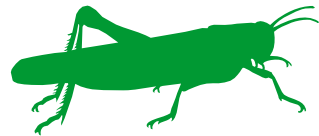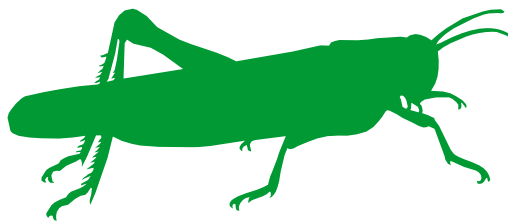# From Grassroots
# TO GRASSHOPPERS

# Tales of the
# GRASSHOPPERS

This book is dedicated to Mr.Haazela who played a crucial role in the Grassroots Projects 2009.
He died in a car accident on the 18th of June 2010.

| | |
|---|---|
| **Chair:** | Bart Cornille |
| **Authors:** | Grassroots Participants |
| **Media Producer:** | Lukonga Lindunda |
| **Educational Technologist:** | Pier Goudappel |
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**Kennedy Kasimba**

**Ivy Kabamba Kabuswe Ndhlovu**

**Jonathan Mwiinga Haazela**

**Kanchebele Simon**

**Maimbolwa R M Muyangana**

# Foreword

*"... it is what people develop in their minds and actions that count. People do not learn or accomplish complex change by being told or shown what to do."*
*(Fullan, 2001)*

*This quote of Fullan explains why I embraced the idea of the Grassroots Project with great enthusiasm.*
*Most Zambian colleges and schools prioritise ICT. This is not surprising, as ICT offers tools that make interactive learning possible. Learners get the possibility to "construct" lasting knowledge based on social interaction with peers. ICT has the potential to play an important role in the paradigm shift from behaviourism to constructivism.*
*But ICT does not always bring what is assumed. Sometimes the computer has a hard time living up to the expectations of the educators. The introduction of constructive learning is a complex change. To reach the paradigm shift the school climate needs to change, the curriculum needs to change and the educators themselves need to change.*

*UNESCO speaks about four development stages for ICT: emerging, applying, integrating and transforming.*
*Education in Zambia has not yet reached the ICT integration in education stage. But this does not mean that educators have to wait to experiment.*
*I believe that people learn best when they work on a task they enjoy, and by doing so, gain a deeper understanding of what works and does not work.*

*The Grassroots Project gave a first group of pioneers the chance to experiment with the use of ICT in education. The stories in this "Tales of the Grasshoppers" tell you what the pioneers have learned and you will catch the enjoyment and fulfilment of their learning process between the lines.*

*I hope that these tales will motivate other pioneers who are willing to play their role in the change process that needs to take place at various levels.*

*Enjoy reading the "Tales of the Grasshoppers". Be inspired and start your own journey!*

**Astrid Scholten**
**Programme Manager VVOB Zambia**

# Preface

*A warm welcome to all of you, lecturers and teachers,*
*generation X educators or generation Y students,*
*whichever subject you teach or learn, and to all educational*
*managers, who have the tremendous responsibility*
*to support innovation in the colleges and schools!*

You're bound to ask why a book on the Grassroots Zambia Projects is being printed on paper and distributed the traditional way (as opposed to being published and distributed online). Is a book on the use of ICT in the classroom not a contradiction in terms?

We feel that a book simply is a comfortable way of familiarising Zambian lecturers and teachers with the technological and pedagogical issues Grassroots ICT Projects entail. Also, some readers might not be entirely comfortable with computers or do not have ready access to the internet. Therefore, we have opted for a practical handbook.
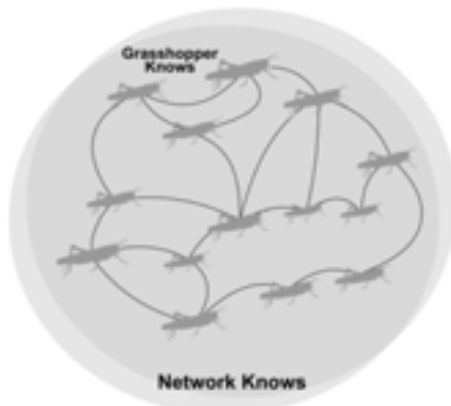
In fact, it is a loose-leaf folder, so you can easily take some pages out and photocopy them. That is no problem since the book has a creative commons license.

