



# Annual Work Plan

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Submitted by FHI

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## List of Abbreviations

ICT	Information and communication technology
KIE	Kigali Institute of Education
MINEDUC	[Rwanda] Ministry of Education
MINICT	[Rwanda] Ministry of Information and Communication Technology
MoU	Memorandum of Understanding
NCDC	National Curriculum Development Center
ORINFOR	Office Rwandais d'Information
RDB	Rwanda Development Board
REC	Rwanda Education Commons
RFP	Request for proposals
RURA	Rwanda Utilities Regulatory Agency
TCE	Teacher College of Education
TSC	Teachers Service Commission
TTC	Teacher Training College
UAF	Universal Access Funds
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VSO	Volunteer Services Overseas
WRI	Waterford Research Institute



## Planned Activities in Year Four

### Summary

In Y1, REC focused on building key partnerships and relationships. In Y2, REC focused on developing content, capacity, and channels with partners. In Y3, REC began reaching teachers and learners, and collecting data that will allow us to demonstrate impact. In Y4, REC will **maintain, refine, and monitor beneficiary-focused activities**, and will work with existing partners to ensure continuity of activities after USAID funding ends.

REC work in the areas of policy support, coordination, and partnerships are completed or largely complete. In Y4, REC activity areas will be narrowed to ensure that sufficient outcomes are realized. Specifically, in Y4, REC will:

- **Complete a digital library** of subject and pedagogical materials encompassing *every unit* in Rwanda’s primary and secondary curriculum. This will be a significant accomplishment: there are no similar digital products in East Africa;
- **Establish a self-sustaining online community** of Rwandese teachers around this library, comprised of pre-service instructors and learners, and increasingly, of in-service teachers, as a non-formal component of in-service training. This too will be a significant and unique accomplishment in the region;
- **Release version 2.4 of the Rwanda Education Commons online community**, which will improve, among other things, social and search functionality, in collaboration with a subcontractor, through a grant by Google.org of approximately \$120,000;
- **Improve the quality of and access to our broadcast education television program**, so that broadcasts truly model excellent teaching practices and become “must-see TV” for educators in Rwanda;
- **Implement our sustainability strategy** of working with MINEDUC to establish a follow-on program, and integrate ongoing activities with partner institutions, given the demand for continuity.

At the end of Y4, REC expects to demonstrate the positive impact of its activities on teaching and learning behaviors, and to leave behind ongoing work streams and products that continue to boost education outcomes. (See M&E section below for details.) REC further expects that its collaborative and practical approach to ICT, as exemplified by its activities and now represented in national policy, will continue to shape development practices in Rwanda.



## Content

REC content activities in Y4 will focus on facilitating the production of local education resources, and organizing previously acquired resources. Content collection activities in Y3 outpaced our capacity to organize, tag, and upload materials. Y4 content activities include:

- a. **Facilitate the production of teacher tools for primary school teachers.** REC has already facilitated the production of teacher tools for every unit in the secondary curriculum, and has begun to do so for the primary curriculum. REC will work with groups of Rwandese teachers to create these resources.
- b. **Produce high-quality education video broadcasts modeling strong teaching practices.** This is an ongoing activity, with a focus on quality improvements through a partnership with KIE, which leads student-centered learning workshops for the REC video production team as well as featured teachers.
- c. **Organize existing content for efficient distribution through REC technology channels.** As a result of Y3 content development activities, REC acquired content from partners and produced content with Rwandese teachers. The REC library team will label and descriptive information to all materials, as per our content taxonomy, and upload them to REC distribution channels.
- d. **Perform quality assessment of existing libraries.** REC will work with NCDC and KIE to review and validate the existing repository of educational resources developed and acquired to ensure the high quality of REC libraries.
- e. **Launch targeted online discussions** on the REC online community around topics relevant to Rwandese teachers and learners.
- f. **Distribute test preparation materials** through newspapers to rural secondary schools.

