let's share business models

open business management manual

THE ENTERPRISE COMMONS

Growing sustainable open content for accessible education in Africa

for educators

A free culture is not a culture without

property; it is not a culture in which artists

don't get paid. A culture without property,

or in which creators don't get paid,

is anarchy, not freedom.

Lessig, 2004

Version 1.0, March 2006

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Development of this resource made possible by a grant from the International Development Research Centre (IDRC), Ottawa, Canada, http://www.idrc.ca

Introduction

This manual is the result of an international project entitled 'OpenBusiness', a collaborative project undertaken by the hosts of Creative Commons in the United Kingdom, Brazil and South Africa. The project aims to provide a platform for the exploration of models that employ some form of open or accessible content in the digital environment. Case studies of entrepreneurial models built around openness, free services and/or free access are studied and showcased in online business models, ideas and tools from around the world (http://www.openbusiness.cc).

In South Africa we decided to focus on an "enterprise commons" that is currently burgeoning in the local education sector. The reasons for our focus are twofold: firstly because educational websites are the strongest open content players in a relatively under-populated online environment in South Africa and secondly, because we believe that investigating the economic viability for publishers who choose to adopt open content principles is critical to broadening access to quality education in South Africa. In an age where competition for funding resources is growing, organisations need to be aware of how to get the greatest impact from dwindling resources. For this reason, the area of open content has become a critical issue for both donors and educational organisations.

The word "business" may be a bit distracting when talking about educational projects. Unlike traditional business models that rely solely on commercial transactions between the company and its customers, the funding of open content educational products comes mostly from public foundations, international donors and government departments. Although open educational publishing projects are typically not developed around pure business or commercial goals, all of them require a strategy that addresses long-term viability in order to sustain themselves after what is usually only an initial period of funding.

Sustainability of open educational content projects is referred to further in this manual as an elusive "golden egg" that is dependent on a range of interdependent factors. Project partnerships; the development, licensing and procurement of content; content dissemination; interactivity and user statistics; innovative and entrepreneurial scope and, lastly, project funding are analysed through the lens of "openness" in this guide. From this perspective, the guide has attempted to analyse to what extent "openness" plays a part in the project's sustainability and whether there are any clear trends that similar projects could follow in achieving success in providing accessible, quality educational services.

Are Africans developing open content?

There are, indeed, a number of online open content efforts underway in the African education sphere. One particularly pioneering open content educational project targeted at countries in Africa and other developing nations is **itrainOnline**. The itrainOnline site, with links to dozens of learning objects aimed at supporting developing country civil society use of ICTs, explicitly brands itself as "an open content site" and is championed by the Association of Progressive Communications (APC) and six other development organisations: Bellanet, FAO, IICD, INASP, OneWorld and UNESCO.

Meanwhile, two online educational resources developed by **SchoolNet Africa** -- the African SchoolNet Toolkit and the Technical Service Centre Managers course -- are soon to be Creative Commons-licensed open content. Already 45 SchoolNet workers have been trained using at least of one of these modules, with training conducted as donor funding becomes available. Soon there will also be French-language versions available, also on an open content basis.

Some of the most dynamic use of open content in the educational sphere in Africa is happening in Namibia, where the **SchoolNet Namibia** website is providing open content teaching tools and student support materials, as well as an online open content comic called **'Hai Til'**, meaning "listen up" in the local Namibian Oshiwambo dialects. The comic, licensed under Creative Commons and also distributed in hard-copy in association with *The Namibian* newspaper, aims to promote the ways in which computers and the internet can empower Namibian learners and teachers. The **Made in Namibia** link features Creative Commons-licensed activity worksheets contributed online by teachers around the country, with Creative Commons licences.

In Senegal, the **Examen** project, started in 2001, is a free web resource that helps high school students prepare for examinations and career choices, with a focus on mathematics and science. The site, licensed under Creative Commons, is well-used, as evidenced by the following statistics from the period 4 -10 April 2005: 8,850 page visits (between 750 and 1,539 page visits per day); 963 site visits; and 822 distinct visitors. Examen also has online resources for teachers and school principals, via the **FADCE** initiative. Both Examen and FADCE are spearheaded by the Réseau Africain de Formation à Distance (**RESAFAD**) project, linked to the Senegalese Ministry of Education headquarters in Dakar. RESAFAD has been focusing on using ICT multimedia centres to support face-to-face training, content development and e-learning since 2001. Several educational websites have been developed by teachers through their participation in RESAFAD.