The focus of this book is on simple, technical tools and on the pedagogical approaches needed when integrating ICT in the classroom. The book gives you an overview of the experiences of more than 30 Zambian educators breaking their heads over how to make sense of these computers in class.

*Figure 1: Illustration adapted from Siemens (2006)*

This book is written during a workshop in May 2010 by the participants of the Grassroots Zambia Projects 2009, all lecturers at Colleges of Education or teachers at (community) schools who want to share their experiences with each other and with a broader educational network. Indeed, we also hope that people who did not participate in the Grassroots Projects 2009 might feel inspired to enrol for another round of Grassroots Projects in Zambia or set up similar initiatives in any other country.
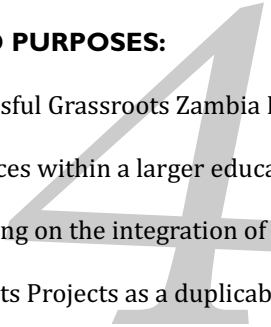
We want to take this opportunity to acknowledge the support of a lot of people. First and foremost, we want to thank the Ministry of Education for giving its full support to the Grassroots Zambia Project. We also want to sincerely thank all the participants and ambassadors of Grassroots Projects 2009; without their enthusiasm this wouldn't have been such a success. We want to give a special word of thank to Pier Goudappel, an educational technologist, who has successfully launched the first edition of Grassroots Project Zambia. In conclusion, we want to thank everyone who, in one way or another contributed, to the success of this Grassroots Zambia Project.

*VVOB Zambia*
*August 2010*

# Introduction

**Why this book?**

This book intends to serve **4 BROAD PURPOSES:**

**ONE**   To document the successful Grassroots Zambia Projects 2009

**TWO**   To share the best practices within a larger educational network

**THREE**   To stimulate peer learning on the integration of ICT in education

**FOUR**   To present the Grassroots Projects as a duplicable concept

**How does "Tales of the Grasshoppers" work?**

Tales of the Grasshoppers is divided into 9 tabs.

In Tab 1 (From Grassroots to Grasshoppers) you will find more background information on the Grassroots Zambia Project.

In Tab 2 up to 6 the work of the separate Grassroots groups is presented by means of jury reports, short bios, contact details and case-studies. Since ICT integration in education can only be a success when enough attention is given to pedagogy, each project is complemented with some background on the main methodology used. The projects of Group 1 (Find, Search and Collaborate), mentored by Leonie Meijerink can be found in Tab 2. Tab 3 presents the projects of Group 2 (Gadgets and Tools), mentored by Pier Goudappel. Andre Irabishohoje and Lukonga Lindunda mentored Group 3 (Hands-on ICT). Their projects can be found under Tab 4. Tab 5 showcases the projects of Group 4 (Audio, Visual and Video Learning), mentored by Bart Cornille. And last but not least, the projects of Group 5 (Language and Maths), mentored by Lieve Leroy and Hans Casier are presented in Tab 6.

Tab 7 (Tools for Grasshoppers) gives 35 technical cards explaining how to download, install or use these tools in education.

In Tab 8 some examples of eLesson plans are given. (The format of the eLesson plan was created by the ICTEM project, VVOB Vietnam).

Finally, Tab 9, provides you with all documents and PowerPoint presentations produced to implement Grassroots Zambia 2009.

**How did Grassroots start?**

When Leonie Meijerink visited her friend Sofia Dopper in June 2009 they both talked excitingly about their work. Sofia Dopper worked at the Focus Centre of Expertise in Education of TU Delft in the Netherlands. She was one of the coordinators of Grassroots Projects, small-scale teaching initiatives in which lecturers themselves apply ICT in their own teaching. Sofia indicated that research shows that bottom-up or grassroots initiatives may result in more widespread use of ICT resources in teaching. The ultimate aim is more efficient and effective teaching. Leonie kept on repeating these sentences on the train back to Brussels where she visited the VVOB head office. By the time she arrived there she had read the booklet with ICT successes in teaching at TU Delft completely and worked out a proposal for VVOB Zambia Grassroots. She strongly believed this bottom-up idea could work very well within the MOE-VVOB multiyear programme (2008-2013) in Zambia (see box).

