

# *Building a Community For Developing OERs*

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*PCF6 - Access and Success: Global Development Perspectives to  
Learning for Development  
Kochi, India*

*25 November 2010*

*Theme: Formal Education  
Sub-theme: Open Schooling*

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## *Abstract*

The transition to lower secondary education is now at the centre of the Education for All agenda in many countries. As more children are progressing through primary school the demand for secondary school places is growing. However, the demand for places in the school is not the only challenge governments are facing for sustained improvement in quality education. One of the most important requirements is an improved learning environment, which includes the provision of learning materials (UNESCO, 2010). While access to learning materials is a significant barrier in many countries, tremendous progress has been made with the development of OERs (stimulated by benefactors such as the William and Flora Hewlett Foundation and UNESCO) and educational content has been provided freely to institutions and learners across the world (Sclater, 2010). The Commonwealth of Learning, in collaboration with the William and Flora Hewlett Foundation initiated the Open Educational Resources for Open Schools to address the challenge of access to quality educational resources while at the same time enhancing the capacity of teachers in writing distance education materials using new technologies. When embarking on a large scale project, such as developing open educational resources, it is important to involve the right people to commence and complete the project successfully. It is essential to choose educators with ample experience in their field of teaching in order to ensure that the end product will be of a high standard and, of course, on an appropriate level for the target users. This paper will explore the challenges experienced

by the teachers involved in this project. This includes the relationships between the different partners, technological, cultural as well as work related challenges. It will also explore the different support mechanisms which allowed the teachers to deal with the challenges in building a supportive community which lead to the success of the project. Developing open educational resources is not an easy task. It demands high level of motivation and courage of those involved to overcome the challenges they face to make the changes to succeed.

## Key words

Open Educational Resources/Capacity/Challenges/Technological/Relationships/  
Partners/Support/Supportive Community/OERS4OS

## Introduction

The Commonwealth of Learning in collaboration with the William and Flora Hewlett Foundation initiated the Open Educational Resources for Open Schools Project to address the challenge of access to quality educational resources. This initiative involves 100 teachers from 6 countries (Namibia, Seychelles, Botswana, Lesotho, Zambia and Trinidad & Tobago). While the primary objective was the development of content, the initiative also aimed at enhancing the capacity of teachers in using and integrating technology as well as strengthening their capacity to write quality distance education content. An indirect objective was that the project would serve as a vehicle to transforming educational and policy practices in the relevant institutions and Ministries of Education. Through their involvement in the project and exposure to existing OER material, the teachers were provided with “the intellectual capital to help understand and use all of the Web’s content” (Smith & Casserly, 2006). This paper will explore the challenges experienced by the project team as well by the teachers. It is a combined effort of the team leader and one of the teachers who worked on the project.

## Challenges

### Technological

This project stretches over 6 countries and it was designed to have an inter-relationship amongst the different stakeholders who developed content collaboratively. The most important vehicle for collaboration, communication, development and sharing was undoubtedly the different forms of technology. However, it seems that previous research in this area which has shown that “despite the fact that there is a wealth of free tools and resources available which can be used to support teaching and learning, in reality technologies are not used extensively” (Blog post e4innovation was equally true for most of the participants on this project.)

When the project was conceived, provision was made to ensure that each participant had *access to technology*. With this, our understanding was that access should also be after hours. This provision was made through a contract with participating institutions and individuals. This was easier said than done, as

some of the teachers claimed that they only had access during office hours. It seems that there was a mismatch between the teachers' (and our) understanding of their needs and that of the institutional management.

This challenge had a knock on effect on teachers' capacity to *deliver on time*. However, in cases where there was a clear alignment between the teachers' understanding of their needs and that of the institutional management, progress was significant. "Perhaps the greatest challenge of ICT integration relates to vision, policy and leadership" (Le Baron, 2009).

Access to technology was not the only technology related challenge. Many teachers who were nominated for the project did not have the basic computer *literacy skills*.