One of the continent's most ambitious online education endeavours is the Nairobi-based African Virtual University (**AVU**), which has a presence in more than 50 Learning Centres in 26 African countries. The AVU uses video and internet platforms to provide interactive distance education, employing both satellite and landline delivery platforms. The AVU's curricula are primarily Western in origin, not at present available on an open access or open content basis, and the AVU's online learning management system is the proprietary WebCT platform. However, 2005 saw the beginning of some significant AVU open content initiatives.

The AVU began collaborating with the MIT **OpenCourseWare (OCW)** project, one of the pioneering US tertiary-level open content initiatives. In June 2005, more than 80 African users (AVU students and staff) piloted OCW materials at the University of Nairobi and the University of Addis Ababa (AVU, 2005b). Also in 2005, the AVU began Collaborating with the **Development Gateway (DG)** Open Educational Resources (OER) site. The AVU is helping the DG locate and aggregate open content resources and producing materials promoting the site, which includes materials from MIT and from Johns Hopkins Bloomberg School of Public Health. Johns Hopkins, like MIT, is a leading online open content proponent in the US using Creative Commons licences. Eventually, the AVU is aiming, as part of its Capacity Enhancement Programme, for African-originated open content resources to be produced by AVU-partner African universities. As the AVU puts it in a recent position paper, the impact of materials development work by African tertiary institutions "will be much larger if the capacity gained ... is put towards development of open content materials to be shared between all members" (AVU, 2005a).

Linked to the open content movement in Africa are efforts to develop African-appropriate online open source learning management systems – so that full-scale courses can be conducted on non-proprietary platforms. One leader in this area is the Knowledge Environment for Web-Based Learning (**KEWL**) system developed in South Africa at the University of the Western Cape (UWC). In development since 1997 and currently used for about 40 courses at UWC - in law, social work and biology – KEWL has been adopted by several other institutions and e-learning projects on the continent, including the University of Ghana Legon and NetTel Africa. UWC is also collaborating with institutions in Tanzania, Kenya, Uganda, Senegal and Ghana on open source learning management systems development through the African Virtual Open Initiatives and Resources (**AVOIR**) consortium. Another open source learning management system, the Open Learning System (**OLS**), has been developed at the University of KwaZulu-Natal (U of KZN) in Durban, South Africa. The OLS went online in 2004, and 230 modules were uploaded in its first eight months, with more than 3,400 unique users in that period. Meanwhile, the Vancouver, Canada-based international organisation, the Commonwealth of Learning (COL) has developed an open source Learning Object Repository (**LoR**) software package for storage, archiving and retrieval of learning materials. The African Virtual University began piloting this package in 2005.

Also in South Africa, the Free High School Science Texts (**FHSST**) project, initiated by graduates of the University of Cape Town, is an online collaboration among materials developers around the world to build free science textbooks for Grades 10-12. The FHSST texts, developed using the Wikibooks online collaborative platform, are offered as open content in terms of the GNU Free Documentation Licence. Also in Cape Town, the Shuttleworth Foundation (TSF) is providing curriculum support for teachers via its **SOCKS** wiki, and the TSF's Go Open Source campaign has partnered with ICDL Foundation Africa to develop the **OpenICDL** curriculum, an International Computer Driver's Licence for users of open source. Both SOCKS and the OpenICDL make use of Creative Commons open content licences. Meanwhile, South Africa's Department of Education has commissioned a broad-based consortium of organizations – led by Mindset Network and the South African Institute for Distance Education to develop the open content **Thutong** Education Portal, which was launched in January 2005 and licences its content with Creative Commons "in order to promote widespread sharing and dissemination of the educational content" (Thutong) website.

Another set of important players in African open content enterprises are the consultancies specialising in development of open content learning objects and the relevant content management systems. A number of consultancies have emerged with this kind of expertise in South Africa: such as those involved in the Thutong project consortium of organisations and OpenLab International, a central player in the open content work of SchoolNet Namibia.

The projects are open; but are they sustainable?

A number of sustainability variables were outlined earlier, and it is against these that the existing African open content initiatives may be evaluated.

Partnerships

At the level of partnerships, the initiatives appear healthy. The itrainOnline project, with six central strategic partners and a range of content development partners, is particularly noteworthy in this respect. And SchoolNet Namibia's link with the The Namibian newspaper is a good example of a potentially valuable new media/ old media partnership. SchoolNet Africa has also used their relationship with itrainOnline to successfully develop additional resources, such as the toolkit. Partnerships such as these can both maximise, and ensure ongoing development of products and resources.