Once back in Zambia, the detailed proposal was discussed with MOE and the VVOB team. All agreed that lecturers should be given the opportunity to experiment with ICT in teaching, to elaborate their ideas and to revitalise their teaching. They decided to hire a consultant to adopt the concept to the Zambian context. Pier Goudappel, an educational technologist, agreed to plan for Grassroots Zambia. VVOB Zambia organised a Grassroots ambassadors' meeting in September 2009.

**MOE-VVOB Teacher Training Support Programme**

The MoE-VVOB programme is a multi-year programme that runs from 2008 till 2013. Its ultimate aim is to improve the quality of training of basic school teachers. To reach this aim it addresses Continuous Professional Development (CPD) for Colleges of Education and basic schools, Open Distance and e-Learning (ODeL) and effective use of ICT.

An important (first) step taken by the CPD Task Team was creating a common understanding of what high quality teaching and learning means. This has resulted in a teaching and learning policy with guidelines which was endorsed by the management team of the Ministry and distributed to all staff of the Colleges of Education. Concepts like "student-centred learning", "active learning" and "collaborative learning" are featuring in this policy document. Secondly, the Colleges of Education conducted a self-evaluation to identify at what stage they are and how they can best improve themselves. Each college developed an action plan, focussing on three priorities, and they started the change process. Numerous colleges gave priority to building capacity in effective use of ICT in education.
The support given as part of the MoE-VVOB programme can be linked to UNESCO's 4 ICT development stages (see figure 2).

During the first phase of the Teacher Training Support Programme (2008-2011) the colleges and a selected number of Teacher Resource Centres and schools received support to improve the ICT infrastructure, to improve basic ICT skills, and to learn what a selected number of ICT tools can do.

But how can we stimulate educators to undertake action, and explore how ICT can help to make learning more student-centred, more interactive? That is exactly the purpose of the Grassroots Project.

*Figure 2: UNESCO ICT Development stages versus VVOB interventions*
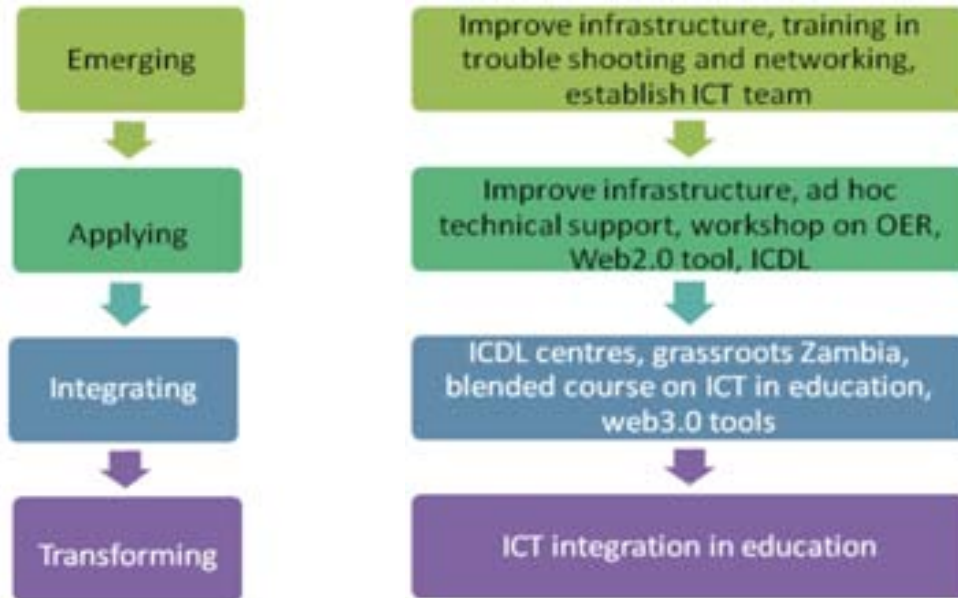


