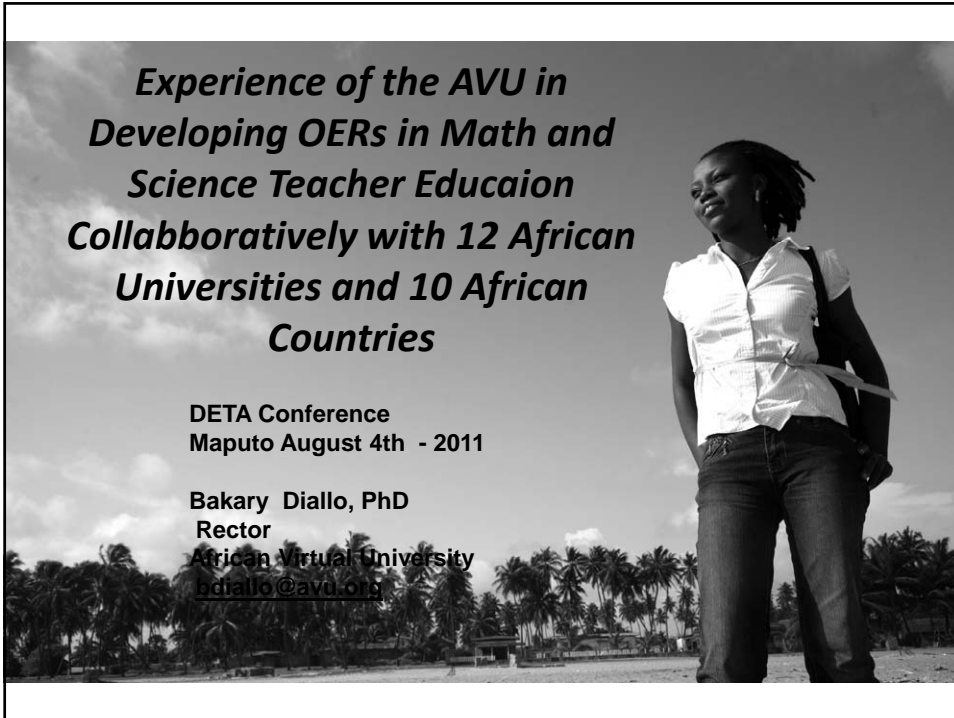


***Experience of the AVU in
Developing OERs in Math and
Science Teacher Educaion
Collaboratively with 12 African
Universities and 10 African
Countries***

DETA Conference
Maputo August 4th - 2011

Bakary Diallo, PhD
Rector
African Virtual University
bdiallo@avu.org



OUTLINE

- **Introduction to AVU**
- **Collaborative Approach to Producing and using Math and Science content**
- **Online Interactive Portal OER@AVU**
<http://oer.avu.org>
- **Looking into the future**
- **Conclusion**

Introduction to AVU

- A Pan African Intergovernmental Organization
- Established by charter with the mandate of significantly increasing access to quality higher education and training through the innovative use of information communication technologies
- **Adopted ODeL in 2003**
- Established in 1997 as a project
- Acquired largest eLearning network in Africa - 53 partners in 27 countries
- Trained + 43, 000
- Working beyond technological, language and cultural barriers in Francophone, Anglophone and Lusophone Africa
- Find more <http://www.avu.org/About-AVU/introduction.html>