Content Development

Success in terms of the content development variable seems more mixed. If the ideal is to have the users (teachers and learners) participating in content development, then it would seem that SchoolNet Namibia and RESAFAD can claim the most progress in these areas. When one goes onto the SchoolNet Namibia (Made in Namibia) pages – http://www.schoolnet.na/resources/wsnamibia.htm – one can see the postings of educators, a sign that organic open content communities are starting to emerge on the continent.

Dissemination

Connectivity is cited as an ongoing barrier to dissemination. As SchoolNet Namibia Executive Director, Joris Komen wrote in reply to an e-mail questionnaire, "BANDWIDTH, BANDWIDTH, BANDWIDTH" is a central dissemination challenge (Komen, 2006). The AVU found in its OCW pilot that "low computer literacy" (i.e., lack of familiarity with personal computer usage) continues to be a barrier to online education of any sort, let alone open content engagement (AVU, 2005b). The key here would be to look at alternative distribution methods which complement the electronic product, and to ensure that actors with limited access to technology will not be excluded.

Users

In the case of SchoolNet Namibia and RESAFAD, some of the users are also contributors, and this represents the ideal situation. Where the users are not contributors, it becomes more difficult to gauge the power of the open content model, beyond reciting web statistics on user numbers and getting users to fill out questionnaires on the experiences with the material. However, this being said, it should be noted that if the needs of the user are successfully met, the statistics should reflect heightened activity on the website, portal or wiki, which will attract additional stakeholders, investors and contributors and may possibly result in new mechanisms being found to ensure financial sustainability of the project.

Innovation & Entrepreneurship

Two examples of an innovative approach are SchoolNet Namibia's Hai Tail comics and the FHSST project's use of the international Wikibooks platform for development of locally-based textbooks. South Africa is witnessing the emergence of an entrepreneurial group of consultancies who would seem to see a clear "business model" for themselves in open content project work. The Thutong project consortium of organisations and OpenLab International are all sustaining their businesses at least in part through open content work.

Funding

All of the projects mentioned above appear at present to have durable funding relationships with key funders including the Commonwealth of Learning (COL), UNESCO, OSISA, OSIWA, SIDA, CIDA, AUSAID, the African Development Bank, the Hewlett Foundation, the Shuttleworth Foundation, the South African Department of Education, and the Senegalese Ministry of Education.

A composite profile of South African open educational projects

Many disciplines are required in the open content publishing and dissemination process: content producers, content managers, designers, programmers and web developers. One of the most lucrative disciplines in the process at present is that of the content producer. Why? Because there is limited open content available which is relevant and specific to the South African (and African) educational context. A common objective among open content publishers is to create a pool of educational content that users (such as educators and learners) can use and add to.

Often, the open content publishing and distributing agency will not produce the content itself. It will source the content from other organisations or commission individuals or companies to create the content for open access. In some cases, copyright in the work is ceded to the organisation commissioning or hosting the material, in other cases, joint copyright is held by the author and organisation. In this case, the author will be asked to choose their licensing conditions within a framework such as Creative Commons or will sign up to the project website's default licence.

The content producer will sometimes be paid for her contribution. However, content producers will invariably find that many open content publishing organisations operate within tight budget constraints. In these cases, the content producer should be aware of any secondary benefits that might come about through the relationship with the open content publisher. For example, a content producer's material might be exposed to a key, decision-making target audience as a direct result of the relationship with the content publisher. In such an instance, the content producer may be prepared to sell her material at a reduced fee in order to benefit from the exposure that her material might not otherwise have received.

Examples of open content projects

A cross-section of the open content projects that are being run is illustrated below briefly outlining the focus and objectives of each project.

The Mindset Network is a non-profit organisation that provides education on a large scale to schools, health institutions and livelihood projects, by focusing on:

- providing content in the form of multimedia, video and print;
- disseminating and delivering content through a dedicated satellite broadcast network; and
- managing the entire publishing process including content sourcing, content development, content packaging and dissemination.

