From North To South: African Librarianship in the New Millennium

Dr. Sohair Wastawy
Chief Librarian
The Library of Alexandria
Portrait of Power: The World Lights
World Production of Information

- Nearly 900,000 titles are published yearly
- 73.6% published in developed countries

<table>
<thead>
<tr>
<th>Region</th>
<th>% Published</th>
<th>% World population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>1.5%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Asia</td>
<td>24.9%</td>
<td>58.9%</td>
</tr>
<tr>
<td>Europe</td>
<td>46.7%</td>
<td>9.3%</td>
</tr>
<tr>
<td>N. America</td>
<td>11.8%</td>
<td>5.2%</td>
</tr>
</tbody>
</table>
A Vision

A vision is not just a picture of what could be; it is an appeal to our better selves, a call to become something more.

- Rosabeth Moss Kanter
Revolution in the Library
The Meaning of Revolution

For something to be a revolution, it needs to affect all aspects of people's lives all over the world--and this is not just a phrase.

- Gertrude Himmelfarb, 1999
The Printing Revolution

Gutenberg’s Movable Type, 1450
The Digital Revolution
Diffused
October 29, 1969, a computer in UCLA and one in Stanford were connected through ARPANET. The first message was fairly unceremonious — it was meant to be "login", but the system crashed on the third keystroke. So the first message was, officially, "lo".
We have come along way!

ENIAC 1946
Evolution“ized” by a New Breed of Users
and will be shaped by the youngest generation
The Library of 2000 is already *Profoundly* different from the library of 2010

- Users are different
- Expectations are different
- Collections are different
- Modes of research are different
- Scholarly communication is different
Library

Find a book  Find an e-journal  Find OASIS catalogue  Find study material  Find new books

Digital collections
African digital library  Institutional repository  Subject Databases  e-Resources  Theses & dissertations

Information about our services
Renew  Return  Request a literature search  Submit a question  Login

Announcements
The Library will be closed on the following days: 2 April - Friday (Good Friday), 3 April - Saturday, 5 April - Monday (Family Day), 27 April - Tuesday (Freedom Day), 1 May - Saturday (Workers Day)

Durban Campus Library training for all registered students (February - April 2010): Click here to view the Durban Campus Library training schedule

Johannesburg Campus Library training for all registered students (April 2010):
Cultivate Strategies for Working Smarter in 21st Century Libraries
e-Science & e-Research, life beyond the document
e-Science is about global collaboration in key areas of science, and the next generation of infrastructure that will enable it
Patterns of Relations Among Academic Disciplines
Scholarship Evolution in the Digital Age
Data Sharing in e-Science

- Particle Physics
  - global sharing of data and computation
- Astronomy
  - ‘Virtual Observatory’ for multi-wavelength astrophysics
- Chemistry
  - remote control of equipment and data archives
- Environment
  - federated data centres
CERN Users in the World

Europe: 267 institutes, 4603 users
Elsewhere: 208 institutes, 1632 users
Necessity of Cyberinfrastructure

“Most expression of human creativity in the United States will be ‘born digital.’ The intensification of computing as a cultural force makes the development of a robust cyberinfrastructure an imperative for scholarship in the humanities and social sciences”

- ACLS Report
The Library Cyberinfrastructure Characteristics

- Wide community of interest and collaboration;
- Multidisciplinary;
- High level of shared expertise;
- Tremendous amounts of data;
- Responsibility for data curation & persistence;
- Integral research and its strategies; and
- Involved with data analysis, visualization, mining, semantic search
UNISA Role

- Engage in building/developing the university repository;
- Maintain digital research data for UNISA (curation);
- Cooperate with different entities on and off campus to share it;
- Enable group to group interactions in e-space and within an overall context of intelligent grid;
- Perform metadata and access to rich resources.
Consolidate Environments

User Environments

Resource Environment

Institutional Repository

Digital Collections

E-reserve

Catalog

Cataloging

ILL

Consolidate Environments
Web 2.0 & Web 3.0, beyond the technology
The Participative Web

- Understanding the impact of user-created content and the challenges to traditional views of peer-review, authority, mediation, and authenticity.