### What are Grassroots ambassadors?

Grassroots ambassadors are representatives of Colleges of Education and selected Resource Centres who promote Grassroots at their institutions. The aim of the Ambassadors meeting was to train the ambassadors in the promotion of Grassroots and in the key guidelines of Grassroots Zambia Project (see PowerPoint presentation in Tab 9).

The Grassroots ambassadors were very excited about the concept of Grassroots Zambia Projects and went back to their institution with information flyers to motivate their colleagues to participate (see blank Application form and Project proposal form in Tab 9). From that time on, any lecturer or teacher inspired to start integrating ICT in education could submit a project proposal in which they had to make sure that ICT adds value to the learning process. They could all consult the brand-new grassroots website for more information:
http://www.grassrootszambia.webs.com/

### Guidelines in a nutshell

- Staff at all levels can submit a proposal for a small-scale initiative to help enhance the introduction of ICT, or innovative methods of teaching at your CE

- Reward for a successful implementation

- Expert support/guidance over the duration of the pilot (about half a year)

- Dissemination in a good practices seminar and publication of good practices

| NAME | COLLEGE/ INSTITUTION | POSITION | Email |
|---|---|---|---|
| Shanzie Alfred | Charles Lwanga CE | HOS | shanzie@clce.ac.zm |
| Penjani Simwaka | Provincial Resource Centre (Kabwe) | IT Tutor | penjasims@yahoo.com |
| Sr. Angelina Kabwe | Kasama College | Senior Lecturer | srangelakabwe@yahoo.com |
| Malambo Luckson | Mufulira CE | ICT Coordinator | malamboluckson@gmail.com |
| Kalapa Lilly M | Malcolm Moffat College | ICT Tutor | kalapalilly@gmail.com |
| Muyawa Wilfred S | Mongu College | Senior Lecturer | wsmuyawa@yahoo.com |
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| Mvula Lois | NISTCOL | IT Technician | loismvula@yahoo.com |
| Phiri James Zakalia | Chipata College | Senior Lecturer | jzphiri@yahoo.com |