It has to be stated that it was the intention of the project to involve teachers with very limited computer skills in order to enhance their capacity with respect to technology, as well as its use and integration. However, for teachers to develop skills, they needed to have access to the computers on a regular basis and even after hours.

"At the beginning of 2010, when I was approached to become part of the project, I did not really grasp what was expected of me and I was a bit hesitant since I already had a very full programme. At that stage I did not even have an email address and I had never sent or received any mail! I was scared of the unknown, but also very thankful for the opportunity to enhance my technological skills. I do not feel like I am the only one out there without an email address!"

"During and after the workshops my fears regarding the technological aspects slowly but surely vanished as I gained the necessary skills to do the required tasks. I also gained experience using the software via trial and error! When we were first introduced to Moodle I honestly considered quitting the entire project. I did not think I would ever get it right! Once again, it was just a matter of trying it out and practising. After the training we received, I changed my mind and realised I could do it. This change of mind actually made me more positive towards the project and I have realised that I have grown a lot over the last few months. I can now do things on the computer that I had never thought would be possible and I feel empowered!"

To compound issues, *access to the internet* was an added challenge. The project was designed in such a way that the teachers could work offline and online. However, due to bandwidth challenges, the teachers struggled to complete their assignments during the times for which they had set out to do the work. In most of the countries, access to affordable and reliable bandwidth created more challenges and the lack of resources to connect to the internet denied the teachers the opportunity to work online after hours on a regular basis. Some of the teachers who did not have access to personal computers experienced challenges when they wanted to access the computer labs during school hours, despite signed agreements with the schools and institutions.

This raises questions such as “to what extent did the school authority capitalise on the teachers involved in this project? To what extent did the school authorities capitalise on the potential of technologies (computer lab) for the whole school? Or do the school authorities realise the potential of the technologies for the school? (Conole, 2009) This project’s aim is to integrate technology in the classroom practise, however if computer laboratories at schools are restricted for part of the staff, it will be difficult to sustain the integration of technology in the classroom. “For ICTs to be used transformationally, educational leadership must re-evaluate the fundamental meaning of schooling and what this implies for institutional structure” (Le Baron, 2009).

## Communication & Collaboration

For a project of this nature it is imperative to have an open participatory infrastructure (which refers to the institutional practices; technical infrastructure; and social norms), in place to allow a smooth operation (Atkins et al). The previous section of this paper already dealt with the availability of technical infrastructure and alluded to institutional practices which were not necessarily supportive to building a culture of learning and consequently reflects on the social norms. Communication amongst all the participating institutions and individuals and between the countries and the project teams is a crucial element for building a community in which OERs are developed. During the first 12 months of the project the communication was good and there is a correlation between the communication and the outputs.

Challenges with respect to the technology were one of the most difficult ones to solve from the project management side. The project team had various mechanisms to communicate with the teams to keep them motivated. Regular emails, BaseCamp postings, teleconferences and Skype sessions were the glue which kept the project together. This created an additional workload on the project team as it was clear that the initiative should be taken by them to ensure lively communications. It was not always easy to arrange a suitable a time slot for teleconferences/Skype sessions for the participants in the different parts of the Commonwealth.

“Internet connectivity proved to be a major frustration when I started developing my web lessons. Sometimes, while in the middle of something, the whole system would simply bomb out and I would have to start all over again. It was also an extremely time consuming process, since the reaction time of everything done in real time via the net is very slow! I suppose this will prove to be a major obstacle to prospective users of the web lessons.

There is not much one can do about the connectivity problem. At times like that I rather retired and tried at another time when connectivity was better. I realised that the load might be too heavy at certain times of the day. I found it better to work in the evenings or early mornings. When the connection was particularly slow, I always busied myself with other work while waiting for a response.”