- Define role of the library in the knowledge value chain and work through the brand value associated with independence, quality, and authenticity of content.
Today's patrons expect information in the palm of their hand… cell phones are their primary interface.

These are the leading methods innovative libraries use to deliver services through mobile devices and seamlessly meet our modern mobile patrons’ information needs on the go.

Together, these top methods promote the relevance of traditional services in the modern environment and advance the ability of librarians to think forwardly about new mobile services.

THINK FORWARD, THINK MOBILE.
UN - Africa Development Indicators

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile phone subscribers</td>
<td>7,474,544</td>
<td>331,544,120</td>
</tr>
<tr>
<td>Internet users</td>
<td>2,804,527</td>
<td>60,901,474</td>
</tr>
<tr>
<td>Personal computers</td>
<td>6,177,136</td>
<td>18,921,500</td>
</tr>
</tbody>
</table>
WorldCat

Some searches to try ...
- Artistic photography
- Biography
- Children's books
- Cooking
- Graphic novels
- Health
- Hobbies
- Landscape gardening
- Military history
- Movie reviews

Some searches to try ...

Mobile Web services
by Ariel Pashtan - Published 2005
Includes bibliographical references and index.

Related books
Related subjects
Search for libraries by Zip code:
E-mail a WorldCat title link
E-mail formatted citations
Visual Networking Index

In 2013, the Internet will be nearly four times larger than it is in 2009. (equivalent of 10 billion DVDs will cross the Internet per month) The sum of all forms of video (TV, video on demand, Internet, and P2P) will account for over 91 percent of global consumer traffic by 2013. Internet video alone will account for over 60 percent of all consumer Internet traffic in 2013.

In 2013, Internet video will be nearly 700 times the U.S. Internet backbone in 2000. It would take well over half a million years to watch all the online video that will cross the network each month in 2013. Internet video will generate over 18 exabytes per month in 2013.

Global Mobile Highlights

Globally, mobile data traffic will double every year through 2013, increasing 66x. Mobile data traffic will grow at 131 percent between 2008 and 2013, reaching over 2 exabytes per month.
Special Collections, enriching digital content
The Harold & Eda Steafel Collection of Musical Instruments
Collection Elements

- Instruments
- Musicians
- Scores
- Photographs
- Programs
- History
- Books, articles, correspondence, business records
- Video & audiotapes
- Regalia
UNISA’s Collection

UNISA’s collection lends itself beautifully to artificial intelligence cybernetics.
Students learn by doing rather than reading

- Interactive Data Language: development environment for data visualization, 2D & 3D graphics, and image processing
- Virtual learning environments and artificial intelligence in the performing arts (drama, music, dance, ...)
- Virtual reality and computer simulations with science fiction, high-tech industries, and computer games in physical education.
CyberGlove II Wireless Glove with VirtualHand for MotionBuilder

Virtual reality & Simulation/Training Applications
Music collection from traditional setup to one tightly integrating digital technologies

- 2D/3D, graphic viewer and multimedia player with a customizable interface (3D VRML 2.0 Interface).
- Digitized Collections and multimedia objects with computer search tools and networked delivery.
- Integrate images, sound, and music using ICT.
Computer Simulations Improved 3D Visualization

Investigating 3D solids with a desktop virtual reality programs
Stereo 3D Immersive Display

3D Display Screen

Robust Gloves For 3D Interaction
Haptic Feedback Devices

- Interactive Wall Projection
- Interactive Touchscreen Tables/Kiosks
- Interactive Touchscreen Window
- Interactive Floor Projection
Photo3-D works with any digital camera with the standard tripod socket on the bottom, mounting it is a simple 3-step process.
The Final Act
An interactive media performance about the disappearance of classic performing arts in the age of digital technology
Computing Technology Within Performing Arts

The performing arts are linked by the use of human movement to express art. Computing copes richly at present with kinaesthetic activities