> **"Mindset Network is dedicated to sustainable poverty alleviation through the delivery of quality educational materials using innovative technology platforms."**
>
> Mindset Network website, 2006

Thutong is the South Africa National Department of Education's portal which hosts open-licensed, educational content and resources for teachers, parents, learners and education administrators. The portal provides:

- content in the form of downloadable lesson plans and some textbooks;
- content management and storage solutions for easy access to National-curriculum aligned resources; and
- additional links to external international and national educational tools and materials.

"The Thutong portal – delivering information, curriculum and support materials to the South African schooling community!"

Thutong website, 2006

The Shuttleworth Foundation's wiki project provides educators and learners access to open educational content. The project provides:

- content in the form of specific, downloadable methodologies, such as lesson plans;
- easy-to-use content authoring solutions to enable non-technical authors to contribute material directly to the online repository; and
- dissemination of content via the internet, but also through CDs and hard-copy printouts should access to the internet be problematic.

"By sharing your knowledge and insights online you will be advancing the quality of educational practice in South Africa."

SOCKS wiki, 2006

Educational consultancies as mentioned earlier, are an important player in the sector. These consultancies have found a clear business model using open content. Consultances such as those which form part of the Thutong project consortium of organisations could be viewed as 'consultative projects' within the open content project. These companies provide resources to champions and managers of open content projects in the form of:

- market research and conceptualisation of the most suitable technological tools and resources
- to assist with open access and dissemination of the open content;
- implementation of the web-based project, including content acquisition and management; and
- administration and management of the web-based project.

"Develop your own technical expertise and develop relationships involved in content development."

Neil Butcher, Neil Butcher & Associates

OpenLab International is a privately-owned consultancy that provides technology solutions to the educational sector, with value-added products that sit on top of the solution. The company provides:

- linux-based operating system, OpenLab 4 GNU/Linux, with specialist focus on thin-client computing;
- educational software and content solutions, including EduKar (90 different applications, tools and contents) and OpenBook;
- plug-in ability of software and content from non-core third-party vendors.

"It's nice to have alliances and partnerships so that their products can sit on top of our technology, but it's not at the core of our product range."

Denis Brandjes, OpenLab International

SAHistory.org.za is a non-profit organisation that provides a non-sectarian view of the history of South Africa, with the objective of creating a space where communities and people in South Africa can contribute their own histories to a public forum. The website offers:

- SA history classroom paralleled with the South African Revised National Curriculum Statement;
- Photographic and textual histories of people and places in South Africa; and
- Resources such as out-of-print publications and academic dissertations free for download.

"Our focus has been to rewrite the history of SA, and to do that one wants to create a multi-dimensional platform, or a forum, of information that allows people to look at history critically."

Omar Badsha, SA History Online

Open content licence policies

A number of open content publishers and disseminators originally began their projects with an informal website policy wherein they acknowledged that the content was free to be used in a variety of ways. However, a number of publishers have since realised that a sound, legally-enforceable licence should be created for a variety of reasons:

- Publishers and creators want to be secure in their use of a legally-enforceable licence that permits some uses while preventing others.

"For us it's about: how do we protect ourselves a little bit more, because our content is important. The bedrock of Mindset is: good quality to the end user at a limited cost."

Dylan Busa, Mindset Network

- in the online environment where the user is often unsure of what rights she or he has with regards to use and re-use of the content, it is important to formally communicate to the user what she or he is permitted to do, thus stimulating reuse and re-publishing under the terms of the licence.

"... increasingly value lies not in possessing information, but rather in developing the skills and capacity to manipulate it effectively for new applications ..."

Effective Information Management Education: The Knowledge Matrix™ Described, Neil Butcher, Neil Butcher & Associates

- unless an initial agreement has been reached to licence the content with an open content licence, the commissioned content producer automatically holds copyright to their work. This could compromise the openness of the content at a later stage.

"Originally we never licensed the content developed as part of our project. This presented a problem when we went back to the content creators to collect the content for open distribution, as we found that they owned most of this content and wouldn't allow us to licence it under an open licence, even though we initially paid for the content creation."

Karien Bezuidenhout, The Shuttleworth Foundation

- to ensure that the content remains open even after the project itself has been concluded, it is necessary to licence it with an open-content licence which will ensure that the rights awarded to users will remain in place (as per traditional copyright, for a period of 50 years).

"Ultimately you don't need us (the Shuttleworth Foundation) to ensure longevity of the project because it is licensed, open content on a wiki. As long as someone hosts it somewhere; as long as people keep adding to the content it will remain ongoing."