## Technology channels

The REC platform comprises several communication channels for distributing and exchanging materials, promoting good practices, and fostering communities of educators. REC has established a print channel, an online channel, and a broadcast video channel. In Y4, REC will strengthen these channels and add a fourth channel: a ‘digital’ channel for the offline distribution of digital resources. Activities include:

- a. **Strengthen the REC online channel.** REC will release version 2.4 of our online portal ([www.educationcommons.rw](http://www.educationcommons.rw)). Version 2.4 will include a raft of improvements, including



improving registration flow, increasing the dynamism of the home page, adding search functionality to the library, and adding social network features to the community. This activity is funded by a \$100,000 grant from Google.org. (For a complete list of changes, see Appendix C.)

- b. **Maintain connectivity at TTCs and TCEs.** REC will continue to subsidize TTC and TCE connectivity at 20% of the total cost, with the other 80% subsidized by RURA through the Universal Access Fund. (See the Sustainability section for discussion of how connectivity will be maintained after USAID funding to REC ends.)
- c. **Strengthen the REC video channel.** REC will improve the quality of our broadcast television channel through the procurement of new video equipment and training of video production staff to make best use of this equipment.
- d. **Expand access to the REC video channel.** REC will work with TTCs [and UNICEF?] to establish community viewing stations.
- e. **Establish a REC ‘digital’ channel.** The REC library of online, multimedia, and video materials will be burned on CDs and DVDs, overlaid with software enabling users to interact directly and easily with these materials, and distributed to TTCs, TCEs, and other locations with computer labs but limited connectivity, including in-service training centers and secondary schools.

## Capacity building

REC capacity building activities in Y4 will increase, with a strong focus on creating a sustainable and thriving online community. In this, REC will be aided by the new part-time position of Education Advisor, which has been filled. Chief among the Education Advisor’s responsibilities will be the strengthening of training plans and outreach efforts, to ensure that partner institutions are capable of and motivated to promote REC activities. In Y4, capacity building activities will include:

- a. **Conduct follow-on trainings of IT instructors** at Rwanda’s TTCs and TCEs, as well as IT instructors at in-service teacher education programs as they come online, on the promotion and administration of the online community.
- b. **Conduct follow-on face-to-face trainings** of teacher instructors, teacher students, and in-service teachers at Rwanda’s TTCs and TCEs, and in-service teacher education programs as they come online, on the effective use of the online community.



- c. **Conduct workshops on student-centered pedagogy**, in collaboration with KIE, for the REC video production team and for teachers featured in the REC educational television broadcast program (“Smart Learning”).

## Partnerships

REC will continue to work with local and international partners to implement activities listed above. However, in Y4, REC will formalize key partnerships to ensure the sustainability of program activities after September 2012. (See the Sustainability section for a discussion of our two-pronged sustainability strategy.) REC will:

- a. **Formalize key partnerships.** REC will revise the MOU with MINEDUC, and sign MOUs with ORINFOR, to ensure the continuation of their subsidies for video broadcasts, and with MINICT, to integrate other program activities with their work.
- b. **Maintain ongoing partnerships.** In addition to the key partnerships listed above, REC will continue to work with organizations inside and outside Rwanda, including:
  - i. *KIE*, to build capacity in student-centered pedagogies;
  - ii. *TTCs*, to improve access to resources and expand opportunities for collaboration through the REC online community;
  - iii. *WRI*, to expand, monitor, and evaluate an English-language software pilot program for primary students;
  - iv. *RDB*, to expand access to the REC online channel at RDB telecenters and through Rwanda’s “ICT buses”;
  - v. *VSO*, *UNICEF*, and *TSC*, to ensure the effective use of REC print, digital, and online materials at teacher resource centers.

## Sustainability

REC will implement four major sustainability activities in Y4. Two of these activities, though representing different paths to sustainability, will run in parallel, to mitigate the risk that either sustainability path fails. (Specifically, REC will work both with MINEDUC on a REC II follow-on program, as well as with partner institutions to absorb REC activities.) These four activities are as follows:

- a. **Work with MINEDUC to establish a REC II.** In July 2011, MINEDUC requested that REC prepare a concept note and proposal for a REC II for which the Ministry would find funding. REC will work with the Ministry to prepare these documents and assist with other processes that may result in a Rwanda-owned follow-on program.



