SDG4 Via ODL for Life Long Learning for All
Excited to Be Here

- Thanks to the Univ of Ghana School of Continuing Education for this historic conference. It is an honour.
- A Mark of being sensitive to the immediate environment and current in global focus to critically look into SDG4 and ODeL.
- I am glad to be back home to Accra.
- This keynote is only to set the tone and be provocative in an area requiring extensive discourse.
- The conference will incisively expatiate and x-ray all areas through the sub-themes.
Collateral Learning and the Eco-Cultural Paradigm in Science and Mathematics Education in Africa

Olugbemiro Jegede

1995
Contacts

- Telephone: (+234) 8034116363
- jegedeo@gmail.com,
- ojegede@noun.edu.ng,
- jegedeo@olugbemirojegede.com.
- Website: www.olugbemirojegede.com
Creative Common Licence

Attribution-ShareAlike (CC BY-SA)
Focus

- Introduction
- Education and Development
- SDG4 and ensuring LLL for All
- Indices of Indispensability
- Using ODeL as tool and pathway
- Education as Disruptive Force
- Value Principles and Radical Reforms
- Preparing for the Future: Waves of Change
- Conclusion
Tangible Outcomes

- Achieve Sustainable Development Goal 4
- Use Open, Distance and Electronic Learning (ODeL)
- Ensuring Life Long Learning for ALL
Why Are We Here?

- Opportunities to share new knowledge and innovation
- Push Africa’s Agenda (What Africa Wants)
- Examine all the related areas as listed in the Sub-themes
- Go back home with invigorated ideas and zeal to implement them
- I shall be intentionally provocative
Education and Development
Global Dilemma

- 20th & C21st global changes
- Provide two contrasting aspects of humanity: development and doom
- War, catastrophes, digital divide
- Search for peace, cure for AIDS
- Education identified as solution
The Questions

- Why educate everyone?
- Why remove disparities in educational access?
- Why search for alternative delivery modes
- Why look for flexible and cost effective means?
Critovam Buarque, the Brazilian Minister of Education says that, ‘the twenty-first century has arrived and there is a consolidated critical mass ready to move forward’ (p.5, 2003).

The instrument re-identified, is education
Nelson Mandela, an anti-apartheid revolutionary, former South Africa President, and Nobel Peace Prize awardee

"Education is the most powerful weapon which you can use to change the world."

“No country can really develop unless its citizens are educated.”

“There is nothing I fear more than waking up without a programme that will help me bring a little happiness to those with no resources, those who are poor, illiterate, and ridden with terminal disease.”
Africa’s Future on My Mind

- It is time for Africa’s emancipation
- How can learning become more inclusive and more effective?
- What radical reforms do we require?
- How do we undertake the radical rethink, in form and structure, of our education?
Sub-Saharan Africa

Obvious Characteristics
POPULATION

• Over 1.2 billion, 75% rural
• 3% population growth
• Double in 35 years, to 2.3 billion in 2050
• The world’s youngest region.
• Youth 15-24 years about 70% of the population
• Have 30% of the world’s poorest people. Extreme poverty
EDUCATION

- 4% Annual increase in primary school enrolment
- 30 million ready for school
- 45% of the population are children under 15 years
- In real terms, reduced expenditure on education
- Schools need 4 million more teachers.
- Higher Educ need 465,000 academics
- Weak STEM base
Illiteracy & its price
Security and Fairness

‘human history becomes more and more a race between education and catastrophe’ (HG Wells)

‘human insecurity comes in many forms. The most basic and lethal are illiteracy and innumeracy’ (Amartya Sen)

‘only the well educated will be able to act effectively in the Information Society’ (Michael Barber)
Redemption Song
Bob Marley

- Old pirates, yes, they rob I,
  Sold I to the merchant ships
  Minutes after they took I
  From the bottomless pit

- But my 'and was made strong
  By the 'and of the Almighty
  We forward in this generation
  Triumphant

- Won't you help to sing
  These songs of freedom?
  'Cause all I ever have
  Redemption songs