Karien Bezuidenhout, The Shuttleworth Foundation

The key factors for successful open content initiatives

Opening up content does not automatically ensure success of the project in terms of meeting its strategic objectives. There are a number of key factors that will be applicable, to some degree, to the project's overall success. When setting up an open content project each of these factors should be interrogated for relevancy. Below are some of the key factors for consideration:

- relevancy:
Is there a market for the content?

- sustainability (including financial):
Will the project be a funded concern, or privately-owned and self-financed?
How will you ensure that there is sustainability (and hence, community adoption) of the project?

- access to technology:
How can you overcome lack of access to technology?

- technology usage:
Is tentative use of technology by educators (in other words, resistance of users in making full use of the material on a practical level) affecting the efficacy of your project?

Relevancy

Concern: is your project relevant to both the end user and funder (if funded)?
Solution: continually assess stakeholder engagement with your project.

- Currently it is an unarguable fact that most open-content educational projects are funded by donor agencies. In many cases, to ensure ongoing funding, the donor agency shall require evidence that the project is relevant to the educational community. And in some cases, when applying for funding, the project should be able to demonstrate criteria which will ensure sustainability of the project within the community following the initial roll out.

An example of how a project could become sustainable through its relevancy is the Shuttleworth Foundation's wiki project, SOCKS: the wiki, as a technological tool, would be relatively cheap to manage and host, and it is feasible for this task to be easily taken over by a member of the community. Therefore, the key factor in ensuring sustainability would be that the content is relevant to the community to the extent that the wiki becomes an important community resource, where community members are both using and contributing material to the wiki. In this instance, it would be up to the community to ensure that the wiki remained contemporary to ensure ongoing benefit for learners and educators.

- The content should also be relevant to the funder's objectives. Most projects aspire to obtaining Department of Education buy-in (thus becoming a line item on the departmental budget) which would ensure the future sustainability of the project. The reason why many projects aspire to obtaining the governmental stamp of approval is not necessarily financially driven; it is rather more to ensure that a top-down acceptance of the project is effected which will make certain that the community remains committed to the open content project by contributing to it and making ongoing use of the material.

"... engage governing bodies to get buy in: here's a delivery method, get a level of involvement so that it can be driven down into the rest of the school."

Dylan Busa, Mindset Network

- To ensure that there is relevancy of the project to the end user, it is necessary to continually monitor the progress of the project. You may find that your users' needs might slightly alter the focus of your project going forward. Continually analyse usage patterns (both online and offline as much as possible), probing the community about practical problems encountered in terms of both access and implementation, and budgeting for the ongoing development of technological solutions to problems within each phase of the project. In real terms this will mean having to build research and development costs into the initial budget.

"We've done some pilot projects amongst teachers, but it (usage) does need a systematic study. So far we have discovered that when there is a school holiday, we see the numbers drop. We also see that especially between 2 and 6pm, traffic increases quite substantially."

Omar Badsha, SA History Online

- To ensure that the project's goals remain relevant to the funder, it will be necessary to understand the objectives of the funding agency, and to consistently monitor their internal and external foci. Furthermore, keeping abreast of developments and trends within the funding community, and remaining in personal contact with the funder will result in additional opportunities being identified.

- As a content producer, knowledge of the national curriculum is of primary importance to ensure that the material is relevant to classroom practice, thus it is necessary to make sure that content is kept up-to-date and aligned to the revised national curriculum statement.

Sustainability

Concern:	does your project have the potential to create a positive societal impact that will be felt in the future? Is lack of funding one of your concerns?
Solution:	find the 'golden egg' ie: find ways of ensuring that project will remain viable, both in content and financial terms.

With the exception of one or two projects, most open-content projects do not aim to make a profit and are largely concerned with broadening access to education to under-serviced groups in society. As mentioned earlier it is necessary for funding of the project to be obtained via external sources. For example, Mindset Network has received a funding commitment for up to 5 years from a variety of organisations, including those that provide their products or services in lieu of funding. The organisation is currently investigating ways of ensuring their sustainability after that five-year period.

Ideally, the funding cycle should be supported by other means to ensure sustainability. All projects which are predominantly donor funded are concerned with finding the essence of the project that will ensure financial sustainability into the future. Finding the 'golden egg' will limit the primary risks attached to funding. One of the risks associated with sustainability is that funders may alter their focus, which could result in the project no longer fitting the funder's objectives.