<b>COL + CMC + Country Consultants</b>	<b>= 10</b>
<b>COL + Project Manager</b>	<b>= Skype Sessions</b>
<b>COL + Country Consultants</b>	<b>= 5</b>
<b>Country Consultants + Subject Teams</b>	<b>= 4</b>

*A snapshot of teleconferences over a 6 month period*

BaseCamp, which is the main platform for communication, was established at the beginning of the project. Not only does BaseCamp serve as a communication platform, it is also the platform where we could archive all the records related to the project as well as serving as a repository. The most frustrating activity on BaseCamp, for some participants, was uploading files to the system. It proved to be very difficult and time consuming to upload a simple file in some of the countries, due to low bandwidth.

Developing open educational resources is an activity which happens in a community. Within this community, the majority of the teachers were also learning how to work together and how to share. We thought that the teachers would take advantage of the fact that the OER initiative (worldwide) has nurtured a culture of sharing, and that they would embrace the next phase where they would nurture a culture of learning (Atkins et al 2009). It was not easy to leapfrog into a culture of sharing and in some cases it was very difficult to nurture a culture of learning in a team. This was evident regarding the collaboration amongst countries and amongst teams. The project team attempted to get feedback across the six countries in regard to the curriculum and blueprints. There was no feedback, despite various requests and some of the reasons mentioned were (a) that it takes too long to open files, and (b) because countries developed different subjects, it was felt that they did not always have the subject expertise within their teams to respond to another country’s Blue Prints. Towards the middle of the project we requested countries to co-opt subject experts from the curriculum departments, where they lacked the subject expertise to add value to the team’s intellectual capital.

Within the country teams we observed the ‘challenge of collaboration’ where course teams worked as a collection of individuals rather than a team. It is evident that whatever the institutional practises and social norms in the institutions are, it inevitably has an impact on how the collaboration develops amongst teams.

The following table is a snap shot of communication on BaseCamp earlier this year:

<b>COL + Consultants</b>	<b>Messages Posted = 54</b>	<b>Files Posted = 56</b>
<b>CMC Botswana</b>	= 47	= 14
<b>CMC Lesotho</b>	= 49	= 21
<b>CMC Namibia</b>	= 44	= 20
<b>CMC T &amp; T</b>	= 44	= 15
<b>CMC Zambia</b>	= 32	= 13

The communication mostly happened online and it leads to the next challenge.

## Work Culture

This project is based on a constructivist approach and it was anticipated that the teachers would actively explore and reinforce their new skills as well as building on existing knowledge and skills or modify as they go along. Working with computers on a daily basis and even after hours demanded a paradigm shift from the normal practise of having face to face meetings. We did not anticipate this to become a challenge, and took it for granted that new things make people excited and teachers would not want to miss out on new developments. For example, writing emails was a new experience to some participants and this culture had to be nurtured and in some cases we took it for granted. Most of the teachers involved in the project were not appreciative of the time it took to write an email or/and to upload a file. There was a common assumption that technology is bringing you to the super highway and it should be super fast.

"I found that having an email address opened many doors for me. Now, the first thing I do in the morning is to check my mails. It is just so much easier to communicate with friends and colleagues. It saves me a lot of time, since I do not have to spend hours on the phone or drive around delivering documents, I can simply mail them. I only now realise what I had missed out on!"

This challenge has to be combined with the institutional practices at the institutions where teachers are involved. If it is not a practise (culture) in the institution (open school) to use email for communication, teachers will find it difficult to email each other and other partners. Within each country, we had a Country Coordinator who was suppose to communicate on regular basis with the Project Management Team. We found that in most cases the communication was re-active rather than pro-active. The responses were not always prompt and led to reminders being sent in many instances.

Initially it went well but as the project continued one could see how the communication became less and less. As was mentioned earlier, due to the slow bandwidth, it took so long to send an email or upload a file and many teachers were discouraged. Furthermore we had anticipated a high level of institutional

commitment from senior management. We had the commitment from senior management in all the countries, however, the involvement and engagement from them was not the same in all countries. There was a positive correlation between active engagement of Senior Management and the progress of teams and the opposite was also true. This was an ideal opportunity for transforming the institution's communication culture.