- Emancipate yourself from mental
  slavery
  None but our self can free our mind
  Have no fear for atomic energy
  'Cause none of them can stop the time
  How long shall they kill our prophets
  While we stand aside and look?
  Some say it's just a part of it
  We've got to fulfill de book

- Won't you help to sing
  These songs of freedom?
  'Cause all I ever have
  Redemption songs

- Emancipate yourself from mental
  slavery
  None but our self can free our minds
  Have no fear for atomic energy
  'Cause none of them can stop the time
  How long shall dey kill our prophets
  While we stand aside and look?
  Some say it's just a part of it
  We've got to fulfill de book

- Won't you help to sing
  These songs of freedom?
  'Cause all I ever had
  Redemption songs

- Emancipate yourself from mental
  slavery
  None but our self can free our minds
  Have no fear for atomic energy
  'Cause none of them can stop the time
  How long shall they kill our prophets
  While we stand aside and look?
  Some say it's just a part of it
  We've got to fulfill de book

- Won't you help to sing
  These songs of freedom?
Technology will increasingly dominate domestic, economic and social life

Financial and economic world will change into a plastic world

Increase in demand for constant communication and use of telecommunication

Society will become less personal, concentrate more on nuclear family

Unrivalled demand for education
To Survive the 21st Century

- Sub-Saharan Africa must engage in the following:
  - Building strong economic foundation;
  - Economic integration regionally and continentally;
  - Massive job creation;
  - Embarking on effective food security measures;
  - Health and environmental provisions;
  - Innovations and creativity buoyed by education;
  - Energy reforms and attention to combating climate change; and
  - Massive investment in education, especially tertiary education.
The Africa We Want 2063

the AU Commission/the United Nations Economic Commission for Africa (UNECA)/the New Partnership for African Development (NEPAD) in a document called, *Agenda 2063* says by the year 2063 there should be:

- ‘created an Africa of our dreams that is prosperous, healthy, vigorous, creative and exciting’ (Versi, 2015).

To achieve this, as has been done in other parts of the world, Africa must re-focus on using education as the fundamental and virile instrument for continental, regional and national development.
The Africa We Need
Dr Akinwumi Adesina, the President of the African Development Bank (AfDB), has opined that we need a

“new Africa with prosperous, sustainable and inclusive growth;

one that is peaceful, secure and united,

regionally integrated and globally competitive”.
Goals of the C21st

- sustainable development
- highly educated, mobile and adaptable workforce
- multi-skilled and multi-tasked
- a knowledge and a learning society
- use of ecological and geographical conditions to continental advantage
Education and Development

- clear relationship between a country’s institutional governance frameworks, economic progress and education offered its people.

- Level of development in Africa related to the level of education

- Illiteracy, poverty, low development indices have roots in low level of Education
Recent Imperatives on H.E and Sustainable Development

- Global and regional agendas have risen up to the challenge of using education for development.
- Several initiatives have emerged as solutions to the issues of sustainable development and higher education.
  - Education 2030 Framework for Action (FFA). SDG Goals
  - The 2015 United Nations Paris Climate Change Conference (Conference of Parties 21),
  - Agenda 2063 (AUC/NEC/NEPAD), and
  - Continental Education Strategy for Africa (CESA 2016-25).
From MDGs to SDGs

Millennium Development Goals (MDGs)

2000 – 2015

Education for All

- Addressed developing countries - south
- Addressed Basic education

Sustainable Development Goals (SDGs)

2015 – 2030 (2030 Agenda)

"Towards inclusive and equitable quality education and lifelong learning for all"

- Addresses all countries of the world
- Addresses all levels of education, including higher education

From MDGs to SDGs
On 25 September 2015, the United Nations General Assembly formally adopted the universal, integrated and transformative 2030 Agenda for Sustainable Development, along with a set of 17 Sustainable Development Goals and 169 associated targets.
### TABLE 0.1:

<table>
<thead>
<tr>
<th>Goal</th>
<th>How education is typically linked with other Sustainable Development Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal 1</td>
<td>Education is critical to lifting people out of poverty.</td>
</tr>
<tr>
<td>Goal 2</td>
<td>Education plays a key role in helping people move towards more sustainable farming methods, and in understanding nutrition.</td>
</tr>
<tr>
<td>Goal 3</td>
<td>Education can make a critical difference to a range of health issues, including early mortality, reproductive health, spread of disease, healthy lifestyles and well-being.</td>
</tr>
<tr>
<td>Goal 4</td>
<td>Education for women and girls is particularly important to achieve basic literacy, improve participative skills and abilities, and improve life chances.</td>
</tr>
<tr>
<td>Goal 5</td>
<td>Education and training increase skills and the capacity to use natural resources more sustainably and can promote hygiene.</td>
</tr>
<tr>
<td>Goal 6</td>
<td>Educational programmes, particularly non-formal and informal, can promote better energy conservation and uptake of renewable energy sources.</td>
</tr>
<tr>
<td>Goal 7</td>
<td>There is a direct link among such areas as economic vitality, entrepreneurship, job market skills and levels of education.</td>
</tr>
<tr>
<td>Goal 8</td>
<td>Education is necessary to develop the skills required to build more resilient infrastructure and more sustainable industrialization.</td>
</tr>
<tr>
<td>Goal 10</td>
<td>Where equally accessible, education makes a proven difference to social and economic inequality.</td>
</tr>
<tr>
<td>Goal 11</td>
<td>Education can give people the skills to participate in shaping and maintaining more sustainable cities, and to achieve resilience in disaster situations.</td>
</tr>
<tr>
<td>Goal 12</td>
<td>Education can make a critical difference to production patterns (e.g. with regard to the circular economy) and to consumer understanding of more sustainably produced goods and prevention of waste.</td>
</tr>
<tr>
<td>Goal 13</td>
<td>Education is key to mass understanding of the impact of climate change and to adaptation and mitigation, particularly at the local level.</td>
</tr>
<tr>
<td>Goal 14</td>
<td>Education is important in developing awareness of the marine environment and building proactive consensus regarding wise and sustainable use.</td>
</tr>
<tr>
<td>Goal 15</td>
<td>Education and training increase skills and capacity to underpin sustainable livelihoods and to conserve natural resources and biodiversity, particularly in threatened environments.</td>
</tr>
<tr>
<td>Goal 16</td>
<td>Social learning is vital to facilitate and ensure participative, inclusive and just societies, as well as social coherence.</td>
</tr>
<tr>
<td>Goal 17</td>
<td>Lifelong learning builds capacity to understand and promote sustainable development policies and practices.</td>
</tr>
</tbody>
</table>

UNESCO is entrusted to lead Sustainable Development Goal 4 (SDG4) - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all - through the Education 2030 Framework for Action (FFA).
Seven Outcome Targets

- Universal primary and secondary education
- Early childhood development and universal pre-primary education
- Equal access to technical/vocational and higher education
- Relevant skills for decent work
- Gender equality and inclusion
- Universal youth literacy
- Education for sustainable development and global citizenship

Three means of implementation

- Effective learning environments
- Scholarships
- Teachers and educators
Target 3, point 43.:
A well-established, properly-regulated tertiary education system supported by technology,

Open Educational Resources (OERs) and distance education modalities can increase access, equity, quality and relevance,

narrow the gap between what is taught at tertiary education institutions and what economies and societies demand.

The provision of tertiary education should be progressively free, in line with existing international agreements.
The Change

- From focus on
  - Quality of students admitted
  - Qualification of faculty
  - Design and management of programmes
  - Rigour of marking
  - Course outputs as intended outcome

- To focus on
  - Student engagement and satisfaction
  - Data analytics
  - Reflective assessments by students
  - Student-instructor-student interaction
  - Assessments for learning
  - Faculty satisfaction and engagement
Where are we now?

Three years after........
World is not set to achieve key global education commitments until 2084.