- b. **Prepare a business plan for a REC II or a REC Organization.** REC will work with a local subcontractor to perform a market assessment and devise a business plan for either a REC follow-on program or a separate entity that will absorb REC activities. The RFP for this subcontract was issued in July 2011 and commenced in September 2011.
- c. **Integrate existing activities with partner work streams.** The REC online community, educational broadcast program, and ICT4E expertise are sought by partner institutions. REC will work with MINEDUC, RDB-IT, and MINICT to transfer ownership of these activities to these partner institutions. This sustainability path conflicts the path represented by activities (a) and (b); if a REC II materializes, this path will be discarded or reduced.
- d. **Prepare and implement a sustainability plan for Internet connectivity.** REC will work with an international subcontractor to plan for the gradual decrease in connectivity costs as fiber optic cable becomes available to TTCs and TCEs, for the transfer of maintenance work, and for the absorption of REC-subsidized costs by partner institutions. The RFP for this subcontract was issued in August 2011 and will commence in October 2011.

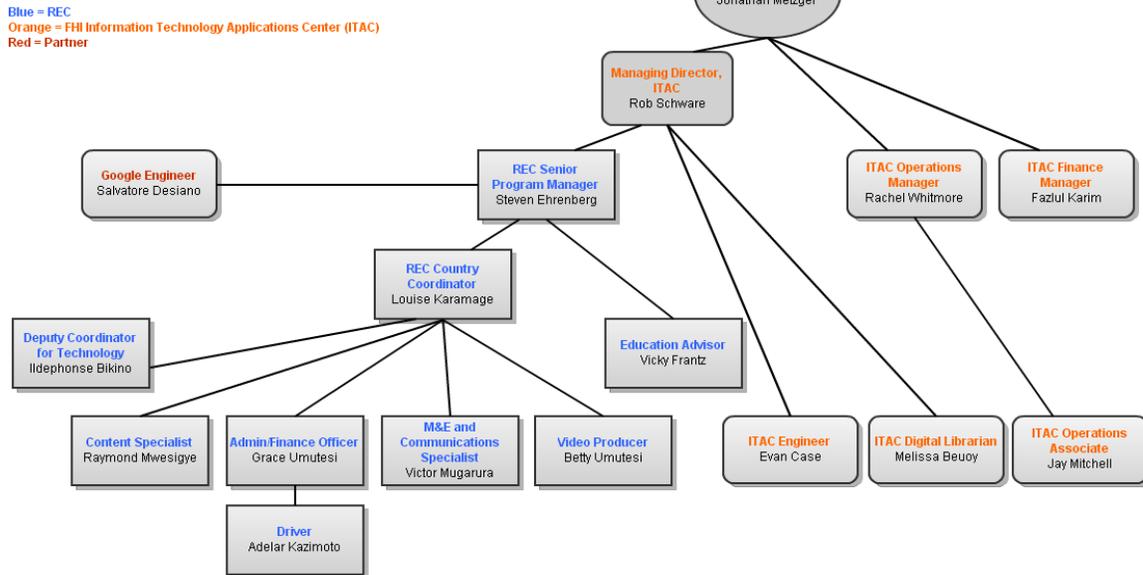
## Revised Management Plan

- **AED acquisition by FHI:** On June 30, 2011, AED and all of its assets, including REC, were acquired by FHI, a global non-profit development organization with a rigorous, evidence-based approach. FHI was renamed FHI 360, and the former AED assets now operate as FHI Development 360 LLC, a wholly owned subsidiary of FHI 360. This does not affect REC, other than to provide us with new colleagues, as FHI 360 operates a Rwanda Country Office that has primarily supported Rwanda's health sector.
- **Hire of new Country Coordinator:** In August 2011, the REC Country Coordinator left the project. In preparation for her departure, FHI conducted a full search for a new Coordinator, and interviewed 8 of the 20 applicants for the position. FHI selected Louise Karamage, formerly the REC Deputy Coordinator as the new Coordinator. We are confident that Ms. Karamage's technical knowledge, excellent reputation, collegial temperament, and unique experience with REC makes her ideally suited for the position.
- **Restructuring of REC staffing plan:** With Ms. Karamage's promotion to Country Coordinator, FHI took the opportunity to restructure REC staff, with the aim of making final adjustments to REC activities, and best positioning REC activities for continuity after the completion of the program. Bikino Ildephonse, formerly the REC Technology Officer, was promoted to Deputy Coordinator, and Vicky Frantz was hired to fill the new



position of REC Education Advisor. As Deputy Coordinator, Mr. Ildephonse will oversee all aspects of the REC online channel. Ms. Frantz will serve a cross-cutting role, supporting all activities with the aim of promoting education quality.