- 3D body tracking and gesture recognition system

- Analyzing Human Motor Action and decoding emotional expressions
Integration between Vision and other Sensing Modalities

limitless possibilities for the performer to explore artistic expression and consciousness
3D Depth Sensing Prototype System for Gesture Control

GestureTek provides unlimited new user interface options for deploying 2D and 3D interactive experiences
Computer Video Analysis Techniques

Virtual Reality Instruction
Information Literacy for the digital natives
Understand the wisdom of crowds

THE USER IS NOT BROKEN
## MILLENNIAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>More Choices - Selectivity</th>
<th>Digital Natives</th>
<th>Impatient</th>
<th>Huge Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personalization / Customization</td>
<td>Gamers</td>
<td>Respect Intelligence</td>
<td>More Adaptive</td>
</tr>
<tr>
<td>High Expectations (e.g. Incomes)</td>
<td>Practical / Achievement Oriented</td>
<td>Optimistic / Positive / Confident</td>
<td>Family Oriented / Largely Children of Divorce</td>
</tr>
<tr>
<td>Merit Systems</td>
<td>Nomadic</td>
<td>More Diverse / Inclusive</td>
<td>Flexibility / Convenience</td>
</tr>
<tr>
<td>Read Less</td>
<td>More Friends</td>
<td>Direct</td>
<td>Entrepreneurial</td>
</tr>
<tr>
<td>Experiential / Interactive</td>
<td>Media Consumers</td>
<td>Patriotic / Civic Minded</td>
<td>Balanced Lives / Healthy Lifestyle</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Multitaskers</td>
<td>More Liberal</td>
<td>Social Involvement</td>
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Need to support the new skills of Library Users

Need to support the development of critical thinking & judgment skills

Need to develop broader understanding and appreciation of the critical information issues and debate that are at the center of our digital information
Preservation
Digital Preservation

- Long-term preservation
  - Preserving the bits for a long time ("digital objects")
  - Preserving the interpretation (emulation/migration)

- Political/social
  - Appraisal - what to keep?
  - Responsibility - who should keep it?
  - Legal - can you keep it?

- Size
  - Storage of/access to Petabytes of regular data
  - Grid issues

- Finding and extracting metadata
  - Descriptions of digital objects
Inspiring Space
Exhibition Spaces
Bird watching & exhibition @ Cornell’s Mann Library
Transformation Lab - Prototyping the Future

http://www.youtube.com/watch?v=TpFO_LJA1c
The Future Library

The primary definition of the “library” will change, but I trust it will remain the intellectual hub of academic institutions.

The next generation will define the “library” as content and services available on the Internet or its incarnation!
knowledge in “permanent beta”
Envoi
When we commit to a vision to do something that has never been done before, there is no way to know how to get there.

We simply have to build the bridge as we walk on it.

Robert Quinn

Innovate, innovate, innovate, Innovate
Innovate, Innovate
innovate, innovate
Most success will come from collaborative work
It takes a world to build a library
Where

1 + 1 ≠ 2
but

1 + 1 = 11
Why?
Because
the mathematics of collaboration
Is nothing less than
MAGIC.
Where
Execution—
not strategy- is where the rubber meets the road.
and because we must compete, create, and change
Compete & Change!

“If you don’t like change, you’re going to like irrelevance even less.”

General Eric Shinseki, Chief of Staff. U. S. Army
I have always imagined that Paradise will be a kind of library.

- Jorge Luis Borges

Thank You!
“To laugh often and much; to win the respect of intelligent people and the affection of children; to earn the appreciation of honest critics and endure the betrayal of false friends; to appreciate beauty; to find the best in others; to leave the world a bit better, whether by a garden patch or a redeemed social condition; to know even one life has breathed easier because you have lived. This is the meaning of success”

Ralph Waldo Emerson, 1803-1882
Poet and philosopher
“The world keeps changing. It is one of the paradoxes of success that the things and ways which got you where you are, are seldom those that keep you there.

If you think they are, and that you know the way to the future because it’s a continuation of where you’ve come from, you may well end up somewhere you would rather not be... [This] is a hard lesson to learn.”

- Charles Handy

The Age of Paradox