about setting up the MLC?
- How long did it take to calibrate the MLC?
- What content is the teacher using for the lesson? How are they using the content?
- What is the behavior of the teachers and students in the classroom with regards to the interactive whiteboard? (In general) Any frustrations?
- How are the teachers and students reacting to using the interactive whiteboard in the class? Positively or negatively in terms of benefits to the lesson? (Lesson)

**End of class follow-up:** *Provide feedback and recommendations to teacher*

**Observations:** *Star items to follow-up on at end of class*

## **APPENDIX M: Self-Evaluation Form (English and French)**

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### **Self-Evaluation Observation "X"**

Name: \_\_\_\_\_ Subject: \_\_\_\_\_ Date: \_\_\_\_\_

*Instructions: Fill ALL 4 lines with your written self-evaluation of your lesson plan. Use the back of the sheet for additional space. Please remember to 1. Be detailed 2. Be constructive 3. Be honest 4. Write what went right/ wrong 5. Write how you plan to improve next time*

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### **Auto-Evaluation "X"**

Nom: \_\_\_\_\_ Sujet: \_\_\_\_\_ Date: \_\_\_\_\_

*Consignes: Remplissez les 4 lignes avec votre auto-évaluation écrite de votre plan de cours. Utilisez le dos de la feuille si besoin. Et n'oubliez pas 1. D'être détaillé 2. D'être constructif 3. D'être honnête. 4. De noter ce qui s'est bien/mal passé 5. De noter comment vous prévoyez améliorer le cours la prochaine fois.*

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**APPENDIX N: Post-Implementation Meeting Agenda - Distributed**

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**A CONNECTED PLANET**  
BRIDGING THE DISTANCE FOR EVERYONE'S FUTURE

**KOBONAL SCHOOL  
ADMINISTRATION  
POST-IMPLEMENTATION  
MEETING**



**MEETING BETWEEN A CONNECTED PLANET & KOBONAL  
SCHOOL ADMINISTRATION  
MAY 2016**

## OBSERVATION OVERVIEW

ACP conducted **Observations 3** in the classrooms on the following:

May 10	May 11	May 12	May 13
Class Pre-K	Class 3A	Class 4B	Class 5C
Class 2A	Class 3B	Class 4C	Class 6C
Class 1A	Class 4A	Class 4A	Class 6A
Class 1B	Class 3D	Class 5A	Class 6B
Class 2B	Class 3C	Class 5B	

## CONTENT

There is a lot of content available. The TA's and Teachers need to take the time to look at it.

Content on the Server	Content on the Internet
MyContent (8 sources – full of information)	Google Play Store
Wikipedia	Any other document, video, music, game, etc

## EQUIPMENT

- A. **Sûrtab Broken Tablets:** we are still waiting on the quote
- B. **Windows Tablet:** it may need to be replaced in September 2016
- C. **Windows Tablet to C3 Server:** we have solved the problems connecting the Windows Tablet with the C3 Local Server
- D. **Logbook:** Need to make sure TA's are filling this out and provided specifics in 'content' section

## MAY AND JUNE 2016

Over the next few weeks, before school ends for the summer, we would like the School Administration to build a schedule for teachers to continue practicing using both the interactive whiteboard and tablets in the classroom.

- An administrator should be present to ensure proper use of the equipment and flow of the lesson.
- We recommend at least 1 use of the tablets, and 1 use of the MLC per teacher
- Lessons must be prepared – please do not repeat the same lesson – and lessons must have a pedagogical objective in line with the curriculum

## **AUGUST AND SEPTEMBER 2016**

Over the summer, we would like the School Administration to build a schedule for additional training in August 2016:

1. Searching for content on the Google Play Store (administrators + teachers)
2. Searching for content on the local server
3. Creating lesson plans using the content
4. Using the annotator tool
5. MLC setup training with teachers
6. Another administrator (perhaps one of the better teachers who enjoys and is committed?)
7. Additional training for struggling teachers

What date do we want to set for starting to use the MLC in the classroom again next year? (ex: Monday of 2<sup>nd</sup> week of school)

## **CONCERNS & QUESTIONS?**