But not only is sustainability about financial issues. The project should be beneficial and even replicable (at least in part) by and within the educational community, to ensure empowerment of people, improved education delivery and upliftment of the community.

There are many different forms of this 'golden egg', and one of the most popular is that of providing training around open content delivery and methodologies for a fee. A few other examples that are being investigated by projects are as follows:

- Finding the 'value add'
  Players should investigate what strengths they bring to the project and attempt to maximise these. For example, Mindset Network has developed a skill that bridges the gap between content creators and technical developers by understanding the specifics within both disciplines. This enables the organisation to seamlessly integrate both content and technology into successful multimedia content products. Mindset Network has developed, through the Mindset Network process, a thorough understanding of the South African national school curriculum outcomes and required deliverables, but also has the knowledge of how this should be translated into a multimedia format.

In other words, Mindset Network could forseeably, once the initial project has come to an end, derive revenue by providing a specialised co-ordination skill to 'clients' who have taken on board the original Mindset Network open-content model, but would need assistance with the adaptation of their own content into multimedia formats. Mindset Network provides the following scenario:

"The Nigerian government is very interested in doing a similar project in their country. It would be good to partner with them by providing them with content and inviting them to change the content however they liked, but ensuring that they consulted closely with us in terms of development."

Dylan Busa, Mindset Network

- **Nurture your partnerships: the key to success**

  Some of the companies involved in the Thutong project consortium choose to work relatively independently, consulting on projects and providing the specific skills that are required at that time. Within each project that these associates become involved, a certain amount of funding is set aside for ongoing content development. One such organisation, which is headed by Neil Butcher, operates via a remote-office set-up which reduces overhead costs.

  These organisations are successful in two instances: firstly, they invest time in developing relationships with key governmental stakeholders and major players in the education sector with the aim (and result) of consolidating these relationships into projects. The organisations rate a large part of their success to the network that they have developed within the educational sector.

  Secondly, they have fine-tuned their knowledge of the needs and trends of the educational sector and have honed their ability to translate these needs into strategic technological tools. Added to this is a firm commitment to the belief that educational content must be aggregated in the public domain.

"Look at a departmental perspective. Develop your own technical expertise and develop relationships ..."

Neil Butcher, Neil Butcher & Associates

Another approach would be one similar to that taken by Open Lab International, where the company has developed close working relationships with partners and continues to provide very specifically to those partner's needs. This ensures longevity of the relationship, which in turn allows for a certain amount of future financial sustainability.

"For example, our history with Schoolnet Namibia goes back for a number of years. We work with them in terms of the integration of technology with the needs of teachers and learners in the classroom. Thus we work in partnership to assist SchoolNet in meeting their objectives."

Denis Brandjes, Open Lab Internationa

Access to technology

Concern:	does limited infrastructures in South Africa and Africa create a negative impact on your project?
Solution:	recognise the problem upfront and allow for complementary distribution channels.

Projects that provide open access and open content need to be aware that providing these resources does not necessarily mean that communities can, practically, access them. On a continent such as Africa where only 1.7% of the inhabitants are online, simply providing these tools is not enough. Projects need to make sure that there are other means of dissemination of resources and tools. Again this feeds into the sustainability aspect.

An example is the Shuttleworth Foundation's open content wiki. Contributing educational material to the wiki is encouraged. The organisation has not, however, overlooked the fact that many people in South Africa are not able to use these materials in their current form. The organisation endeavours to provide content via CDs, DVDs and printed material to communities that don't have internet access.

SA History Online acknowledged early on whilst endeavouring to strengthen the teaching of history in South Africa, that the online arena was simply not enough to get their message across, and that there was a necessity for other materials and dissemination methods. Currently the website is working on these additional tools, after having already begun work with printed materials such as booklets.

Privately-owned OpenLab International has always ensured that their products are disseminated independently of technological methods, due to the fact that their target market is often found in outlying areas that have no access to the internet. However, their physical-delivery strategy brought its own set of challenges. Historically the company managed their own dissemination. But this often took time away from product development and proved to be an extremely resource-intensive process. Recently, the company has changed their strategy and now uses distribution partners, which enables them to refocus their efforts on producing high-quality educational technology solutions.

> **"The methodologies of distribution are adapted according to the market which a particular distributor is working in. They understand their particular market and will most often add our offering to a group of other offerings. We can ensure that our focus is on providing high-quality solutions which we provide to partners, who in turn distribute in them far and wide."**
>
> Denis Brandjes, OpenLab International

Use of technology

Concern:	is tentative use of technology by educators restricting the efficacy of your project?
Solution:	find ways of empowering educators, and turn this into a potential area for growth.