### REC Organizational Chart



## Communications and Outreach

Communication activities for Y4 will increase, purposely to create a massive awareness campaign for REC activities by reaching out more to the target audience and improving awareness about REC. Primarily, the goal is to create interest among the various target groups and ultimately increase participation/viewership on REC online channels. More specifically, the activities will include the following:

- Facilitate the creation of awareness for REC activities.** Mechanisms to be established on how to distribute REC publicity materials like brochures among stakeholders and schools
- Engage the media.** REC team will continue to invite the media for a positive coverage of REC events and activities
- Education-related news to be posted on** the REC portal to make it more informative.
- Write news and feature articles** on REC activities as a way of building on the already existing awareness
- Support REC participation in the NGO Education Forum** activities as a way of reaching out more to targeted audience.



- f. **Support distribution of revision papers and DVDs/CD** to schools to help improve on students' performance.
- g. **Facilitate and moderate discussion topics** on the portal to enable audience engage in constructive debate on education issues.
- h. **Create and organize online communities of viewers at all TTCs.** This will create interest among students for the smart learning program.
- i. **Add publicity information** in the Smart Learning Video session. Through an interlude on this program, REC will be able to improve public awareness and interest in its activities.

## Monitoring and Evaluation

### Summary

REC M&E activities in Y4 will follow up on a baseline study (submitted separately) to determine the impact of REC activities. In particular, REC will assess the impact of the REC video and online channels. In each, we hope to determine how REC activities impact what and how instructors teach; how much and how well students at teacher colleges learn; and what and how students at teacher colleges plan to teach in the future. (Students at teacher colleges are future teachers, and will be hereafter referred to as 'students.')

More specifically, we investigate:

- a) What are the relationships between *instructors'* 1) access to resources provided through REC portal, 2) use of technology and REC material in planning and teaching, 3) philosophy about the teaching process, 4) the degree to which they adopt new pedagogies, *AND* 5) the level of learning of their students?
- b) What are the relationships between *students'* 1) access to resources provided through REC-developed channels, 2) use of technology and material in doing assignments and preparing for examinations, 3) their perception of the teaching/learning process, *AND* 4) the level of their learning?

In the next two sections, we present findings based on correlation analyses from a recent study about the REC online channel, excerpted from the study. We will gather data on the same variables again at the end of the year.

### Findings Based on Correlation Analyses: Instructors

The REC program had developed the initial versions of the REC platform before the baseline surveys were conducted. Consequently, some of the instructors and students received very basic training in the use of the portal and therefore had access to the REC portal at the time of the



survey. Out of the 157 instructors surveyed, 38 instructors reported having used at least one feature of the portal one or more times.

Given this variation in initial exposure to the REC portal, we analyzed the relationship between REC portal use and other variables.<sup>1</sup> For instructors, we found three variables to be significantly correlated with REC portal use. First, the extent of *use of the REC Portal* by instructors has a moderate, positive association with their *use of ICT in their work* ( $r=.51$ ,  $p<.01$ ), indicating that teacher educators who use the REC Portal are more likely to use ICT in their teaching, class preparation, and communication related to their work activities. One should be cautious in drawing causal conclusions from this correlation finding. It is possible that instructors who use ICT resources for teaching are early adopters of the REC portal, or that instructors who have used the REC portal see benefits of using ICT for teaching and are now using ICT resources more.

Instructors use of the REC portal was also significantly associated with the length of time they had been using ICT ( $r=.24$ ,  $p<.01$ ). That is, not surprisingly, instructors who had longer experience of using ICT were more likely to access the REC portal. Again, one should be cautious in drawing causal conclusions from these findings.

