## ESSA & REAL Centre Conference | Action on Funding for African-led Education Research

#### **Presentations:**

- 1. Professor Taldew Woldehanna, Addis Ababa University, Ethiopia (slides 2 7)
- 2. Dr Rafael Mitchell, University of Bristol, UK (slides 8 21)
- 3. Dr Samuel Asare, ESSA (slides 8 − 21)
- 4. Ms Claudia Fritelli, Carnegie Corporation of New York, USA (slides 22 33)
- 5. Professor Ndèye Coumba Toure Kane, University of Sine Saloum El-Hadj Ibrahima NIASS (USSEIN) and Ministry of Higher Education Research and Innovation, Senegal (slides 34 75)







# Challenges and Strategies to Secure Funding for Research

Tassew Woldehanna (Prof.)

Addis Ababa University, President

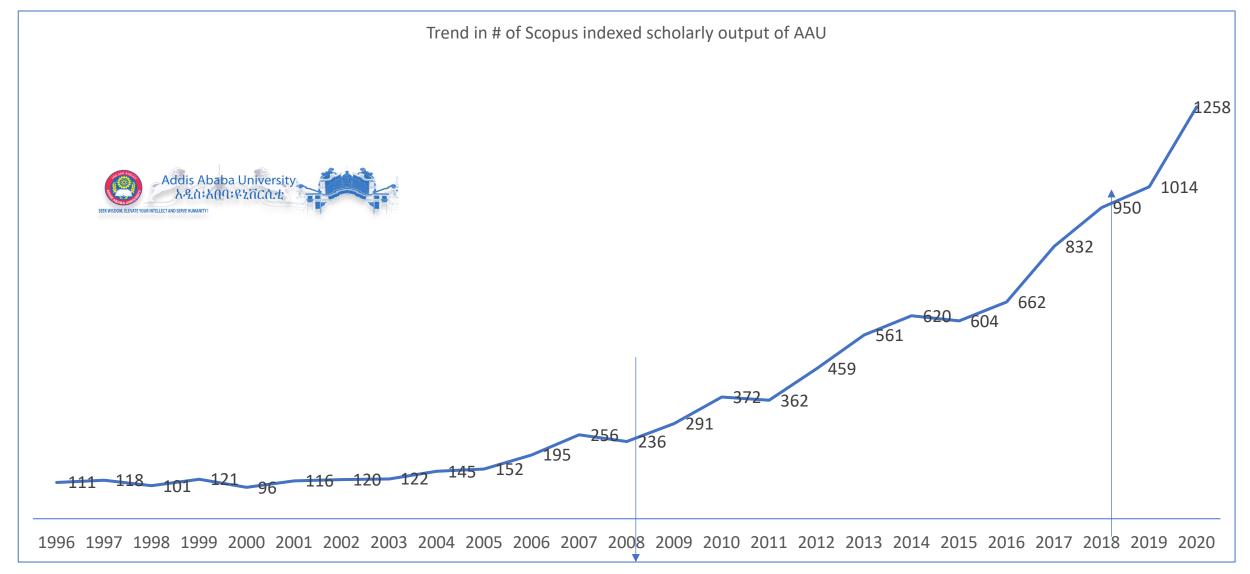
23 June 2021

#### Contents

- Introduction and context: Education research in Ethiopia AAU as a case
- Challeges of research in Ethiopia
- Strategies to tackle the challenges
- Summary and concluding remarks



#### Trend in # of Scopus indexed scholarly output of AAU – 25 years progress

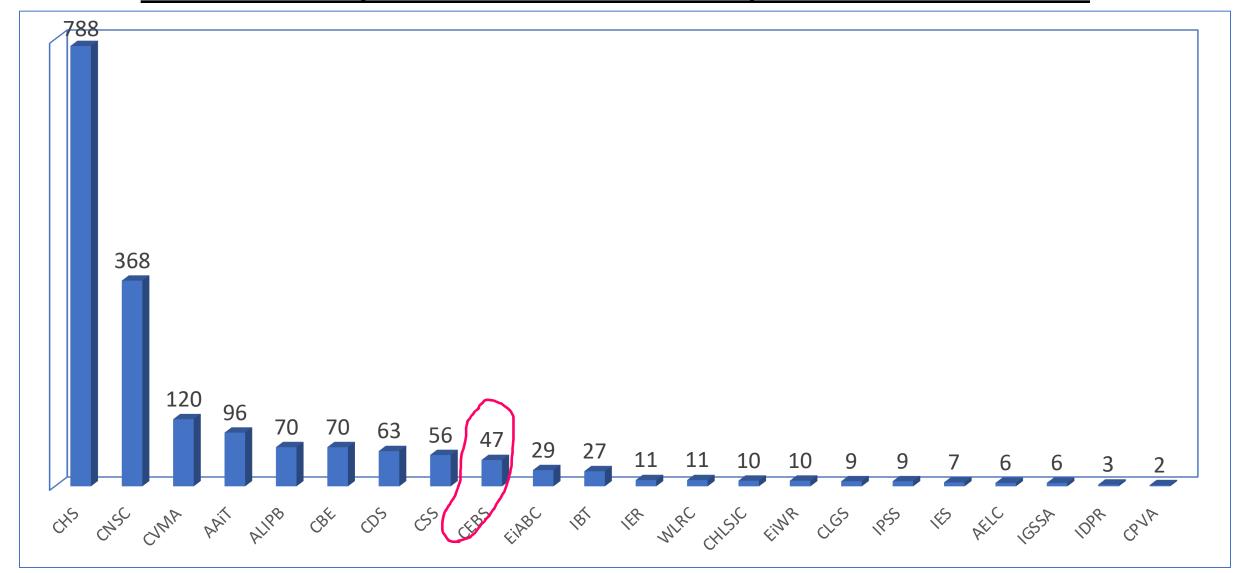


## AAU's Sources of Research Income in million USD

Source of research income	Average	% of the
Source of research income		total
Ethiopian Government sources	1.115	7.8
National research councils	0.175	1.2
Private Sector/Industry	0.108	0.7
International funding from Agencies and Initiatives in Africa (e.g. African Union, African Development Bank, RUFORUM)	3.740	26.2
International funding from agencies and foundations outside of Africa (e.g. World Bank, UN, DFID, SIDA, JICA,	3.7 10	20.2
Gates Foundation, Mellon)	9.189	64.3
Total	14.3	100