My impression was that some teachers sometimes felt that they are investing a lot of personal time and funds (for internet connectivity) and therefore felt disadvantaged at times. It would probably have motivated the teams to email on a more regular basis if there was an incentive for emailing (i.e. Internet access after hours). Teachers on this project are supposed to be on the leading edge of the ICTs development in their institutions however, if there is not an institutional ownership of an online community they may end up at the bleeding edge instead.

<http://edorigami.edublogs.org/2008/11/11/cutting-edge-or-bleeding-edge/>

## Workload

Teachers were working on this project on a part time basis. We had anticipated the additional work may have an impact on the teacher's workload, but did request that teachers should be released to attend to this assignment. This was unfortunately not always possible and some teachers did not properly plan to deal with the demands of the project. There were cases where teachers were overwhelmed with all the responsibilities and one could pick up the irritations in the communications. However, despite the workloads and challenges, the teachers continued to make progress albeit at a slower pace.

“Apart from the technological challenges we had to face, I would say the most difficult challenge for me, was to find and make the necessary time to work on the project and to finish the work on time. I was constantly rushing against time, trying to fit in everything in an already hectic schedule. During our workshops I could also gather that my colleagues experienced the same dilemma, especially during our second workshop which was held towards the end of last year when we were dealing with internal examinations, marking external examinations or dealing with other end-of-the-year duties.

I then decided to set up a work schedule in order to finish all my different duties in time. I realised that I would have to prioritise - I would first finish the most important tasks. I tried to finish one thing before moving on to the next, I worked longer hours and soon I was back on schedule!”

## Evaluation

The Midterm Evaluation raised many concerns regarding the quality of the content which was developed. Since it was the first time for some of the teams to develop content in this fashion and the first time to be exposed to external evaluators, it was not easy to accept the issues that emerged in the evaluation. The evaluation was discouraging to some participants and the project team had to work hard to keep the teams

motivated. The time and effort which went into addressing the evaluation's recommendations delayed the outcome of the project significantly.

## Support mechanism to overcome challenges

COL had agreed to fund the rental of hardware so that teachers could have access to laptops. As well - we also provided teachers with an incentive. A Governance Structure was established to oversee the work and to support the teams. Originally, two workshops were organised but in order to follow up on the recommendations from the Midterm Evaluation, a third workshop was held. Each country was supported by an online consultant. Part of this design was to nurture the culture of online communication and technology integration.

Over the 22 months of the project we managed to open 39 BaseCamps. 2847 Discussions were initiated and 3945 files were uploaded. Approximately 100 teleconferences took place between consultants and the project team(PT) and between the PT and team leaders/CMC. The Steering committee which is the decision making structure for the project held two face-face meetings and 5 teleconferences.

One cannot underestimate the support you have to provide to such a team. It is critical that you are in constant contact with all the members of the team on a regular basis. Encouraging was that the teachers on the project seem to be very committed.

“The wonderful support received from colleagues was also crucial. I did not start developing my online lessons directly after the workshop since I had to complete my duties at school first. When I started working on my lessons I discovered, to my horror, that I had forgotten some of the things that we had learned during the workshop. I then arranged a meeting with the programme developer who helped me to refresh my memory. I also contacted her regularly if there was something I struggled with. I realised that teamwork is very important when working on a project such as this one.”

From the project team's perspective, we were highly motivated and when we became aware of the challenges due to bandwidth we explored more options for communication. VOIP was introduced to the participants and most of them now have a SKYPE ID. This created options when emailing or telephoning failed.

Learning is a social activity. When the normal channels of communication seemed to be less effective we introduced participants to social platforms and engaged them on a different level. A Facebook page was initiated and constant sharing of information took place on this platform. Through the development of their own Facebook pages the participants participated in a much bigger social environment than what was anticipated. They are also exposed to a much larger OER community which brings them in contact with a huge pool of OERs on a daily basis.