Not only is lack of technological access a potential challenge; amongst those who do have access there is often a distinct reluctance in teaching with technology. It is not easy for teachers to 'relearn' and teach in a different way; and for projects such as the Mindset Network, packaging and delivery of content requires just this of the teaching community. Teachers will have to change their mode of teaching. According to Dylan Busa from Mindset Network, it will be possible to assist teachers with adapting their teaching methods, but it will only be possible by investing heavily in training teachers on how to use technology in its most basic form, and then how to teach with technology and use it as a resource.

> **"An additional layer for the training initiative would be to engage governing bodies to get buy in ... here's a delivery method, get a level of involvement so that it can be driven down into the rest of the school. Not only show teachers how to use the technology but get down to really practical levels. South African teachers don't use resources; not even textbooks are used properly."**
>
> Dylan Busa, Mindset Network

One of SA History Online's primary objectives is to provide a 'new' non-sectarian history which can be both shared and critically analysed in South African (and, ultimately, African) classrooms. However, in order to encourage take-up of their content, they have found it necessary to hold workshops with SA school circuit inspectors and subject inspectors. In doing so the organisation has been quite overwhelmed by the enormous demand for such training, which extends to both the need to understand digital technology and content. Currently the organisation is having to find ways to facilitate this much-needed training as this is not one of their core competencies.

> **"Unfortunately we can't train every teacher. We are now moving towards partnering with institutions such as the Wits University History Department which runs history workshops with schools ... these institutions have the correct competency which is not our immediate focus."**
>
> Omar Badsha, SA History Online

Schoolnet Namibia, in conjunction with Open Lab international, encouraged Namibian educator participation in content creation by holding a competition which was open to all Namibian teachers to contribute worksheets and lesson plans. The prizewinner was awarded free airfare and attendance to the Intel Innovations in Education Conference at Hilton College in September 2005. Response was limited, with only about 10 suitable contributions. The best contributions have been added to Open Lab International's EduKar content offering. The low number of entries was disappointing, although those who did enter showed a relatively high level of competency, with some contributions including flash technology. The point is that probably only those teachers who were confident in their technological ability entered the competition, thus indicating that the majority of teachers still approach technology with caution.

Stakeholder politics

Concern:	is your choice of methodology or tools preventing you from making partnerships? Or, do you find that some seemingly good partnerships simply can't get started?
Solution:	find common ground and involve yourself in projects that cultivate these areas.

The common goal amongst the major open content projects is that all the projects contribute towards the common good: to provide quality education for all South African learners. However, among the stakeholders that have initiated these projects, different technological and educational tools are used: open source, open content, turnkey technological solutions, and proprietary content. There is a risk that within these frameworks competing parties can become dogmatic about their methodologies at the risk of alienating themselves from other players, and hence, other opportunities in the market.

Another challenge is that there is a limited number of content producers and even fewer major content repositories. When content producers find that they are 'onto a good thing' they invariably lock themselves into relationships with one main stakeholder. This results in the community being closed off into 'pockets' so that there is little cross-over amongst the major projects or content repositories. Leading from this is a further issue: although many projects claim that there is a dearth of high quality, curriculum-aligned educational content, it is unclear why major projects are not currently sharing content, or at least, providing prominent links on one another's websites and portals to overcome this obstacle. A closed environment such as this will not foster sharing and growth and will be counter-productive to the overall objectives of open educational projects.

Yet a further challenge is that some projects and organisations have a valuable project or initiative that will almost certainly benefit the community, and yet, somehow, they are not able to find the right 'fit' when it comes to funding, or partnering with other initiatives.

SA History Online is beset with the latter issue. There are a number of innovative, community-enhancing projects that the organisation has been attempting to initiate over the last few months. Yet, the organisation finds that both partnerships and funding appear to fall through all too often. Omar Badsha, SA History Online founder, cites two main reasons for this. Firstly, he recognises that the organisation needs a dedicated person who is involved in fund-raising and relationship management with partners. Secondly, he believes that a common problem within government departments is that, despite their commitment, there is no long-term, single ICT strategy, and often projects are embarked upon in an ad hoc manner. Therefore, when it comes to applying for further funding to continue a project, many times that funding is not available at the right moment. It becomes difficult to plan or maintain projects in this type of scenario.