## AAU's # of peer review articles published in 2019





## Thank you for Listening

## Funding for African education research – What do we know from the African Education Research Database?

Dr Samuel Asare, ESSA

Dr Rafael Mitchell, University of Bristol UK

Professor Pauline Rose, REAL Centre, University of Cambridge UK

24th June 2021





### **Outline of this presentation**

Overview of the AERD & its objectives

 Design of this study – exploring links between funding and education publications in the region

• Findings – who is funding, what research, where

- Online catalogue of education publications by researchers based in 48 countries sub-Saharan Africa (excluding South Africa)
- Peer-reviewed publications identified through structured searches of academic databases
- 4000+ studies published between 2010-2020

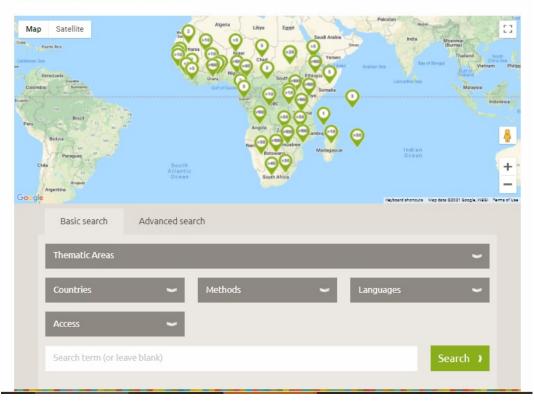
#### **Objectives**

- Increase the visibility and impact of education research from sub-Saharan Africa
- Strengthen the use of African research evidence in education policy and practice
- Support the community of education researchers, policymakers and other stakeholders in the region

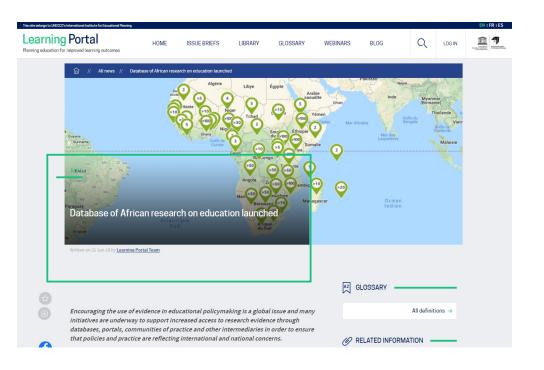
#### AFRICAN EDUCATION RESEARCH DATABASE



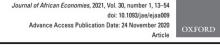
#### SEARCH DATABASE



https://essa-africa.org/AERD







#### **Education in Africa: What Are We Learning?**

#### David K. Evans\* and Amina Mendez Acosta

Center for Global Development, Washington DC, USA

\*Corresponding author: David K. Evans. E-mail: devans@cgdev.org

#### Ahstrac

Countries across Africa continue to face major challenges in education. In this review, we examine 145 recent empirical studies (from 2014 onward) on how to increase access to and improve the quality of education across the continent, specifically examining how these studies update previous research findings. We find that 64% of the studies evaluate government-implemented programs, 36% include detailed cost analysis and 35% evaluate multiple treatment arms. We identify several areas where new studies provide rigorous evidence on topics that do not figure prominently in earlier evidence syntheses. New evidence shows promising impacts of structured pedagogy interventions (which typically provide a variety of inputs, such as lesson plans and training for teachers together with new materials for students) and of mother tongue instruction interventions, as well as from a range of teacher programs, including both remunerative (pay-for-performance of various designs) and non-remunerative (coaching and certain types of training) programs. School feeding delivers gains in both access and learning. New studies also show long-term positive impacts of eliminating school fees for primary school and positive impacts of eliminating fees in secondary school. Education technology interventions have decidedly mixed impacts, as do school grant programs and programs providing individual learning inputs (e.g., uniforms or textbooks).

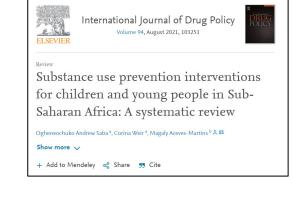
### Uses of the AERD





#### AAU hosts two-day workshop for 'Leaders in African Education Research'





Teaching & learning resource at university level



#### COMPARATIVE Education Research in Sub-Saharan Africa: Quality, Visibility, and Agendas

RAFAEL MITCHELL, PAULINE ROSE, AND SAMUEL ASARE

This article combines large-scale bibliometric analysis of publications on education by researchers based in sub-Saharan Africa with researchers' accounts of their priorities and practice. Patterns in the thematic foci of the research from 48 countries in the region are considered from the perspective of international policy statements (the Education Sustainable Development Goal and the African Union's Agenda 2063), alongside analysis of funding, coauthorship, and citations. We find a large number of publications by these scholars in reputable journals that merit greater scholarly engagement. Furthermore, evidence presented in this article challenges claims about the dominance of Northern research agendas in sub-Saharan Africa.

#### Introduction

This article presents analysis of a database on education publications by researchers in sub-Saharan Africa with the aim of raising their visibility and potential to inform policy and practice in the region. The project was driven by a recognition that the work of African academics is often "overlooked and undervalued" in national, regional, and international policy debates and decision making (Maclure 2006). The African Education Research Database, which we introduce below, is an effort to redress this.

The article opens with a review of what has been found previously about education research by scholars in the region with respect to its quality and visibility, and whose agendas are reflected in the work undertaken. We then explain the development of the database and the methods used in this study. Finally, we report patterns identified through the bibliometric analysis of 3,067 studies in the database alongside an analysis of interviews with 30 African-based researchers aimed at hearing accounts of their priorities in the context of their work. The article concludes with reflections on the qualities, visibility, and agendas of research within sub-Saharan Africa.

The authors gratefully acknowledge funding by Education SubSaharan Africa (ESSA) and the Jacobs Foundation; the research participants who generously gave their time; Rui da Silva for his work cataloging Portuguese language research; and the anonymous per reviewers and to thers who provided valuable feed-back on this article, including participants at CIES 2018, BAICE 2018, and colleagues at the REAL Centre, University of Cambridge and CIRE, University of Bristol

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Comparative Education Review



#### Compare: A Journal of Comparative and International Education



ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/ccom20

#### How equitable are South-North partnerships in education research? Evidence from sub-Saharan Africa

Samuel Asare, Rafael Mitchell & Pauline Rose

To cite this article: Samuel Asare, Rafael Mitchell & Pauline Rose (2020): How equitable are South-North partnerships in education research? Evidence from sub-Saharan Africa, Compare: A Journal of Comparative and International Education, DOI: 10.1080/03057925.2020.1811638

To link to this article: https://doi.org/10.1080/03057925.2020.1811638

Published on behalf of the Institute of Social Studies, The Hagu-

Decolonizing Open Access in Development Research

How Accessible are Journal Articles on Education Written by Sub-Saharan Africa-based Researchers?