*Tabel 1: Grassroots Project Zambia 2009 Ambassadors*
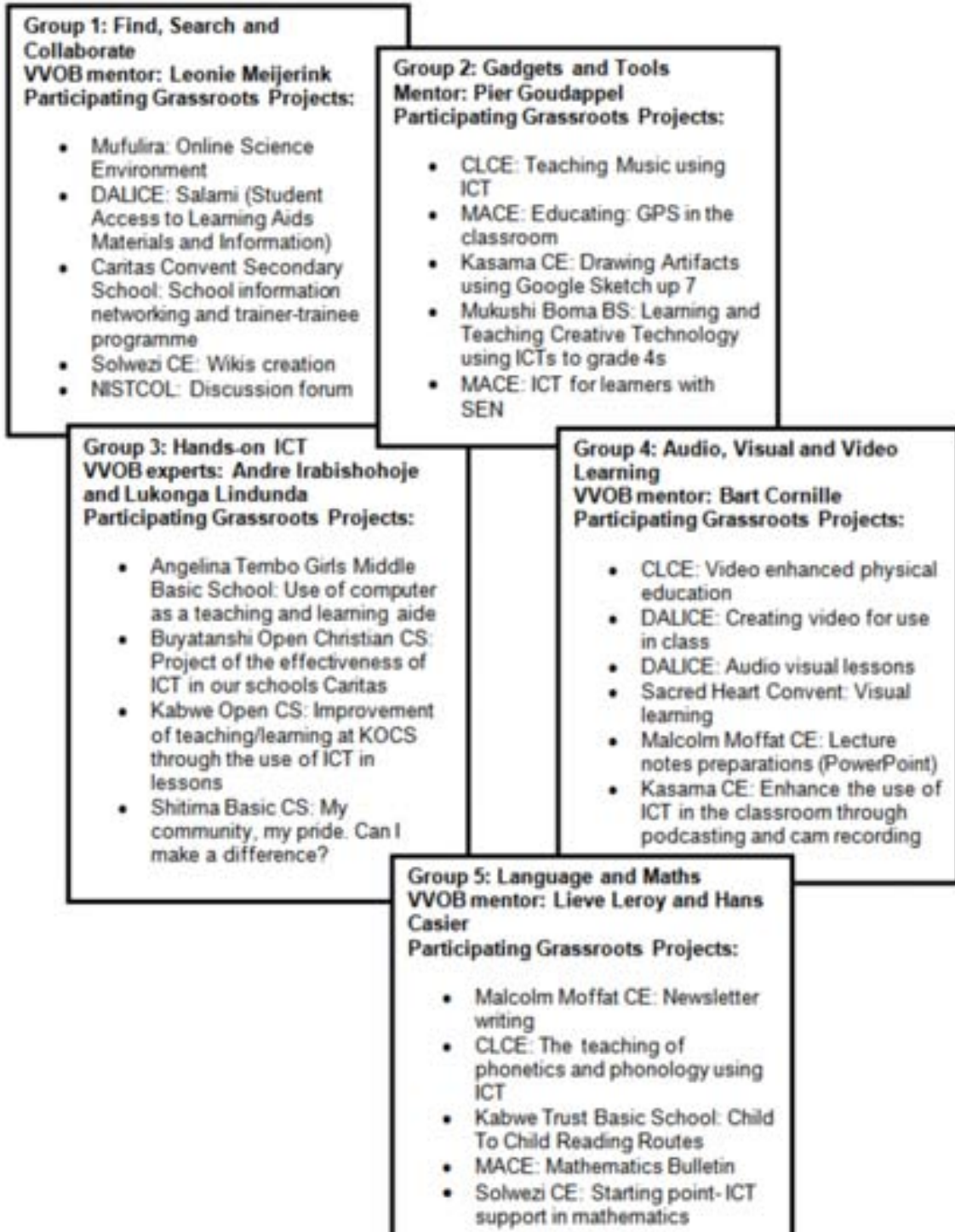
**Which projects were submitted and accepted?**

The Grassroots Zambia Project is all about using new tools and gadgets to help students master the key concepts and skills embedded in language, maths and other curriculum standards. It is not just about the use of PowerPoint, spread sheets or Word. The focus is on teaching and learning strategies that make a difference in daily practice and on activities translating into stronger student performance. The participants of the grassroots project don't necessarily have to be highly technically skilled. Even with basic ICT skills teachers and lecturers can make a difference. The focus is on a fundamental understanding of the pedagogical processes needed to make sense of ICT in a classroom.

Out of 49 submitted proposals 25 Grassroots Projects were selected on the bases of specific criteria. The proposals were ranging from the use of simple, social, end-user control tools like wikis, podcasting or video logging to the implementation of practical, new tools and methods of information connection.

The technologies can be grouped by their affordances, this is the action potential of a tool, a network or a system, which resulted in the creation of 5 groups. Each group was assigned to 1 or 2 VVOB mentors who organised, facilitated and guided them during 4 meetings (DE or F2F). If needed, they also looked for e-coaches who helped the lecturers and teachers to reach the objectives of their Grassroots Projects (8 hours consultancy). It was agreed that upon implementation of the Grassroots Projects a financial reward of 2.5 million ZMK would be given. On November 20th some ambassadors and 25 participants met in Lusaka with their mentors and fellow colleagues and fine-tuned their project proposals. The role of the mentors was clearly defined (see Tab 9) and the whole concept of Grassroots was discussed in detail. The participants also received a newsletter, another attempt to learn with and from each other.