PROJECTIONS FOR EDUCATION 2030

- **2015**: SDGs adopted
- **2030**: Education 2030 deadline
- **2042**: Universal primary completion
- **2059**: Universal Lower secondary completion
- **2084**: Universal Upper secondary completion

**Southern Asia**
- **2051**
- **2062**
- **2087**

**Sub-Saharan Africa**
- **2080**
- **2089**
- **After 2100**
UNESCO Says

“Education needs to fundamentally change if we are to reach our global development goals”

Press release 6, September 2016
Open Access: a 21st Century Imperative
5 Indices of Indispensability
Five indices of indispensability:

- Demographic trends
- Rising enrolment
- Globalisation
- Knowledge as a commodity
- Lifelong learning

Inform the need for viable option
Mass Education

Open, Distance & e Learning:

- weapon of mass instruction
- democratises and liberalises education
- flexible and life long
- quality assured and includes all
- allows individualised learning and at own pace, time and place
Evolution of ODeL

- ODeL is virtual teaching & learning
- First documented in 1728 when Caleb Phillipps advertised for students to learn shorthand
- Evolution: correspondence to distance learning to online learning to technology enhanced to ODL to ODeL to Virtual learning
- Distance learning at tertiary level first used in 1892 at the University of Wisconsin
- 3 conceptual models for network-based educational services:
  - Virtual Class/Campus
  - Flexible & open Learning
  - On-demand learning
Open and Close

**Access**

- Restricted
  - Closed
    - Rigid
    - Entry qual
    - Time bound
    - Expensive
  - Open
    - Flexible
    - Equitable
    - Equality
    - Cheap

Extensive learner support
Instructionally designed materials
Learner-focused, modular, thematic
Individualised and self-paced
Allows for different levels of independent programmes: e.g. B.Sc, MSc, Ph.d
• Infrastructural Development
  • Physical facilities
  • Laboratories

• Human Resource Development
  • Capacity Building

• Academic Units
• Instructional Delivery
• Learner Support

Open, Distance & E-Learning

• Information and Communication Technology
• Other Support Systems
Lifelong, Life-wide & Life Sustaining Learning
Lifelong learning is the "ongoing, voluntary, and self-motivated" pursuit of knowledge for either personal or professional reasons. Therefore, it not only enhances social inclusion, active citizenship, and personal development, but also self-sustainability, as well as competitiveness and employability.
Lifelong Learning

- making learning a continuous lifelong activity
- learning through a flexible, easily accessible mode
- development of a ‘Learning’ or ‘Knowledge’ Society
- global movement towards ODeL
Diversity of Learning Spaces

Temporal

- Adult
- Formal
- Informal
- Non formal

Spatial

- Flexibility in time, space, content
- Sharing with others
- Self-directed learning
- Varied learning styles

Learning Society
‘Cradle to the Grave’

- Coping with the constant change in life.
- Need to successfully manage our daily living in today’s world calls for making learning a continuing lifelong activity.
- Lifelong learning, not as a privilege or a right but, a necessity for every individual.
- Lifelong learning will become the norm rather than the exception as a means of getting the whole society to learn continuously – from “cradle to the grave” as some would say.
The K-Power

Knowledge as a Commodity
Societies moving from a post-industrial information society to a knowledge economy,

Higher education, as a knowledge producer, has become a major force in the emerging global knowledge society.

“a well-established, properly-regulated research-oriented tertiary education system is required”.
"Foolish people! How long do you want to be foolish? How long will you enjoy making fun of knowledge? Will you never learn?.."

Proverbs 1:22
There are increasing signs that our current paradigms for higher education, the nature of our academic programs, the organization of our colleges and universities, and the way that we finance, conduct and distribute the services of higher education may not be able to adapt to the demands of our time.  

J J Duderstadt (2001)
"I will give you wisdom and Knowledge. And in addition, I will give you more wealth, treasure, and fame."

2 Chronicles 1:12
The Iron Triangle of Education

The NIGAVEKAR pentagon

Stakeholders

GOVERNANCE

RELEVANCE

QUALITY

ACCESS

COST
Quality Assurance

Institutional

- Blueprint
- Strategic Plan
- ICT Plan
- Servicom

Programme Development
Assignments & Examinations
Delivery Mode (Technology)
Course Materials Development
Learner Support & Other supports

OPP
DPP
Print
Audio/Video
Broadcast
E-Learning
30% of the world’s young people are currently neither in employment, education nor training.