Samuel Asare, Rafael Mitchell and Pauline Rose

#### ABSTRACT

This article investigates the extent to which education publications authored by researchers based in sub-Saharan Africa are published as open access (OA). We draw on bibliometric analysis of 1,858 peer-reviewed articles over the period 2010-18, together with interviews with 31 academics based in the region. Overall, we find a steady increase in OA publishing in the region over this period, although the proportion of OA publications remains low. The study finds that: (1) open access articles by researchers in sub-Saharan Africa are concentrated in journals with a lower impact factor; and (2) authors in sub-Saharan Africa tend to publish in higher quality journals behind a paywall, rather than in lower quality journals that either have no or lower cost for open access.

#### Primary Schooling for Children with Disabilities: A Review of African Scholarship Authors: Nidhi Singal, Carrie Spencer, and Rafael Mitchell

Professor Nidhi Singal, Faculty of Education, University of Cambridge, United Kingdom

Carrie Spencer, Faculty of Education, University of Cambridge, United Kingdom

Dr. Rafael Mitchell, School of Education, University of Bristol, United Kingdom

Singal, Nidhi, Carrie Spencer, and Rafael Mitchell. 2021. "Primary Schooling for Children with Disabilities: A Review of African Scholarship." Research Report. Cambridge Network for Disability and Education Research, University of Cambridge, United Kingdom.

#### Acknowledgments

We would like to acknowledge the Cambridge Humanities Research Grants Scheme for funding this project. This study made use of the African Education Research Database, an online resource cataloging education publication by African-based scholars, developed through a collaboration between Education Sub-Saharan Africa (ESSA) and the Research for Equitable Access and Learning (REAL) Centre at the Faculty of Education, University of Cambridge, The authors would also like to acknowledge the World Bank's Inclusive Education Initiative (IEI) for their support towards this paper

Many thanks to our reviewers for their very useful feedback.



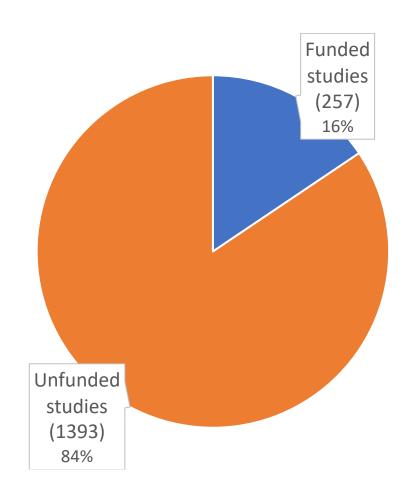
## Analysis of funding and education research publications

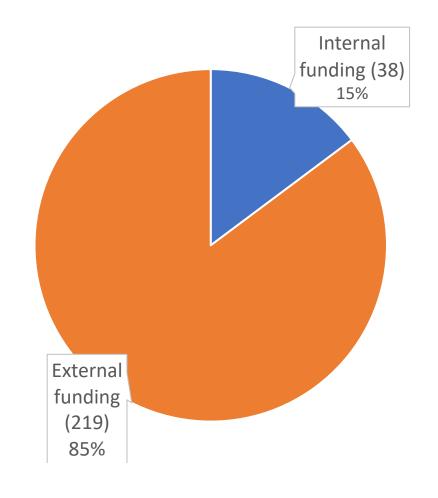
- Objective: explore links between funding and education research publications in sub-Saharan Africa
- Of 4000+ studies in the AERD for the period of analysis, a sample of 1650 studies:
  - English language
  - 2010-2018
  - Peer-reviewed articles in international journals
- Details for each publication recorded in Excel, e.g.:
  - Abstracts; country, affiliation & gender of authorship; nature of collaborations; journal impact factor; funding, etc.