Besides use of the REC portal, three other variables have a significant relationship with instructors' use of ICT in their work: a) the length of time instructors have used ICT ( $r=.47$ ,  $p<.01$ ), b) their perception that ICT resources are available for their use in the TTC ( $r= -.42$ ,  $p<.01$ ), and c) their perception that TTC leaders support the use of use of ICT ( $r=-.24$ ,  $p<.01$ ). The first of these findings indicate, not surprisingly, that experienced users of ICT are more likely to make use of ICT in their teaching, classroom preparation, and work-related communications. The second and third findings are perhaps more interesting, showing that instructors perceiving that TTC resources are available in their TTC and that their leaders are supportive of using ICT are more likely to use ICT in their work-related activities.

Furthermore, we observed a modest, significant relationship between instructors' perception that ICT was available at the TTC and instructor's belief that TTC leaders supported use of ICT ( $r=.29$ ,  $p<.01$ ), indicating that that instructors may have viewed availability of ICT at their institution as a sign that TTC leaders supported the use of ICT. In addition, instructors' perception of ICT being available in their TTC was significantly related to the length of time instructors had been using ICT ( $r=. 38$ ,  $p<.01$ ), which perhaps means that more experienced ICT users are more likely to notice the availability or more likely to gain access to ICT at their institutions.

It is important to emphasize that we did not find any significant relationships between REC portal use and other variables. That is, REC portal use was not related to variables measuring

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<sup>1</sup> However, note that the analyses to be conducted after the second and third waves of data collection should provide a better indication of the impact of use of the REC Portal.



pedagogical philosophy and instructional practice for instructors, nor was it related to ICT availability in the TTC or support of the TTC leader for ICT use.

Moreover, none of the ICT-related measures were found to be significantly related to any of the measures of pedagogical philosophy or pedagogical practice. This suggests that at this stage, at least, instructors' engagement with ICT neither influences nor is influenced by their orientations to active-learning, student-centered, and progressive pedagogies.

However, we did find a significant relationship between instructors' participation in professional development activities outside of the TTC and their disagreement with the statement that "the role of the teacher is to facilitate students' learning" ( $r=.33$ ,  $p<.01$ ) as well as their score on the teacher-centered pedagogy scale ( $r=-.28$ ). While caution is necessary in terms of the causal direction, this finding means that instructors who have had more external professional development are less likely to adopt progressive pedagogical philosophies (i.e., disagreeing with the notion of teacher as facilitator of learning and agreeing with statements signaling teacher-centered methods). This could reflect that either outside professional development programs emphasize more traditional pedagogical approaches or instructors who have more opportunities for professional development (e.g., more senior staff) tend to have less progressive pedagogies.

### **Findings Based on Correlation Analyses: Students**

At the time of the baseline survey, very few students at the TTCs and CoEs reported ever having used the REC portal (15 out of 300). However, we still found some interesting, significant relationships between their use of the REC portal and some other variables. We found that length of time students have used ICT has a modest, positive association with the extent of their *use of the REC Portal* ( $r=.24$ ,  $p<.01$ ), meaning that those who have used ICT for a longer period are more likely to report having at least some experience in using the REC Portal. Also, students' use of the REC portal had modest, positive associations with the extent of their *current use of ICT for learning* ( $r=.30$ ,  $p<.01$ ) as well as their *current use of ICT for communication related to learning* ( $r=.29$ ,  $p<.01$ ). These findings indicate that teacher education students who currently use ICT more often in relation to learning activities at the TTC also tend to have at least some experience using the REC Portal.

With respect to promoting use of ICT in TTCs, one should note the modest, though significant correlation between perceptions that TTC leaders support the use of ICT and perceptions that ICT resources are available to students in the college ( $r=.21$ ,  $p<.01$ ). As discussed above for instructors, it seems that students see the availability of ICT resources as an indicator of institutional leaders supporting the use of ICT. Also noteworthy is the modest, though significant relationship between students' perceptions that TTC leaders support ICT use and their future plans to use ICT when they become teachers ( $r=-.16$ ,  $p<.01$ ), indicating that a higher level of leader support tend with plans for more extensive use of ICT as teachers in the future.



There is evidence that students' previous experience in using ICT has a bearing on their ICT experience during their teacher education program. Note that the extent of students' prior use of ICT is modestly associated with a) their perception that ICT resources are available for students in the TTC ( $r=-.24$ ,  $p<.01$ ) and b) the extent to which they report using ICT as part of their learning in the program ( $r=.20$ ,  $p<.01$ ). These findings indicate that students with more prior experience are more likely to perceive or note the availability of ICT resources and more likely to report using ICT as part of their studies.