Introduction to AVU

AVU Video

www.youtube.com/watch?v=Gt-CLya0jzY

Follow AVU

Twitter

@avu_org

Youtube

www.youtube.com/user/avuorg

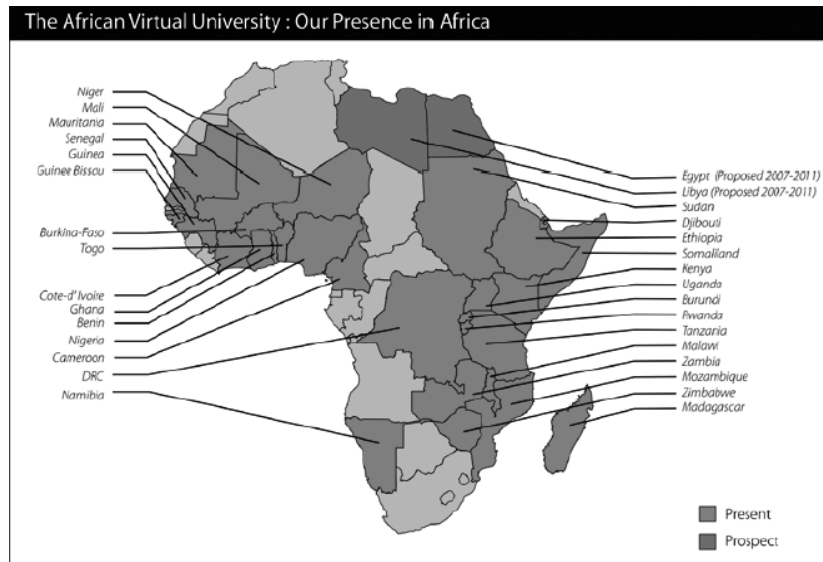
Facebook

www.facebook.com/pages/African-Virtual-University-AVU/296137566560

RSS Feed

http://www.avu.org/component/option.com_ninjarsssindicator/feed_id.1/format.raw/

The AVU: Presence in Africa



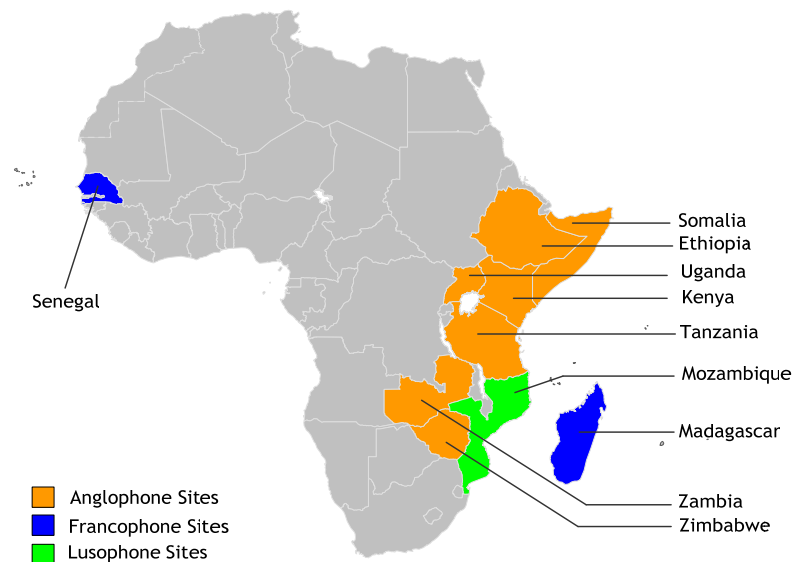
AVU Teacher Education Project

- Started in 2005 as one component of a Multinational Project involving 10 countries
- Multinational Project:
- Funding: African Development Bank, AVU and partly United Nations Development Program (Somalia)
- Project Components
 - Establishment of Open Distance eLearning Centers with internet connectivity
 - AVU capacity enhancement (ACEP)
 - An ICT integrated Teacher Education Program in Math and Sciences
 - Gender Mainstreaming

Participating Institutions

Country	Institution
Kenya	University of Nairobi
Uganda	Kyambogo University
Tanzania	Open University of Tanzania
Ethiopia	Jimma University
Mozambique	Universidade Pedagogica
Zambia	University of Zambia
Zimbabwe	University of Zimbabwe
Somalia	Amoud University, EAU, UoH
Madagascar	Université d'Antananarivo
Senegal	Université Cheikh Anta Diop (UCAD)

AVU Teacher Education Project - Countries



The Computers and Other Equipment UoN



The Open Distance & eLearning Centres



Universidade Pedagogica, Mozambique



Developing and Using OERs

- **AVU An ICT-integrated Teacher Education program for Math and Sciences**
- **Objectives:**
 - Improve the quality of teaching and learning in schools through use of ICTs
 - Increase the number of Mathematics, Science, and ICT basic skills teachers
 - Develop and promote research in teacher education to inform future curriculum reform
 - Establish and strengthen relevant partnerships with other teacher education initiatives in Africa

Developing and Using OERs

Methodology

- Formation of the Teacher Education Advisory Committee
- Policy and Curriculum Conceptualization for Teacher Education programs
- Curriculum Design
- Content Development
- Design and Development of a Quality Assurance Framework
- Establishment of Program Teams in the Participating Institutions
- **Establishment of Teacher Education Virtual Consortium**
- A Pilot Study of the Teacher Education Programs
- **Launching the Math and Science TE Programs**
- **Publishing resources on OER@AVU**