## What did we learn about funding?

Majority of studies are unfunded

Of those receiving funding, funding come from external sources

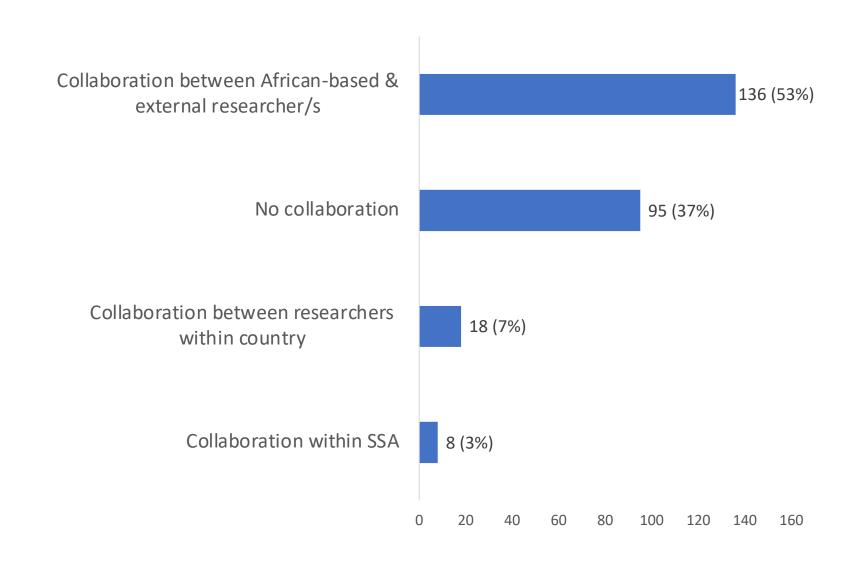




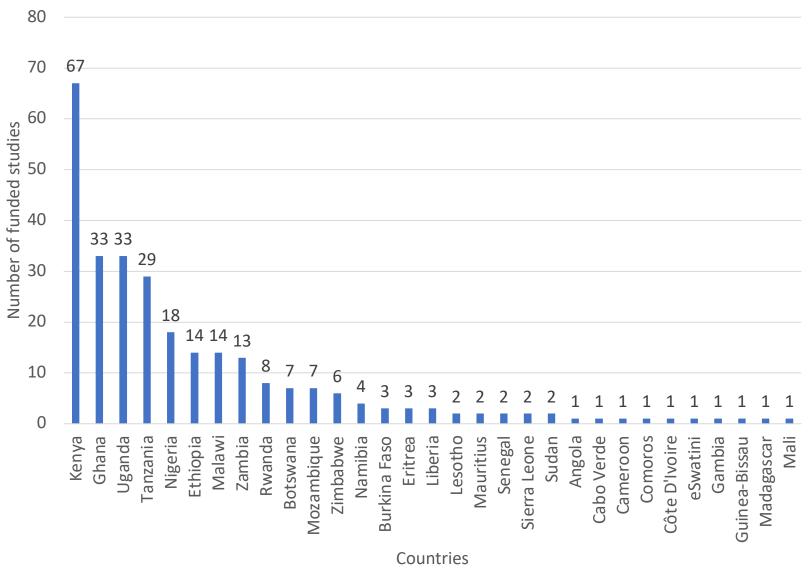
## Top providers of external funding (descending order)

Inter/governmental institution	Foundation/charity
Department for International Development (DFID, now the Foreign, Commonwealth and Development Office - FCDO), UK	Hewletts Foundation
United States Agency for International Development (USAID)	Carnegie Corporation of New York
UNICEF	Wellcome Trust
Commonwealth Scholarship Commission, UK	Aga Khan Foundation
World Bank	RTI International
Netherlands Fellowship Programme	Gates Foundation
Irish Aid	Google
Norwegian Education Trust Fund	Spencer Foundation
Spanish Impact Evaluation Fund	Leverhulme Trust

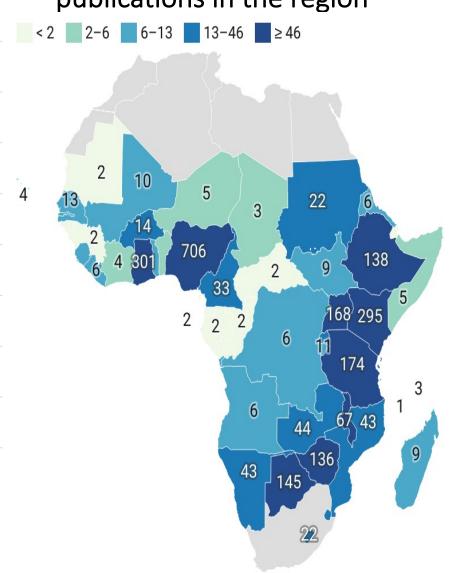
## What are the links between funding and research collaborations?



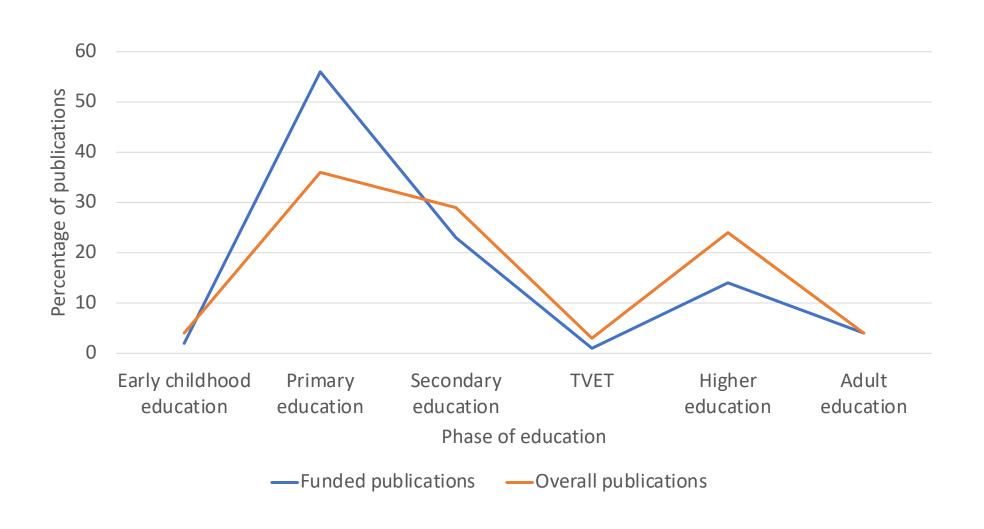
### Funding is concentrated in few countries



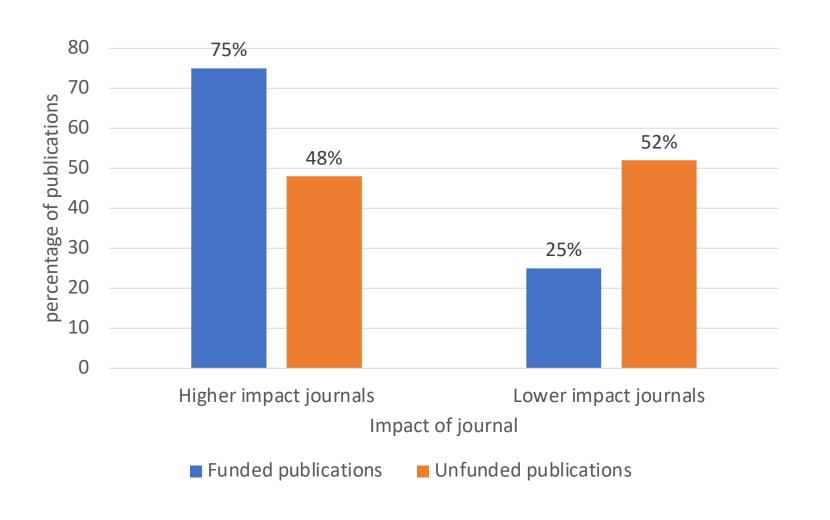
## Comparative education research publications in the region