As with the instructors we found no significant relationships between students' use of the REC portal (or other measures of past or current use of ICT) and their pedagogical philosophies and practice. This suggests that at this stage, at least, students' engagement with ICT neither influences nor is influenced by their orientations to active-learning, student-centered, and progressive pedagogies.

However, one pedagogical philosophy dimension *student-centered pedagogy*, has a modest association with students' *future plans to use ICT in their work* ( $r=-.19$ ,  $p<.01$ ), meaning that students who are more oriented to student-centered pedagogy plan to use ICT more often when they become teachers. This finding should be interpreted with caution, though, because neither of the other two pedagogical philosophy measures (*teacher-centered and active-learning*) is significantly related to students' *future plans to use ICT when they become teachers*.

Nevertheless, it is interesting to note that we found a moderate, significant relationship between students' involvement in active-learning in their TTC classes students' future plans to employ active-learning pedagogies in their teaching ( $r=.42$ ,  $p<.01$ ). While one should be cautious about drawing causal inferences, this finding suggests that the more teacher education students have active-learning experiences during their teacher education program, the more likely they are to anticipate using ICT in their future work as teachers.

Of relevance here are the findings that students' involvement in active-learning experiences in TTC classrooms has a modest association with: a) their orientation to *student-centered pedagogy* ( $r=-.16$ ,  $p<.01$ ) and b) their orientation to *active-learning pedagogy* ( $r=-.19$ ,  $p<.01$ ). While we are not able to draw clear causal conclusions, it seems that such active-learning experiences encourage or enable students to develop more progressive pedagogical orientations (i.e., student-centered and active-learning pedagogical philosophies).

## Appendix A: Gantt Chart of Implementation Tasks

Task	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>1. Content</b>												
a) Produce teacher tools (primary)												
b) Produce teacher tools (secondary)												
c) Validate teacher tools												
d) Produce video programs												
e) Organize existing content												
f) Launch online discussions												
g) Distribute test prep materials												
<b>2. Technology channels</b>												
a) Build REC portal v2.4												
b) Subsidize TTC connectivity												
c) Create TTC viewing stations												
d) Distribute CDs/DVDs												
<b>3. Capacity building</b>												
a) IT instructor training												
b) Pre-service teacher training												
c) In-service teacher training	[TBD]											
d) Student-centered learning												
<b>4. Partnerships</b>												
a) MoU with MINEDUC												
b) MoU with ORINFOR												
c) MoU with MINICT												
d) Muhanga, Rukara connectivity												
<b>5. Sustainability</b>												
a) REC II concept note												
b) REC II proposal												
c) REC II business plan												
d) Plan for REC activity transfer												
e) Connectivity sustainability plan												
f) REC Closeout												

## Appendix B: Monitoring and Evaluation Logframe

Activity	Indicator(s)	Data source(s)	Target(s)
<b>1. Content</b>			
a) Produce teacher tools (primary)	- # of tools produced	- REC Monthly report - Content log	3 000 tools
b) Produce teacher tools (secondary)	- # of tools produced	- REC Monthly report	4,000 tools
c) Validate teacher tools	- # of tools validated	- REC Monthly report	7,000 teacher tools validated
d) Produce video programs	- # of videos produced - Report on user satisfaction - Report on improved teacher methods	- REC Monthly report - Video Survey report	320 teaching videos
e) Organize existing content	- # of content arranged	- REC Monthly report - Available resource online	8993 teacher tools and approximately 850 videos to be organized
f) Launch online discussions	- # of posted topics - # of user reactions or responses - # Portal usage statistics - # of users	- REC Monthly report - Portal statistics - Google analytics	2000 discussion posts and generated responses
g) Distribute test prep materials	- # of materials produced and distributed	- REC Monthly report - Newspaper Distribution report	- 28 materials to be produced - 4000 newspaper editions to be distributed
<b>2. Technology channels</b>			