ONE billion more youth will enter the job market in the next decade and only 40 per cent are expected to be able to get jobs that currently exist.

The global economy will need to create 600 million jobs over the next 10 years.

Global priority is how to reverse the youth employment crisis.

Otherwise, the socio-economic and socio-cultural cost, will be colossally high!
The world is changing at a rate most humans cannot keep pace with.

The silent evolution of the brain is adding copiously to knowledge and information.

Four major changes are shaping the world:

- Space Exploration
- The future of jobs and human capital development
- Emergence of Artificial Intelligence
- Use of education as disruptive force
Education as a Disruptive Force
Radical Reforms

- University learning should be
  - more inclusive
  - more effective, and
  - more efficient
- Replace current/cancel examination systems
- Scrap degrees, use life portfolio system
- Forget graduation – continuous learning
- Study for free
- Age no more a factor in employment
- The line between F2F and ODeL to disappear
If we are to achieve *life long learning for all* towards a path of real freedom, justice and equity

We must subscribe to *value principles* of:

- All lives have equal value
- Freedom and flexibility to choose the mode, medium, time, place, and pace of study, and
- Education is a basic need that should be accessible to all
Open Educational Practices

- **Open Access**
  - Inclusive and equal access to educational opportunities without barriers such as entry qualifications and ability to pay. All lives have equal value.

- **Open learning**
  - Ability to study and learn at anytime, anywhere and at any pace.

- **Open scholarship**
  - Releasing educational resources under an open licence that permits no cost, access, use, adaptation and redistribution by others.
What Vision?

“Where there is no vision, the people perish.” Prov 29:18
'Our belief is that deep, radical and urgent transformation is required in higher education as much as it is in school systems. Our fear is that, perhaps as a result of complacency, caution or anxiety, or a combination of all three, the pace of change is too slow and the nature of change too incremental.'

Perhaps it is ignorance and current limitations of our thoughts...
The Future of Learning
“change is coming/ (has come) whether we like it or not. If we are not involved in shaping it, others will do it for us” (Eisenberg, 1998)
Learning in a Volatile World

Online personalised learning

Volatile Uncertain Complex Ambiguous world

Personalised online learning that opens the door to the world of long life opportunities

Theories as tools to help make better decisions

VUCA

WHAT WHERE WHEN HOW WHO WHY
Use the imperatives of the 21st century for education, learning and development needs; new focus on teacher educ and HE

Embark on knowledge generation emphasis on ODeL research and initiatives

Explore and exploit new learning tools and environment – enhance OER, social networks, MOOCs, Social Media

Negotiate with digital networks to donate satellite space for learning activities
C21st Teachers

- not the boss but the facilitator
- ‘no longer sage on stage but guide on the side’
- learning with technology must begin with educating teachers
- must always operate within the students IT-driven learning environment
- Should be equipped to relate globally to other teachers and learners
C21st Learners

- easily bored, require multiple stimuli
- know more about technology than teachers and parents
- access to information = acquisition of knowledge
- Please text, email, bbm, WhatsApp, etc
- Check my web, facebook, blog or twitter
- Gone through waves of change in learning
From Ghetto to the Bank

Wave to Wave
Global Trends & Waves of Change

- Open, distance e-learning, is now going mainstream: online, blended, open, flexible and technology enhanced learning.

- Digital transformation is challenging the relevance of brick and mortar educational institutions all over the world.

- New innovations are enabling a shift from personalized learning and assessment.

- Education is on the brink of a revolution caused by convergence of research. Education, Cognitive Psychology and Neuroscience: powerful advances in optimizing online learning experiences.