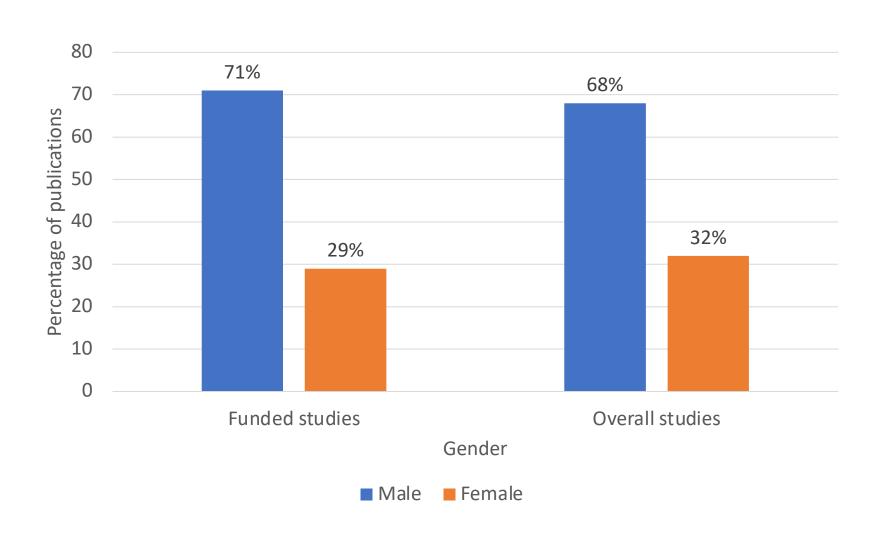
#### Most research and funding is focused on primary education



### Most funded studies are published in higher impact journals



#### Funding is NOT being used strategically to include female researchers



#### Conclusion

- Funding for African education research needs urgent attention
- Very limited external funding for research collaborations within the region
- Target funding towards female researchers (and other disadvantaged groups)
- Mobilise research funding and direct towards priority areas



## Action on Funding for African-Led Education Research Claudia Frittelli

ESSSA & REAL CENTRE CONFERENCE

June 24, 2021

Carnegie Corporation of New York Mission

"Promote the advancement and diffusion of knowledge and understanding"

- Andrew Carnegie



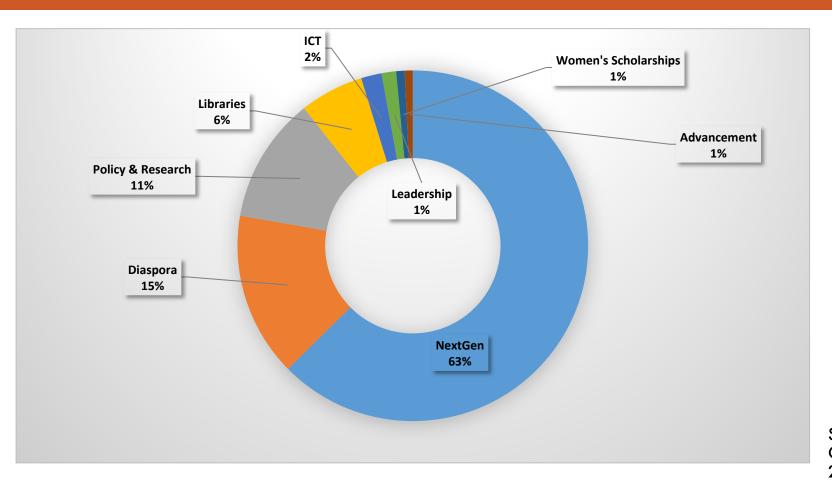
### **Conference Objectives**

- 1)Funding opportunities, requirements and expectations of funders based in and/or outside Africa.
- 2)Barriers researchers face in accessing funding and the strategies they use to overcome them.
- 3)How funding policies can be improved to better support researchers based in Africa.
- 4)Whether/how funding is aligned to education policies and priorities in Africa.

## Carnegie Corporation Higher Education and Research in Africa (HERA) Program

- **Early-Career Programs**, developing academics through doctoral and postdoctoral research and training opportunities at select universities and university research networks, with emphasis on academic advancement and retention.
- Academic Diaspora Linkages, connecting African universities with academic diaspora communities to strengthen training and research at African universities and create mutually beneficial partnerships.
- **Higher Education Policy**, creating higher education policy environments conducive to the development and retention of African academics.

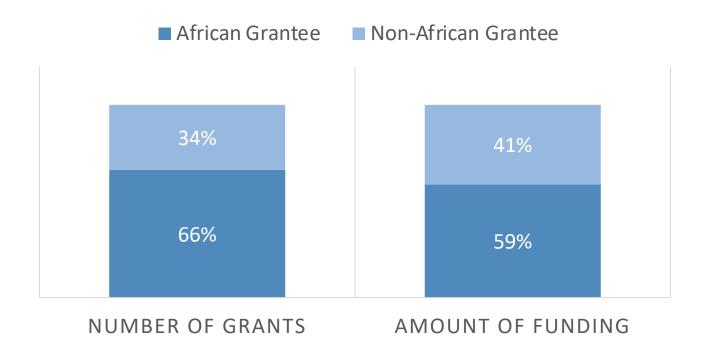
## Higher Education and Research in Africa (HERA) Report on investment objectives \$120 million (2010-2019)



Source : Carnegie Corporation of New York, 2021

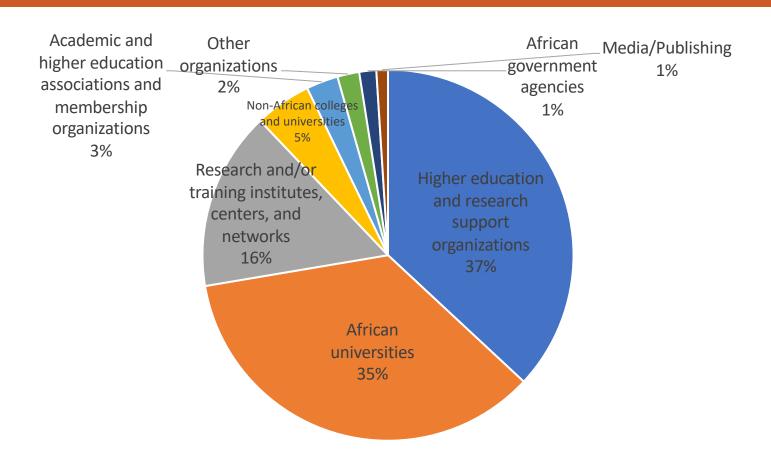
### The majoriy of grants are made to African institutions

Distribution of grants between African and non-African grantees



Source : Carnegie Corporation of New York, 2021

### HERA distribution of grants by organization type



Source : Carnegie Corporation of New York, 2021

- The MasterCard Foundation
- Ford Foundation
- Kresge Foundation
- Michael and Susan Dell Foundation
- Elma Philanthropries

Access / Workforce
Development

Thematic

**Funding** 

- The Bill and Melinda Gates Foundation (health, agriculture)
- Open Society Foundations (social justice)
- Wellcome Trust (health)