Activity	Indicator(s)	Data source(s)	Target(s)
e) Build REC portal v2.4	<ul style="list-style-type: none"> <li>- # of New features added</li> <li>- Improved and upgraded tools</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> <li>- Portal usage report</li> <li>- Portal Statistics</li> </ul>	<ul style="list-style-type: none"> <li>- Implementation of planned improvements to REC Portal v2.4</li> </ul>
f) Subsidize TTC connectivity	Internet available at TTCs	<ul style="list-style-type: none"> <li>- REC Monthly report</li> </ul>	All TTCs and CoEs to be connected
g) Create TTC viewing stations	<ul style="list-style-type: none"> <li>- # of viewers</li> <li>- # of stations created</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> <li>- Survey report</li> </ul>	<ul style="list-style-type: none"> <li>11 Viewing stations</li> <li>1100 Viewers</li> </ul>
h) Distribute CDs/DVDs	<ul style="list-style-type: none"> <li>- # of CDs/DVDs distributed</li> <li>- # of schools that receive CDs/DVDs</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> <li>- Distribution report</li> </ul>	1000 CDs/DVDs to be distributed
<b>3. Capacity building</b>			
e) IT instructor training	<ul style="list-style-type: none"> <li>- # of workshops organized</li> <li>- # of trainees</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> <li>- Activity report</li> </ul>	<ul style="list-style-type: none"> <li>11 IT instructors trainees</li> <li>3 Workshops</li> </ul>
f) Pre-service teacher training	<ul style="list-style-type: none"> <li>- # of workshops organized</li> <li>- # of trainees</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> <li>- Activity report</li> </ul>	All Students in S4,S5 and S6 in all TTCs.
g) In-service teacher training	<ul style="list-style-type: none"> <li>- # of workshops organized</li> <li>- # of trainees</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> <li>- Activity report</li> </ul>	5 workshops on remaining community
h) Student-centered learning	<ul style="list-style-type: none"> <li>- # of workshops organized</li> <li>- # of trainees</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> <li>- Activity report</li> </ul>	<ul style="list-style-type: none"> <li>11 workshops at 11TTCs</li> <li>250 teachers Trained</li> </ul>
<b>4. Partnerships</b>			
e) MoU with MINEDUC	<ul style="list-style-type: none"> <li>- MoU Signed</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> </ul>	
f) MoU with ORINFOR	<ul style="list-style-type: none"> <li>- MoU Signed</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> </ul>	<ul style="list-style-type: none"> <li>- Free of charge TV airtime at RTV</li> </ul>
g) MoU with MINICT	<ul style="list-style-type: none"> <li>- MoU Signed</li> </ul>	<ul style="list-style-type: none"> <li>- REC Monthly report</li> </ul>	<ul style="list-style-type: none"> <li>- Resource and infrastructure sharing</li> <li>- Advocacy</li> <li>- Sustainability of connectivity</li> </ul>

Activity	Indicator(s)	Data source(s)	Target(s)
h) Partnership with KIE for learner centered Methodology	- MoU to be signed	- REC Monthly Report	- 250 in service teachers will be Trained
i) Muhanga, Rukara connectivity	- Connectivity available	- REC Monthly report	- Reliable Internet connection at both TTCs
<b>5. Sustainability</b>			
g) REC II concept note	- Concept conceived	- Progress report	REC II
h) REC II proposal	- Proposal submitted	- Progress report	REC II
i) REC II business plan	- Business Plan presented and validated	- Progress report	REC II
j) Plan for REC activity transfer	-	- Progress	REC II
k) Connectivity sustainability plan	- Plan submitted	- Connectivity plan	11 TTC and 1 CoE connected to remain connected



## Appendix C: Planned Improvements to REC Portal v2.4

Google.org has decided to reduce staff time committed to improving the REC portal, and the Commons product in general. Google.org, recognizing that this decision could adversely affect the stability and sustainability of the Commons product, has offered instead to fund outside contractors to complete the work promised. In October 2011, Google.org will award a grant of approximately \$120,000 to REC for improvements to the REC portal, and for capacity building of FHI and REC staff, to ensure that they can make additional improvements or changes in the future.

The table below represents a list of intended improvements, prepared together by FHI and Google.org. It will form the basis of an SOW to be implemented beginning in November 2011.