After the first phase on developing the print based online content, the participants were exposed to MOODLE training. The biggest challenge with MOODLE was the fact that (we thought) you must be online to use it. Due to developments with MOODLE we were able to introduce participants to POODLE (Portable Moodle). Through the MOODLE Platform participants were exposed to Digital Storytelling, Elluminate and different webinars where they shared the room with an international community. Through



this exposure they have found that there are other people with similar challenges and yet they pursued the dream of broadening access to education. Teachers exposure to the different online communities was an indirect benefit which will stand them in good stead in their work in OERs We can conclude that a supportive community was built during this process not only amongst the 100 teachers, but beyond.

Apart from sending and receiving emails, I have also learned how to use the internet more effectively and I now constantly use it to do research or find resources to use in classroom. I was also made aware of certain sites where one can find wonderful educational resources to use in class. I am also not scared to try out the various options and applications that are part of the software since I realised that nothing can go wrong and that most things can be undone if need be.

## Lessons learned

### 1. Criteria for participation should be adhered to

It is also important to choose the right trainers and managers to manage and control the entire process to ensure that targets are set and adhered to. These people should also be able to provide the necessary support to the teachers involved in developing the learning materials. The relationship between the various parties involved in the process should thus be of such a nature that it would be conducive to the entire process of material development.

### 2. Motivation is crucial

In order to ensure the ultimate success of the project, it is important to motivate everybody involved to see the project through and to give it their best. Since it is a long term project, it is important that people should not lose interest. Ideally, the same group of people should be involved since the day the project is initiated until it is completed successfully. This will ensure continuity and of course, strengthen the relationships formed between individuals. It will also save money and time with regards to training. It is thus important to encourage perseverance and a positive attitude. This can be accomplished by regular contact between the different parties involved in the project, via workshops, group sessions or electronic communication. Group members should also get regular feedback on the work they have completed and criticism should be constructive. The best way to keep people interested is, of course, by providing a proper incentive. For example: remuneration, recognition or the promise of personal development.

### 3. Ownership

Institutional ownership is crucial. The development of OERs should not be seen as a separate project, but as an integral part of the institutions work (Smith & Casserley, 2006). Furthermore, any institution involved in the development of OERs should ideally have a vision for why they make educational resources freely available (Sclater, 2007).

### 4. Commitment form Senior Management:

One of the greatest challenges of integrating ICTs and related initiatives relate to vision, policy and leadership. In order for institutions to develop sustainable OER models it is important to have a

committed Senior Management. When committed it will be Senior Managements' prerogative to find solutions for the challenges such as bandwidth, and workloads.

### Despite all the challenges, were we Successful?

“In short, I regard this project a huge success. Personally, I am very proud to be associated with the project and I am thankful for the opportunity to be part of it. I am grateful for the skills that I have acquired because of my involvement as well as for the relationships formed during the process.

From a personal perspective, I can now look back upon a very fruitful two years. A time during which I have acquired skills to do things I would never have imagined myself capable of doing! I had the opportunity to meet new people and to exchange knowledge and skills with colleagues in the same field. There were plenty of opportunities for me to grow on a personal, as well as professional level.

The workshops posed plenty of opportunities to develop my computer skills and the way I think about teaching and learning with the focus of this project, of course, being distance learning. It made me realise once again that teaching and learning is, and should be, an enjoyable and creative process. It is also because of my involvement in this project that I can attend this wonderful conference. This project has inspired me to also become involved in educational projects and development in my country in future since it has been a very rewarding experience. I realised once again, how important it is to make education available and accessible to everyone since we all know that knowledge empowers people.”

## Conclusion

The road to success will, of course, not be without its challenges. The people involved in the project will have to overcome several challenges while working on it. It is hoped that this paper will assist the OER community to address challenges pro actively and that it will also enlighten the leadership in institutions so that there is an improved alignment between the challenges of the teachers and the perceived challenges by senior management. This paper also hopes to assist partners such as the COL and WFHF to enhance future projects such as this through being cognisant of the realities when implementing such a dynamic and important project. “Around the globe, technology has enabled us to democratize the development and distribution of learning materials” (Barbara Kurshan; Curriki).

Once completed, the content developed through this project will have an impact across the globe. Teachers involved in this process will no longer be pioneers in their field; they will become the leaders in their institutions as we anticipate that success breeds success.

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