Developing and Using OERs

Achievements include

- **Development of policies**
- **Conceptualization of the curriculum**
- **Quality Assurance Framework Document**
- **219 modules of Math, Physics, Chemistry, Biology, Teacher Education foundation, ICT Basic Skills and ICT integration in Math and Sciences**
- **Modules structured as 4 Bed (Math, Phy, Che, Bio) and Diploma and Certificate programs**
- **Using Open resources to develop the content**
- **Released content as OER under the Creative Commons open licence**

Developing and Using OERs

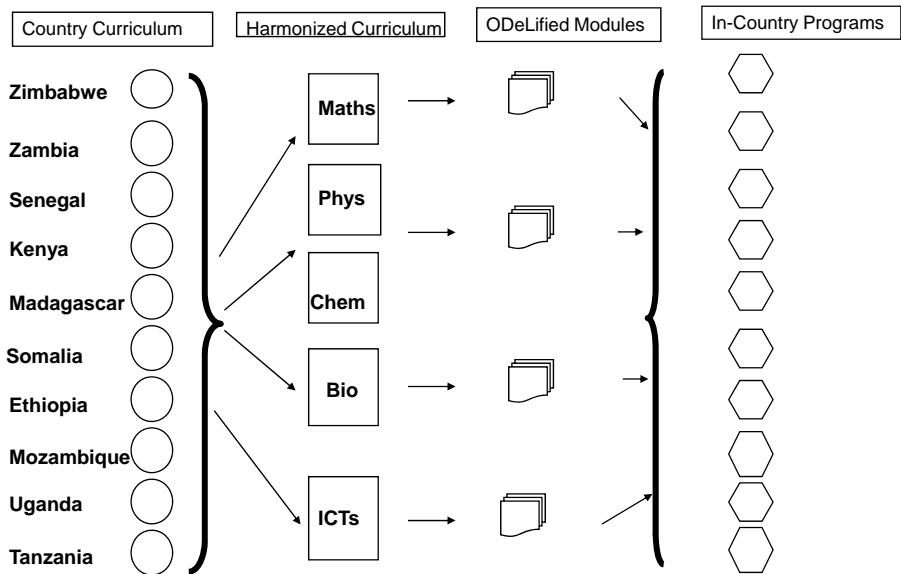
Achievements include (Continued...)

- **Program coordination teams in each participating university**
- **Training of more than 459 academics**
- **Using Moodle as Online LMS Platform**
- **Establishment of a community of practice TE**
- **Testing program in 3 countries (Kenya, Somalia, Senegal)**
- **Launching the program in 10 countries**
- **Launching 2 AVU Certificate programs**
- **As of Jan 2011, some 4000 students enrolled in degree, certificate and professional development programs**

AVU Certificates in ICT in Education

- **Joint certificate programs**
 - ICT basic skills
 - ICT integration on Education
- **Participating institutions**
 - University of Nairobi, Kenya
 - Open U. of Tanzania
 - Kyambogo University, Uganda
 - U. Zambia
 - University Cheikh Anta Diop Senegal
 - Putland State University , Somalia

Development Process: Negotiation or Dialogue?



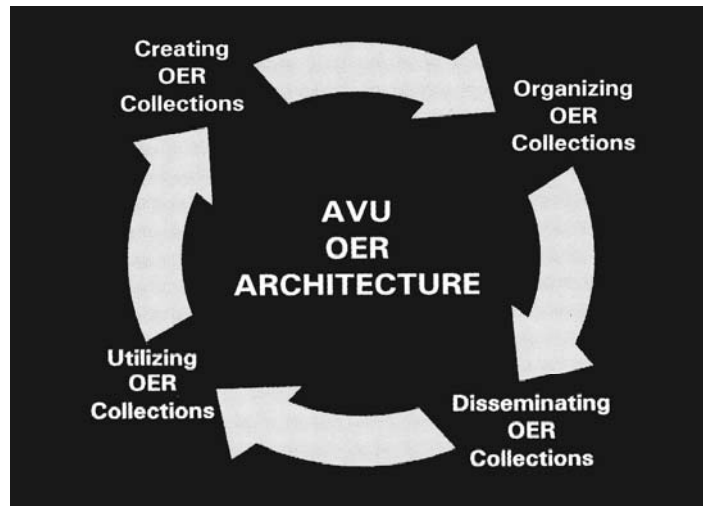
Materials Development Process

Materials Development Process

- Most complex activity of the Teacher Education program
- The major steps in the process were:
 - The training of the authors to write for ODeL
 - Use of a standard template for all the modules
 - Drafting of the modules
 - Involvement of consultants to support authors
 - Peer review of the modules
 - Participation of instructional designers, editors and graphic designers
 - Involvement of a Materials Development Coordinator to oversee and coordinate the entire process
 - Involvement of an academic advisor