Major African
Higher
Education
Philanthropic
Funders

- Carnegie Corporation of New York
- The Robert Bosch Stiftung Foundation
- Volkswagon Foundation

Postgraduate
Training &
Research

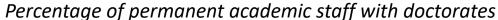
Government &

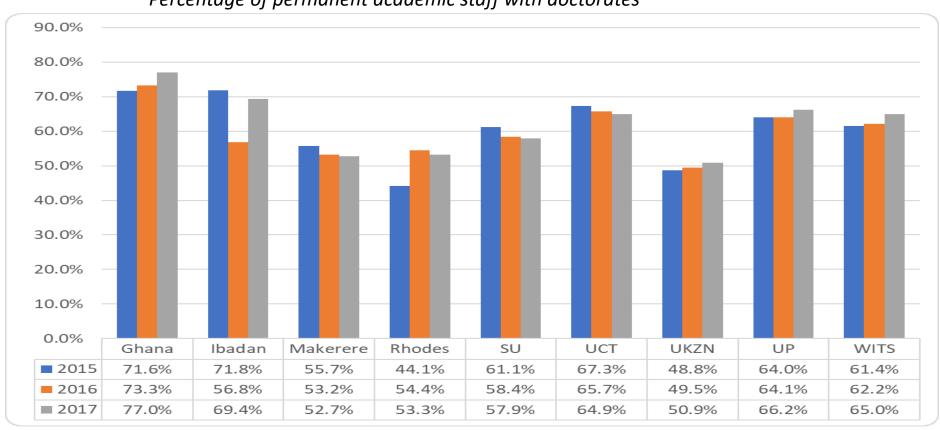
Bilateral Aid

- Swedish International Development
- Cooperation Agency
- Norwegian Program for Capacity
   Development in Higher Education
   and Research for Development –
   NORHED
- USAID (agriculture)
- DFID (UK)
- JICA (Japan)
- DAAD (Germany)
- NUFFIC (Netherlands)
- IDRC (CANADA)

Source: Carnegie Corporation of New York, 2021

## HE Policy: Developing data structures for the sector and institutions (ARUA)

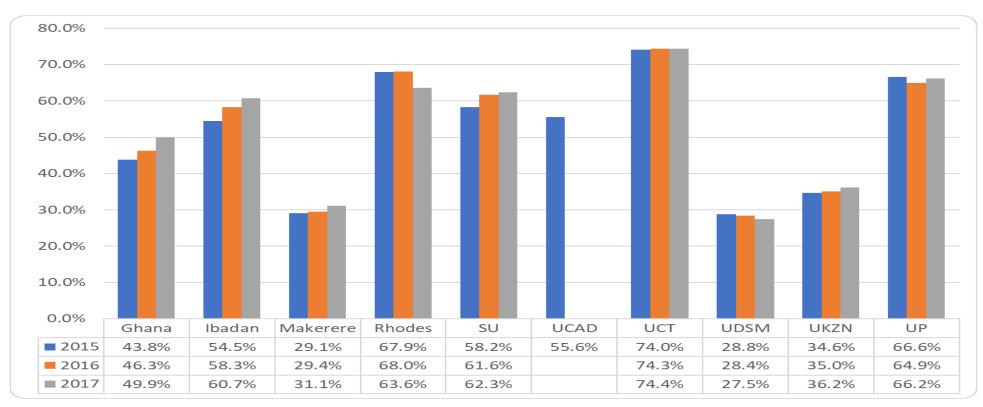




Source: 2021 ARUA Draft report: Research profiles of ARUA universities: emerging trends

## HE Policy: Developing data structures for the sector and institutions (ARUA)

Professors, associate professors and senior lecturers as a percentage of permanent academic staff



Source: 2021 ARUA Draft report: Research profiles of ARUA universities: emerging trends

### Working with philanthropic foundations

- Know the foundation's strategy and interests
- Meet representatives at conferences and local events; invite representatives to campus
- Identify niche areas
- Consider collaboration; expand reach and networks
- Have data to back up your ideas
- Include operations, finance and administration early-on in partnerships

#### Resources

- <u>Carnegie Corporation Higher Education and Research in Africa Quarterly Newsletters</u>
- <u>University World News-(Africa)</u>
- The Conversation (Africa)
- Alliance Magazine
- <u>Council on Foundations (cof.org)</u>
- Candid (Foundation Center and Guidestar)
- Africa Grantmakers Affinity Group



## how government funds education research in a particular African countrY: SENEGAL

Professor Ndèye Coumba TOURE KANE, Rector USSEIN

24th June 2021

## Presentation plan

- 1. Introduction
- 2. Case study: Senegal
  - 1. Context
  - 2. PGFSUP: Program of governance and financing of Higher education (PGFHE)
  - 3. National Consultation on the Future of Higher Education (NCFHE)
  - 4. Presidential Council on Higher Education and Research (PCHER)
  - 5. Implementation of the decisions of the PCHER
  - 6. Sustainability approaches
- 3. Conclusion

### Introduction

- Higher education
  - Key role > promoting rapid economic growth and sustainable development
  - recognised across most African countries (Bailey et al 2012; Obamba 2012).
  - Post-independence period : developmental university paradigm :
    - universities viewed as the citadels of enlightenment, development, and national pride
  - Recently → Higher education system has been required to play an increasingly central role in the new knowledge-intensive economic landscape.

#### Introduction

- Higher education
  - African country faces significant challenges at the top and at the bottom of the academic system.
  - Key to finding solutions are :
    - effective funding mechanisms to support higher education in a rapidly changing environment.
    - Inadequate and undiversified funding regimes remain a major challenge to the development of more vibrant research and innovation infrastructure
    - Absence of private-sector funding and competitive grants, public universities and research institutes in the Sub-Saharan region predominantly depend on dwindling public subsidies as well as unpredictable international donor support.

Senegal: case study

### Case study

- 1. Context
- 2. PGFSUP: Program of governance and financing of Higher education (PGFHE)
- 3. National Consultation on the Future of Higher Education (NCFHE)
- 4. Presidential Council on Higher Education and Research (PCHER)
- 5. Implementation of the decisions of the PCHER

#### Context

- Senegal considers its human capital to be the driving force in its emergence trajectory (focus 2 of the Emerging Senegal Plan) for the diversification of its economy and development of social harmony and political stability in order to achieve "an emerging Senegal by 2035 with a civic-minded society governed by the rule of law".
- Population
  - Youth = 75%
- Without a stable funding base, neither access nor excellence can be achieved.
- lack the capacity to formulate and drive their own domestic research agendas. National policymakers and university leadership need to be encouraged to work in closer partnership and to prioritise the strategic importance of research and innovation in national economic growth and competitiveness by investing more significantly in strengthening research capacity, infrastructure, and research opportunities in universities.