The Honourable Deputy Minister of Education, Mr. Sinyinda and
VVOB Programme Manager, Dr. Astrid Scholten at launch Grassroots Project 2009

**Group 1: Find, Search and Collaborate**
**VVOB mentor: Leonie Meijerink**
**Participating Grassroots Projects:**

- Mufulira: Online Science Environment
- DALICE: Salami (Student Access to Learning Aids Materials and Information)
- Caritas Convent Secondary School: School information networking and trainer-trainee programme
- Solwezi CE: Wikis creation
- NISTCOL: Discussion forum

**Group 2: Gadgets and Tools**
**Mentor: Pier Goudappel**
**Participating Grassroots Projects:**

- CLCE: Teaching Music using ICT
- MACE: Educating: GPS in the classroom
- Kasama CE: Drawing Artifacts using Google Sketch up 7
- Mukushi Boma BS: Learning and Teaching Creative Technology using ICTs to grade 4s
- MACE: ICT for learners with SEN

**Group 3: Hands-on ICT**
**VVOB experts: Andre Irabishohoje and Lukonga Lindunda**
**Participating Grassroots Projects:**

- Angelina Tembo Girls Middle Basic School: Use of computer as a teaching and learning aide
- Buyatanshi Open Christian CS: Project of the effectiveness of ICT in our schools Caritas
- Kabwe Open CS: Improvement of teaching/learning at KOCS through the use of ICT in lessons
- Shitima Basic CS: My community, my pride. Can I make a difference?

**Group 4: Audio, Visual and Video Learning**
**VVOB mentor: Bart Cornille**
**Participating Grassroots Projects:**

- CLCE: Video enhanced physical education
- DALICE: Creating video for use in class
- DALICE: Audio visual lessons
- Sacred Heart Convent: Visual learning
- Malcolm Moffat CE: Lecture notes preparations (PowerPoint)
- Kasama CE: Enhance the use of ICT in the classroom through podcasting and cam recording

**Group 5: Language and Maths**
**VVOB mentor: Lieve Leroy and Hans Casier**
**Participating Grassroots Projects:**

- Malcolm Moffat CE: Newsletter writing
- CLCE: The teaching of phonetics and phonology using ICT
- Kabwe Trust Basic School: Child To Child Reading Routes
- MACE: Mathematics Bulletin
- Solwezi CE: Starting point- ICT support in mathematics

**Who was part of the jury of the Grassroots Projects?**

Esvah Chizambe (MOE)
Leonie Meijerink (VVOB)
Pier Goudappel (Consultant)
Bart Cornille (VVOB)

**What criteria were used to select and to review the Grassroots Projects?**

The ultimate aim of the Grassroots Project is the creation of (digital) content and knowledge. The knowledge flow cycle served as a guiding model for the jury. From the project proposals to the implementation, there are several stages a project can go through.

An example of the knowledge flow cycle:
In today's online world, a lecturer can post a series of ideas/writings, and receive critique from colleagues, students or peers. These ideas can be used again to build more personalized representations. The dialogue continues, and ideas gain momentum as they are analysed and co-created in different variations. After some time, the ideas can be sharpened, enlarged, challenged, or propagated. The cycle is dizzying in pace, process, and final product, which is then fed back into the flow cycle for continual iteration (Siemens, 2006).

The knowledge flow cycle has the following stages:

**Co-creation . . .**

(like end-user generated content) is a recent addition to the knowledge cycle. The ability to build on/with the work of others opens doors for innovation and rapid development of ideas and concepts.

**Dissemination . . .**

(analysis, evaluation, and filtering elements through the network) is the next stage in the knowledge flow cycle.

**Communication . . . of key ideas**

(those that have survived the dissemination process) enter conduits for dispersion throughout the network.

**Personalisation . . .**

at this stage, we bring new knowledge to ourselves through the experience of internalization, dialogue, or reflection.

**Implementation . . .**

Is the final stage, where action occurs and feeds back into the personalization stage. Our understanding of the concept changes when we are acting on it, versus only theorizing or learning about it.

All the Grassroots projects in this book have been successful. The stars in the jury report only indicate how far the project is on the knowledge cycle.