Participation

Concern:	how can you get the community to contribute, when often there is no obvious value or incentive for content contributors?
Solution:	develop your project around creators' incentives.

Educators need to adopt the mindset of becoming contributors to the open-content projects and not simply users of the existing material. This is most important within educational portals and wikis such as Thutong portal and the Shuttleworth Foundation wiki. This can be challenging as content is viewed by many as a commodity which is perceived by many in a proprietary manner, with power being equated to one's intellectual capital.

> **"Educators still see content as a commodity. They use it as a commodity to sell, as publishing houses do, or to gain status and power. For example, an educator may be perceived as the best grade 3 educator in the school because of the excellent materials she develops. These materials are a valuable trading commodity for her to use to elevate her status among educators in her grade, her department and her school. But she believes that she will be relinquishing the opportunity to gain and maintain that status if she is to release the materials online as open content. She may feel that she will be irrelevant to the educators three provinces away who now use her materials without even knowing her name and who don't need her direct permission to do so."**
>
> Karien Bezuidenhout, The Shuttleworth Foundation

Karien Bezuidenhout from The Shuttleworth Foundation, believes that to shift this outlook, the wiki and other repositories for open content, should ideally include an area where the educator's, or content producer's skill or work could be showcased. Furthermore, thought should be given to how an educator is valued: what recognition can educators receive for their contribution to the education system? Currently the only way educators are distinguished is through the additional work that they do (in other words, "going the extra mile") and for many educators that is found in their content creation.

SA History Online hopes to encourage involvement initially through the learners rather than educators, possibly because there are less of the issues, as highlighted by Bezuidenhout above, surrounding contributions. After obtaining learner 'buy-in', it is hoped that this will be extended to entire communities. One way of doing this was to hold what is hoped to be the first of many annual schools' competitions in conjunction with the South African National Education Department, called the "Chief Albert Luthuli Young Historians Prize". The idea was to get young people to write about local heroes and heroines and then for the material to be posted onto the website.

> **"The idea is to incentivise young people to use the site, and to own the site, so that they are the creators and can see their work out there. The idea of our site becoming an interactive vehicle is one of the strategies we aim to employ. Following learner involvement, we would like to extend this to communities to get them to write their own histories."**
>
> Omar Badsha, SA History Online

Open content

Do stakeholders really understand what the term 'open content' means?

Many stakeholders that become involved in open content educational projects often do not fully comprehend what it means to licence work with an open content licence. When it comes to publishing their material, many contributors experience last-minute concerns that users can, in most circumstances, freely copy their material. A greater understanding of what open content, and open content licensing means, needs to be engendered amongst content producers.

> **"The ideal situation would be to get to the stage where Wikipeida is, in terms of being that open. So, we would like to create our own African (history) wikipedia. Although still in its infancy, we have talked to a number of people to expand the site to bring in other African countries and researchers to exchange info and linkages."**
>
> Omar Badsha, SA History Online

> **"One of the key factors that drove us down our road of development was the educational upliftment of Africans. If we were only interested in making money we would have gone down a Microsoft road. But we chose to go down this track because we saw the benefit for society in an alternate technology ..."**
>
> Denis Brandjes, Open Lab International

The future is here

The new, digital landscape

Undoubtedly the advent of technology has dramatically changed the landscape for educational content production in South Africa. As can be seen from the educational projects that are currently being developed in Africa, technology has opened up what was once a niche, closed environment. In place of traditional learning mechanisms such as textbooks, there are now internet portals designed specifically to store and make searchable educational content; there are electronic 'books' that can be downloaded free from the internet; and there are television channels that broadcast content to learners across Africa.

This new, digital landscape brings with it a wealth of opportunities for the educational sector, both for the creators of content and the users of content. For entrepreneurs who wish to play an active role in the investment of South Africa's youth and economy, the key to sustainability in open content models may not be as easily apparent as those found in the 'developed world'. However, the current activity within the educational sector by both government and the private sector makes the environment ripe for entrepreneurs to find opportunities, and to develop these into workable open content solutions using their expertise.

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- DG OER – Development Gateway Open Educational Resources: http://topics.developmentgateway.org/openeducation
- Examen: http://www.examen.sn
- FADCE - Formation à Distance des Chefs d'Etablissement du Sénégal: http://fadce.education.sn
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- GNU Free Documentation Licence: http://www.gnu.org/licenses/fdl.html
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