#### Context

- Favorable context with
  - economy (GDP grew at an average rate of 4.1% per year)
  - Performance of the labor market in the higher education sector

#### Gaps

- High demand of skills and education provided by public universities
- low internal efficiency in Higher education
- Substantial share of public financial resources in education in general and higher education in particular

#### Context

- The Higher Education Institutions operate with great autonomy, but few of responsibility, accountability or national coordination
- The central control of the subsector has suffered from a lack of technical, logistical and human resources
- The information management system for the sector is low
- Lack of a formal mechanism for evaluating the quality of programs and institutions
- Finally, low use of ICT in teaching strategies, and in steering and governance system.

#### 1. Gouvernemental measures

Higher education reform / important reforms :

- Vote by the National Assembly of the LMD LAW: Law No. 2011-05 of March 30, 2011
- Signature by the Government and the World Bank of the results-based Program of Governance and Financing of Higher Education focuses (PGF-Sup) »
- National Consultation on the Future of Higher Education (NCFHE) 6-9 April 2013
- Presidential Council on Higher Education and Research (PCHER)

## 1. Program of Governance and Financing of Higher Education focuses (PGF-Sup) »

- Results-based program of governance and financing of Higher education
  - Start: Second quarter of 2010
- Signing of the funding agreement between the Government of Senegal and IDA: June 10, 2011
- Enforcement: December 13, 2011
- Objectives
- Enhance the efficiency and quality of the higher education system and the supervision of higher education institutions and their accountability.
- The Project will support investments and policy reforms

# 1. Program of Governance and Financing of Higher Education focuses (PGF-Sup) »

- The performance contracts (PC) are within the implementation framework of the Strategic Development Program of Higher Education and Research (NSDS) in Senegal.
- PC development objectives are:
  - improve the effectiveness and efficiency of the functioning of universities;
  - encourage universities to make the changes needed to make the higher education system more competitive;
  - strengthen government capacity in managing the higher education system;
  - introduce a new funding mechanism to create incentives for improvement.

# 1. Program of Governance and Financing of Higher Education focuses (PGF-Sup) »

- Performance contracts are contracts between the government and public universities in Senegal.
- For these contracts, the Government agrees to grant additional funding
- In return, the University is committed to improve its performance in some areas.
- All public universities in Senegal submitted proposals that were discussed, accepted and signed.
- The coherence of the proposals of the Universities with the Government's strategy for higher education
- The assurance that the strategies proposed by the universities may actually lead to improved performance referred
- Identification of targets with clarity, realism and accuracy.
- The contract duration was five years

# Objective of the performance contracts

- In acordance with the Strategic Development Program of Higher Education, the Ministry selected five measurable targets for performance indicators:
  - Objective 1: Improving the internal efficiency of universities
  - Objective 2: Improving the use of elearning
  - Objective 3: Improving the quality of education
  - Objective 4: Strengthening links with the labor market
  - Objective 5: Improving the institution's governance

Objective 1: Improving the internal efficiency of universities

- the retention rate for undergraduate students;
- the repetition rate of these students;
- the promotion rate after the first year.

### Objective 2: Improving the use of ICT

- the percentage of students with personal computers;
- the proportion of trainings delivered effectively using ICT;
- the number of courses available online.

### Objectif 3: Improving the quality of education

- the percentage of programs offered according the BMD format;
- the percentage of teachers who received training in the requirements of the BMD for teaching;
- the number of programs submitted for accreditation to the quality assurance organism, ANAQ;
- the implementation of a functional quality assurance mechanism in the university.

# Objective 4: Strengthening links with the labor market

- the percentage of vocational training programs credited with a work experience;
- the percentage of courses offered by professionals.

# Objectif 5: Improving the institution's governance

- the percentage of administrative staff trained in contract management and performance of the BMD system;
- the percentage of resources generated by the institution in its overall budget;
- the implementation of a system to complete enrollment a week before classes start;
- the implementation of a control system to reduce the number students in irregular situation (failing students).

### The PGF-Sup

The PGF-Sup led a number of advancements and innovations that the Reform has consolidated:

- the steering system: Direction General of Higher Education (DGES) and Direction general of Research (DGR)
- ICT interconnection of universities and WIFI
- one student one computer program
- the extension of access:
  - construction and equipment of existing universities (UGB, UADB, and UASZ UT, UCAD
  - Rehabilitation and creation, construction and equipment of the Higher Vocational Education Institute (ISEP) Thies

Culture of institutional evaluation, educational and accountability implemented:

- National Authority for Quality Assurance (ANAQ-Sup)
- Performance contracts (PSC) signed by each public university with five objectives:
  - quality improvement
  - improving the use of ICT
  - improving internal efficiency
  - improved relations with the economic social circles
  - Improving governance

## The PGF-Supresults Culture of institutional evaluation, educational and accountability implemented:

- National Authority for Quality Assurance (ANAQ-Sup)
- Performance contracts (PSC) signed by each public university with five objectives:
  - quality improvement
  - improving the use of ICT
  - improving internal efficiency
  - improved relations with the economic social circles
  - Improving governance

The PGF- Sup, which was developed from an accurate and uncompromising diagnosis, has laid the foundations for a culture of evaluation, accountability and quality assurance without which it would be difficult to undertake a great reform of the higher education system

## National Consultation on the Future of Higher Education (NCFHE) 6-9 April 2013

- Implementation
  - Establishment of a Steering Committee by the President of the Republic, Mr. Macky Sall, in December 2012
  - Steering Committee (SC) of 15 members chaired by Professor Souleymane Bachir Diagne (Columbia, USA);
  - A strong political will and commitment
  - Consensus: General Adoption of the Report of the NCAHE with 78 recommendations
  - Participatory approach: over 400 delegates, academic community, employers, communities, elected officials, government, civil society, technical and financial partners