AVU Conceptual Framework/Architecture



OER@AVU



- **Flexible format**
- **Print**
- **CD/DVD/USB Keys**
- **Online**

MyAVU Virtual Class www.avu.org/virtualclass

The screenshot shows a Mozilla Firefox browser window displaying the MyAVU Virtual Classroom website. The address bar shows the URL <https://www.avu.org/virtualclass/>. The page has a header with the title "MyAVU Virtual Class" and the URL. Below the header is a navigation bar with links for "Most Visited", "Getting Started", and "Latest Headlines". The main content area features a large banner with the text "MyAVU Virtual Classroom" and a welcome message: "Welcome ediallo. You are an authorised AVU SMS sender. Click on the button below to proceed." Below this is a "Go to AVU SMS Portal" button. The page is divided into three columns: "Welcome to MyAVU", "MyAVU Calendar", and "Communication". The "MyAVU Calendar" column shows a calendar for August 2011. The "Communication" column has links for "Messages", "Messages", "Phone Support", "Education", and "Equity". The browser's status bar at the bottom shows the time as 8:41 AM on 04/08/2011.

OER@AVU <http://oer@avu.org>

The screenshot shows a Mozilla Firefox browser window displaying the OER@AVU website. The address bar shows the URL <http://oer.avu.org/>. The page has a header with the title "OER@AVU" and the URL. Below the header is a navigation bar with links for "Home", "Resources", "Partners", "Supported by", "News", "About", "Credits", and "Contact". The main content area features a large banner with the text "OER@AVU" and "OPEN EDUCATIONAL RESOURCES". Below this is a search bar and a navigation bar. The page is divided into three columns: "Resources", "News", and "Donate". The "Resources" column has links for "English", "Français", and "Português". The "News" column has a link for "OER@AVU Nominated for the OCV People's Choice Award as 'Best Emerging Initiative'". The "Donate" column has a "Donate" button and a "Browse" section with links for "Communities & Collections", "By Issue Date", and "Authors". The browser's status bar at the bottom shows the time as 8:20 AM on 04/08/2011.

Scribd www.scribd.com/AfricanVirtualUni



The African Virtual University (AfricanVirtualUni) on Scribd | Scribd - Mozilla Firefox

http://www.scribd.com/AfricanVirtualUni

Most Visited Getting Started Latest Headlines

Convert

Login Successfully

Welcome to the African Virtual Uni...

The African Virtual University (A... x

https://mc-s7.pou...diallo%40avu.org x

English
Created by: The African Virtual University — English Modules
Documents: 74 Created: 06/09/2011

Documents:

1. Introduction to Guidance and Counselling From: The African Virtual University
2. Curriculum Studies From: The African Virtual University
3. Special Needs Education From: The African Virtual University
4. Developmental Psychology From: The African Virtual University
5. Educational Research From: The African Virtual University

See all

The African Virtual University created a collection

Separação, Técnicas, Electroanalítica e Espectroquímica
Uploaded by: The African Virtual University — Este módulo consiste na interrelação de três áreas: separação e técnicas cromatográficas, técnicas electroanalíticas ...
Reads: 88 Uploaded: 06/09/2011

A guide to buying property directly from the developer in South Africa
www.property24.com/za/property24
Africa's Premier Hunters
Big Game Safaris- Zambia, Tanzania Botswana, Zimbabwe, SA & Namibia
www.ausa/afri.com
Middle-East Tenders
Register To view 20 Lakhs Tenders For Tenders Info call:9824051600
www.Middleeast.TendersInfo.com