Grassroots Projects that somehow went through all these stages received **** in the jury report.
Grassroots Projects that somehow went through 4 of these stages received *** in the jury report.
Grassroots Projects that somehow went through 3 of these stages received ** in the jury report.
Grassroots Projects that somehow went through 2 of these stages received * in the jury report.

**How did Grassroots participants become Grasshoppers?**

In December 2009 all was set for the official launch by the Ministry of Education. All participants were very excited and prepared posters to present their project. The new VVOB advisor ICT, Bart Cornille, gave a presentation on Connectivism, a new learning theory for the digital age (see PowerPoint presentation in Tab 9). He also shared his vision on the use of ICT in education through the story of Mr. Bornwell (see box).

The Honourable Deputy Minister of Education, Mr. Sinyinda gave a very motivating speech during his visit to the Grassroots Projects. He also took the time to listen to all the projects that were being implemented. For the participants it was a real energiser. Mr. Haazela of Charles Lwanga College of Education gave a vote of thanks. He made everyone laugh as he said that those whose projects were not selected called participants of the Grassroots Projects "Grasshoppers" (meaning hopping to Lusaka several times for Grassroots workshops). Indeed, all members were very hopeful that teaching and learning in schools and colleges would improve with the use of ICT as a working tool.That is how the Grassroots participants became grasshoppers.

**Republic of Zambia
Ministry of Education**

A day in the life of Mr. Bornwell

A seventh-grade language teacher, Mr. Bornwell, reviews the podcasts of 'Alice in Wonderland' (Lewis Caroll) he has downloaded from the internet. He jots down his reflections on how he will use this in the classroom in a blogpost. Indeed, Mr. Bornwell keeps a regular blog, where he writes about everything from homework assignments to reflections on course topics, with a full description posted each Mondays morning on the how, what, and why of course materials to be taught in the upcoming week. His blog is called 'Learnedwell'. Students, parents, administrators, and other lecturers can subscribe to his blog. The blogposts enable them to benefit by sharing strategies and materials with colleagues who teach the same subject or those in other departments. In fact, Mrs. Mwaniki has just emailed Mr. Bornwell her sites tagged 'English podcasts' of her social bookmarks. In her email, Mrs. Mwaniki also explains that an assignment to study poetry was not warmly received by the students, but she turned it into an incredible opportunity by creating a blog on Dickinson, Frost and Shakespeare. The students as part of a group work began writing to other students about what they learned and how they felt about the poems, and then published their work for others to see and comment upon.

Mr. Bornwell is impressed by the ideas of Mrs. Mwaniki. In fact, he is challenged by her thoughts. He decides to experiment with the use of wikis. This could help the students become better communicators. The students could construct their own study resources using their team wikis. He could reward teams that create the most useful study guides. Mr. Bornwell closes his eyes and pictures one of his brightest students Lukonga. Lukonga is in a jubilant mood, because he just learned that his team produced the most useful study guide for the previous day's test, which earned them 10 points towards level three in the class. Level three will give the team much more editing access to the class wiki and more opportunities to contribute to the class literacy Web site…

*(Story adapted from "A day in the life of web 2.0" of David Warlick)*

**How did grasshoppers experience the Grassroots Project?**

Here are some testimonies of committed grasshoppers and ambassadors.

*Mizzie Mkandawire, librarian, Mansa College of Education*
"In the beginning, I thought being an ambassador did not really mean much, but now I realise that I was wrong.  Being an ambassador has greatly benefited me through exposing myself to several types of ICTs that could be used to enhance teaching and learning and which have been implemented at my college as well as other Colleges of Education.
My experience as ambassador has made me realise that it's up to us to make ICT the driving force in education and that, we do not need millions to do so. Through Grassroots, simple and reasonably priced ICT projects have been implemented. Though simple, these projects promise to have positive and long term effects in our education sector.
To sum it all, being an ambassador has greatly increased my knowledge and appreciation of ICTs in education. It is my sincere hope that my colleagues take Grassroots Projects seriously and try to implement them to the best of their ability for the benefits of ICT to yield results in education."