Feature or Task	LOE (SWE-wks)	Technical Difficulty (6)	Need (7)	Skills (8)	Notes
<b>Home Page</b>					
Changing home page images	0.2	L	L	JS	
<b>Registration &amp; Sign In</b>					
REC Improved Flow	4	H	M	JS, GAE	Very hard, possibly cannot be done without Google.com support (in addition to Google.org).
<b>Library</b>					
"Print Resource" button	0.5	L	L	JS	Not possible for all resources, may be tricky to get working in all browsers.
Hide empty topics	[Done]	M	L	P, JS	
Text search	2	H	H	JS, GAE	Will require serious eng design work to make this fast enough to be useable.
"Back" button goes to topic	[Done]	L	L	JS, P	Should go to topic, not library home
Moderated upload form for user	2	H	H	JS, GAE	Significant eng design effort to get this right.
"My Library"	3	M	M	JS, GAE	Hardest part here is UX design.
"Back" button goes to page	0.5	L	L	JS	
<b>Discussions</b>					
Recent topics goes directly to post	N/A	N/A	M	N/A	Discussion gadget provides no mechanism for setting post on page load.
Investigate recent topics workarounds	0.5	L	M	OS	
Overhaul discussion interface	N/A	H	M	N/A	Gadget is internal and not modifiable. If this becomes possible, it will be 4 weeks of work.
E-mail notification defaults off	N/A	N/A	H	P	Will require cooperation from Google team. Sal will look into this, but is not hopeful.
Default full-screen YouTube videos	N/A	N/A	L	N/A	Browser policies prevent videos from being full screen without user interaction.

Feature or Task	LOE (SWE-wks)	Technical Difficulty (6)	Need (7)	Skills (8)	Notes
<b>Social</b>					
REC school profile pages	0.2	L	M	WD	These are manually-made Sites pages with edit permissions.
REC student profile pages	2	H	H	JS, GAE	Must be made programmatically.
Google+ profile in frame	1	M	H	WD, JS	It may be impossible to do this without confusing users.
Customized Google+ profile	N/A	N/A	H	N/A	Google+ does not provide a facility for customizing profiles.
<b>News</b>					
Blogger backend	0.5	M	M	JS	Actually 1 wk, but includes News formatting.
Formatted news page	0.5	L	M	JS	
<b>Documentation &amp; Training</b>					
Site usage documentation	0.5	N/A	H	WD	
Site maintenance documentation	0.5	N/A	H	WD	
Site development documentation	[inc]	L	H	JS, GAE	
Code documentation	[inc]	M	H	JS, GAE	Statement of work should require documented, tested open source code
In-Person training	2.5	L	H	JS, GAE	Steven estimate: 8 hrs/week for three months, in person = 100 hrs
Phone/E-mail support	0.7	L	H	JS, GAE	Steven estimate: 2 hrs/week for three months, phone/email support: 25 hrs
<b>Google Work</b>					
Open source code	[G]	N/A	H	N/A	
Contractor under NDA	[G]	N/A	H	N/A	
Contractor technical support	[G]	L	H	N/A	

#### (5) Level of Effort

	Google has already or recommend that Google executes. Not counted in total.
	Recommend fully funding NGO to pay contractor to execute.
[included]	Part of another line item, called out for clarity.
	Not possible without Google.
	Never promised, low priority.

#### (6) Technical Difficulty

H	Requires substantial design and a senior engineer to even begin.
M	Some design work needed. Could be done by someone junior, better if designed by sr, executed by jr.
L	Modifications of existing code or system, could be executed by a jr. engineer on their own.
N/A	Non-technical work.

#### (7) Need

H	Absolutely necessary to achieve programmatic goals.
M	Workarounds to achieve goals are possible, but quality of result would be improved.
L	Was discussed, but wouldn't significantly impact programmatic goals if not completed.



N/A	Not relevant to this NGO's deployment or never discussed/promised. Not counted in total.
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**(8) Skills**

WD	Basic Web Development, including HTML, CSS, and Google Sites.
JS	JavaScript, including JSON, AJAX, DOM, and Basic Web Development
P	Python, specifically as used by Google App Engine.
GAE	Solid knowledge of Google App Engine design, efficiencies, and issues, using Python for development.
OS	Experience with Open Social standards, Apache Shindig, gadgets, and containers.
N/A	Non-technical work