AdChoices

Stats

Reading	Publishing	
Total Reads	Uploads	Followers
145,087	212	57

Shelf

Uploads	Readcasts	Collections
143 p	60 p	119 p

Done

8:29 AM
04/08/2011

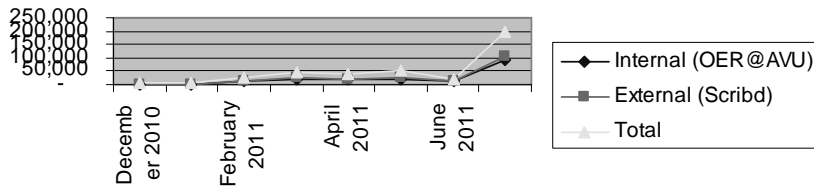
OER@AVU Portal



- **Total Module viewed: 250,000 (July 2011)**
- **Total Countries and Territories worldwide: 141**
- **Total African countries: 42 out of 54**
- **OERs developed originally with 10 African countries**



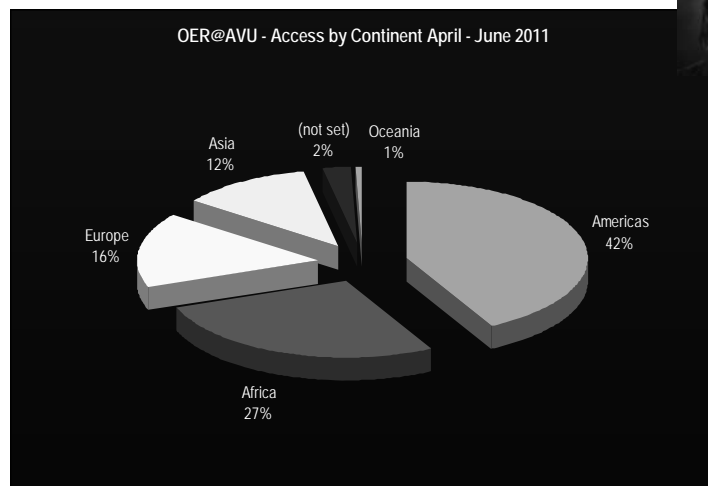
AVU OERs Views Worldwide Dec 10-June 2011



Statistics AVU OERs



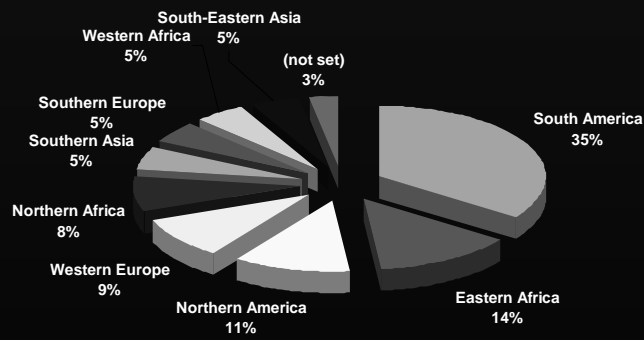
OER@AVU - Access by Continent April - June 2011



Statistics AVU OERs



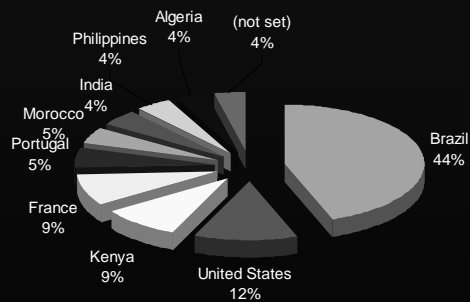
OER @AVU - 10 Top regions -April- June 2011



Statistics AVU OERs

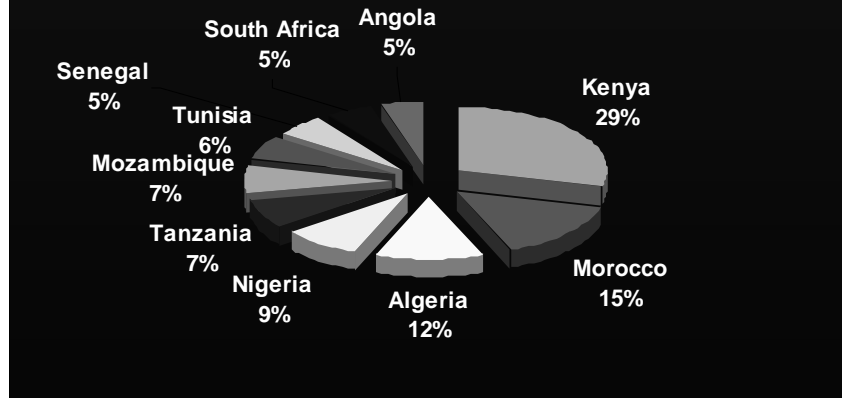


OER @AVU - 10 Top Countries Worldwide April-June 2011



Statistics AVU OERs

OER@AVU Top 10 African Countries -April - June 2011



How were AVU OERs Developed?