- Skills and employment, are hot topics in all regions. Life long Learning is becoming more important than ever.
Waves of Change

Perceived utility of Education

Existing system of Education

Emerging system of Education – Ego based

About to emerge system of education – Eco-based

Time
Waves of Change in Learning

- **System-Determined Learning**
  - Predetermined content, time and pathway by the system
  - Ego-based learning for, determined by self, society directed

- **Personalised Learning**
  - Online learners have power over content, time and place of learning

- **Trans-Personal Learning**
  - C21st skills
  - Eco based earning for self, society, leisure and life

**Time**

**Online learners** have power over content, time and place of learning.

**Waves of Change in Learning**

**Existing system of Education**

**Emerging system of Education – Ego based**

**About to emerge system of education – Eco based**
Skills for the 4th Industrial Revolution

- Soft Skills: sharing, negotiating
- Combine mathematical and interpersonal skills

Top 10 skills

<table>
<thead>
<tr>
<th>in 2020</th>
<th>in 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Complex Problem Solving</td>
<td>1. Complex Problem Solving</td>
</tr>
<tr>
<td>2. Critical Thinking</td>
<td>2. Coordinating with Others</td>
</tr>
<tr>
<td>3. Creativity</td>
<td>3. People Management</td>
</tr>
<tr>
<td>4. People Management</td>
<td>4. Critical Thinking</td>
</tr>
<tr>
<td>5. Coordinating with Others</td>
<td>5. Negotiation</td>
</tr>
<tr>
<td>6. Emotional Intelligence</td>
<td>6. Quality Control</td>
</tr>
<tr>
<td>7. Judgment and Decision Making</td>
<td>7. Service Orientation</td>
</tr>
</tbody>
</table>

Where are the world’s recent STEM* graduates?

- China, 4.7 m
- Japan, 195 k
- Indonesia, 206 k
- Iran, 335 k
- Russia, 561 k
- United States, 568 k

* Science, Technology, Engineering, and Mathematics

Source: Future of Jobs Report, World Economic Forum
Figure 1. The nine categories of the Future Preparedness Framework

- 4th Industrial Revolution Readiness:
  - Innovation
  - Digital readiness

- Economic Readiness:
  - Human capital
    - Health
    - Education
  - Infrastructure readiness
  - Economic agility

- Security:
  - Physical security
  - Environmental security

- Social Cohesion:
  - Intergenerational balance
    - Equality of opportunity
    - Demographic risks
  - Social fabric
    - Social capital
    - Shared long-term vision

Future Preparedness
<table>
<thead>
<tr>
<th>Category</th>
<th>Helps students approach...</th>
<th>Related Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundational Literacies</td>
<td>....everyday tasks</td>
<td>Literacy, Numeracy, Scientific literacy, Information communication, Technology literacy, Financial literacy, Cultural and civic literacy</td>
</tr>
<tr>
<td>Competencies</td>
<td>..complex challenges</td>
<td>Critical thinking and problem-solving, Communication, Collaboration</td>
</tr>
<tr>
<td>Character Qualities</td>
<td>...changing environments</td>
<td>Curiosity, Initiative, Persistence/grit, Adaptability, Leadership, Social and cultural awareness</td>
</tr>
</tbody>
</table>
Learning for All Through life

Offer strategically redesigned programmes (with current sector skills) to the public

Hands-on, self-employed programmes, e.g:

- Events Management;
- Compering (or Master of Ceremonies);
- Confectioneries and Executive Cake Making;
- Speech Writing;
- Hair Dressing;
- Applications Development;
- Contemporary music,
- Theatre Arts/Movie Acting
Conclusion
Specific Messages

- **Quality first**: quality digital, open and flexible education

- **Collaboration**: at all levels, on content, courses programmes, methodologies, infrastructure, internationalisation….

- **Take leadership**: for the future we want – lead educational transformation
Three Little Birds

Bob Marley

- Don't worry about a thing 'Cause every little thing gonna be alright
  Singin' don't worry about a thing 'Cause every little thing gonna be alright

- Rise up this mornin'
  Smiled with the risin' sun
  Three little birds
  Pitch by my doorstep
  Singin' sweet songs
  Of melodies pure and true
  Sayin', this is my message to you

- Singin' don't worry 'bout a thing 'Cause every little thing gonna be alright
  Singin' don't worry (don't worry) 'bout a thing 'Cause every little thing gonna be alright

- Singin' don't worry about a thing 'Cause every little thing gonna be alright
  Singin', don't worry about a thing 'Cause every little thing gonna be alright
Midase

Akpe

Owuladon

Thank you

Enjoy the rest of the Conference