*Beauty Lweendo, Information Technology Instructor, Kabwe School for Continuing Education, who presented her Grassroots project at eLearning Africa pre-conference.*
"My name is Beauty Lweendo from Kabwe, Zambia. I am filled with great happiness as I take this time to thank eLearning Africa and the non-profit organisation VVOB for giving me the opportunity to participate in the pre-conference workshop *"Duplicability of Grassroots Concept to Inspire Educators to Use ICT in Education"* and to learn how educational challenges can be resolved (see Tab 9).

The main highlight, though, was when I presented my VVOB Grassroots Project during the *"Teachers' Forum"* to colleagues from all over the world. Through the Grassroots Project I learned how to use my IMIS diploma skills in teaching, how to gather teaching/learning materials not only from text books but from various other places and websites, how to make them interesting by adding animations and effects using PowerPoint and how to use Windows Movie Maker. I now even encourage my fellow teachers to use ICT tools in their various areas of specialisation and train them in ICT. It was also this project that brought the attention of the Vice Principal at Kabwe School for Continuing Education to my qualifications; he subsequently requested my services at the Provincial Education Office. I am now an Information Technology Instructor and offer ICT and Office Management courses at this school.
Presenting in front of an international crowd helped me gain self-confidence and my future presentations will be even better as a result. I am deeply grateful to the VVOB staff, who supported and encouraged me and made me believe that I could succeed."

*Lois Mvula, IT Technician, National In-Service Teachers' College*
"I have a lot of testimonies to share. Being an ambassador I have learned a lot from my colleagues, VVOB, Grasshoppers and my fellow ambassadors. I thank all. Grassroots Projects have really encouraged lecturers and teachers to start experimenting with the use of ICT.
Sharing during Grassroots meetings, has also given me the courage to share ICT knowledge with my colleagues from other Colleges of Education. Just to mention a few experiences: I went to David Livingstone College of Education, where I conducted a workshop on video production, and to Mansa College of education, where we focused on basic computer trouble shooting. As part of the VVOB programme I was trained in Computer Hardware & Maintenance and Networking and since then I have been able to give other colleges ICT support."

**Who are the learners with who the grasshoppers worked with?**

One of the major outcomes of the Grassroots Project is the production of better learning activities and better learning materials for the learners in the Colleges of Education or (community) schools. Who are the learners we talk about? We asked the participants of Grassroots to give some examples. Here are two thumbnail sketches of the learners:

*David Banda is a pupil at Makululu Community Basic School in Kabwe. David is 14 years old and he lives with his grandmother. He is very bright when it comes to academic work and he has a strong interest in computers and ICT. Since his parents died a long time ago, he divides his time between doing piece work and school. He attends school in the morning and in the afternoon you can find him in town, trying to sell plastic bags. It is tiring to combine the two. In fact, he often finds it hard to concentrate well in the morning, except during computer classes. David Banda feels inspired by the possibilities of ICT and he even encouraged some of his friends to participate in the ICT lessons.*

Here is another thumbnail sketch:

*Sonia Kalaba is a 35 year old female teacher at Batoka basic school in Choma district. She is upgrading her primary teacher education into a secondary teacher's diploma, following the DALICE distance education programme for three years. She is completing the programme this year with the subject combination of History and Religious Education. She is studying whilst keeping her job as a primary teacher. There is no resource centre in Batoka, but when she travels to Choma, she can access an old computer and some outdated books. However, there are many students "in her boat", so the resources available are not enough or even adequate.*
*Our student has three children and her husband is hard working, but fortunately he understands her situation and demand of time to study. But keeping her job, kids and house takes a lot of time, and travelling to Choma resource centre takes several hours each way.*
*Our teacher is however lucky, she has a friend who owns a laptop, and he allows her on one or two occasions to borrow his computer.*
*The residential periods at DALICE are 1-2 weeks three times a year, of which one period is for exams. At DALICE she met two lecturers who were searching for students that would like to join a pilot project in ICT, more specifically, collecting information. With her location and occasional access to a computer, she met the criteria to join the Grassroots group.*

The Honourable Deputy Minister of Education, Mr. Sinyinda and
Participants at launch Grassroots Project 2009

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