Collaborative Approach to Producing and using OER



AVU Teacher Education Virtual Consortium –
Concluding meeting Feb 2011- Nairobi Kenya

Lessons Learned

- The value of the collaborative strategy adopted
- working across three language divides, different education systems and different social political environments requires additional time and resources
- The social political environments in the different countries calls for a lot of flexibility

Lessons Learned

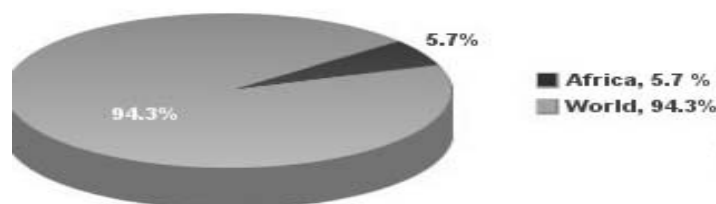
- It was possible to achieve regional integration through
- Collaboration strategy causes delays
- Translation of modules cause delay
- Convincing institutions and authors was not easy
- Need for motivation: initiative incentive for academics to get them involved
- Building a OER portal is challenging, search for qualified Human resources
- Publishing OER in 3 languages
- Funding OERs requires Institutional support

Looking Into the Future



- Where do we go from now?

Internet Users in Africa March 31, 2011

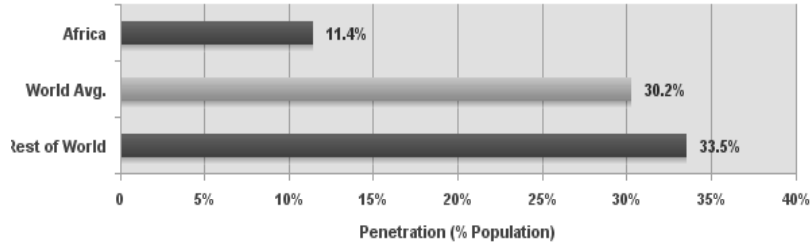


Source: Internet World Stats - www.internetworldstats.com §
118,609,620 estimated Internet users in Africa for 2011 Q1 -
Copyright © 2011, Miniwatts Marketing Group

<http://www.internetworldstats.com/stats1.htm> On June 17 2011



Internet Penetration in Africa March 31, 2011



Source: Internet World Stats - www.internetworldstats.com/stats1.htm
 118,609,620 estimated Internet users in Africa for March 31, 2011
 Copyright © 2011, Miniwatts Marketing Group

Source <http://www.internetworldstats.com/stats1.htm> On June 17 2011



Internet Usage Statistics for Africa

(Africa Internet Usage and Population Stats)

INTERNET USERS AND POPULATION STATISTICS FOR AFRICA

AFRICA REGION	Population (2011 Est.)	World Pop. %	Internet Users, Latest Data	Penetration (% Population)	Use Growth (2000-2011)	% Users in World
Total for Africa	1,037,524,058	15.0 %	118,609,620	11.4 %	2,527.4 %	5.7 %
Rest of World	5,892,531,096	85.0 %	1,976,396,385	33.5 %	454.4 %	94.3 %
WORLD TOTAL	6,930,055,154	100.0 %	2,095,006,005	30.2 %	480.4 %	100.0 %

Source : <http://www.internetworldstats.com/stats1.htm> On June 17 2011



- in Africa (56%) mobile internet users don't use a PC.

Sources <http://www.google.co.uk/intl/en/landing/internetstats/> on June 17th 2011



- Social sharing now produces an estimated 10% of all web traffic and 31% of referral traffic to sites from search engines and social networks

Source <http://www.google.co.uk/intl/en/landing/internetstats/> June 17 -2011

Looking Into the Future



- OER is key area for AVU
- OER@AVU: Africa Contributing to global knowledge - NOT only consumer of OERs
- Quality consortium programs released as OERs: a solution for AVU network
- Inviting more African Institutions and countries to use the AVU OERs

Thank You

www.avu.org