## National Consultation on the Future of Higher Education (NCFHE) 6-9 April 2013

- The vision: to make higher education and research as a lever for economic, social and cultural
- Open higher education and research to the rest of the Society
- Implementation
  - Establishment of a Steering Committee by the President of the Republic, Mr. Macky Sall, in December 2012
  - Steering Committee (SC) of 15 members chaired by Professor Souleymane Bachir Diagne (Columbia, USA);
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## National Consultation on the Future of Higher Education (NCFHE) 6-9 April 2013

Two strategic documents operationalizing the 78 recommendations of the NCAHE:

- Priority Reform Program 2013-2022 for Higher Education and Research (NEAR)
- Development Plan for Higher Education and Research (PDESR) 2013-2022

Presidential Council on Higher Education and Research (PCHER) 14 August 2013 → 11 major decisions

78 recommendations of the NCAHE
Establishing the roadmap for Higher Education and Research for a decade
Evaluation is ongoing now

(11) major decisions and establishing the roadmap for Higher Education and Research for the coming decade. These decisions relate to:

- Steering of Higher Education;
- Access to Higher Education;
- Financing of Higher Education;
- Quality of Higher Education;
- Human resources;
- Internationalization;
- Research and innovation;
- Links with the labor market and the community.

Decision 1 Reorient the higher education system to science, technology and vocational training

#### Decision 2:

Put the information and communications technology (ICT) at the heart of the development of higher education and research to improve access to higher education and system efficiency



Create the Virtual University of Senegal (<a href="www.uvs.sn">www.uvs.sn</a>) and an open digital space (NWE) in each administrative department of the country

<u>Decision 3</u>: Improve the management of higher education and research system and to reform the governance of public institutions of higher education

Strengthening Direction General of Higher Education (DGES) and Higher Education Authority of Quality Assurance (ANAQ-Sup)

Building the City of Knowledge in the new urban center of Diamniadio

Decision 4: Building a culture of peace in public higher cuacution in the tion

Decision 5: Promote the careers of teachers, researchers and administrative, technical and service staff

Decision 6: Make the student an actor in his training, promote his success and improve his living conditions

Decision 7: Strengthen the university card to promote access, diversify the training offer and ensure the quality of higher education

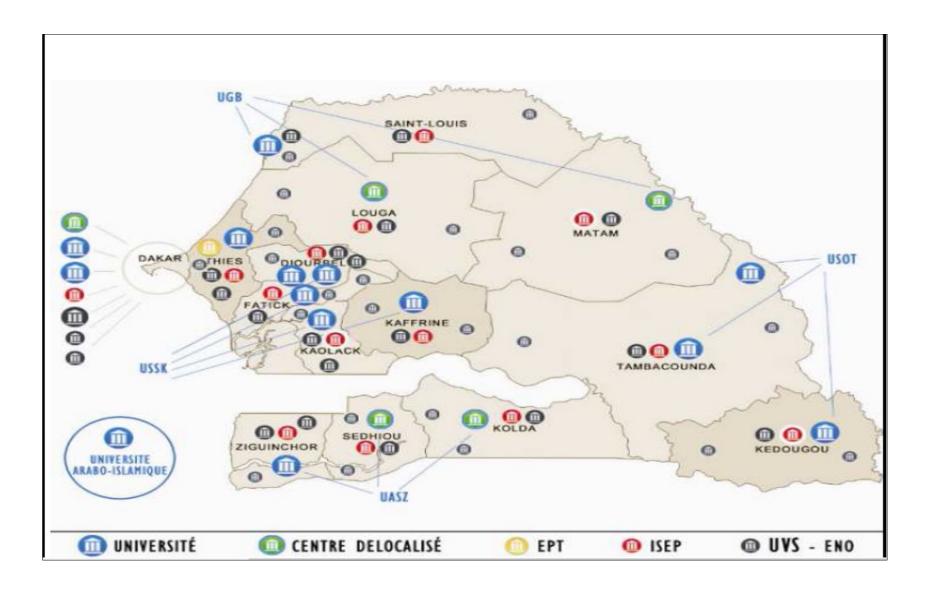
Decision 8. Give new impetus to research and innovation

Decision 9: Open the Senegalese area of higher education and research to Africand the world

Decision 10: Management of budgets and resources

Decision 11: Invest in higher education and research in line with our new ambition

#### Higher education card in Senegal



#### Decision 8. Give new impetus to research and innovation

Adopt the draft decree on the creation,

organization and functioning of the General Directorate of Research (DGR) as soon as possible Decree taken;

All Directors already appointed.

Establish an appropriate system of performance indicators for the evaluation of the national policy on research, innovation, science and technology STI policy development process underway.

Support Research by supporting researchers Funding (FIRST) (for more than 1 billion FCFA) of researchers since 2013,

Funding of women researchers (PAPES) since 2013

Applied research for communities Research and Test Center (CRE)

### Decision 11: Invest in higher education and research in line with our new ambition

• (unprecedented effort by the President of the Republic, Mr. Macky Sall: it invests in infrastructure and equipment since 2012 and 2017, double what was invested in more than 50 years between 1960 and 2012. That is more than 302 billion FCFA.

Strong mobilization of TFPs:

World Bank,

African Development Bank (ADB),

KOICA, `

French Development Agency (AFD),

USAID, others in the process of mobilization

Private nationals: donation of the planetarium for Kaolack

New modes of construction and financing of infrastructures: PPP++ (UAM, USSEIN, University residences, scientific equipment)

### Implementation-Sustainability

The priority challenges for the development of the higher education system are a follows:

- pursue a policy of internationalization in order to open up our higher education more to the rest of the world;
- develop vocational and vocational training;
- pursue a policy of orientation and determined investments geared towards the development of technology and the use of digital technology for training;
- welcome and support students in their choices, (help them in the art of building ar presenting a good portfolio) and
- keep them informed of employment opportunities at various stages of their course;

### Implementation-Sustainability

vary the working languages.

(PSE).

In addition to French, this will involve working more and more with Englis and also ensuring that national languages become languages of instruction; use the academic skills of the diaspora;

build, through negotiation and in a consensual process, a space for science and knowledge;

put in place mechanisms to generate private sector interest in research in universities; align training courses with the needs of the economy and society

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Covid-19 pandemic put many transformations in all learning ecosystems of the world mainly in higher Education

- considered as a place of knowledge where society expects solutions in terms
- of understanding phenomena,
- ways of optimal management and model development.
   Reopening of schools after reduction of restriction is another challenge with many new standard operating procedures such as the suddenly switch:
- to the on-line e-learning modality and
- long confinement to this virtual dimension.

The Covid-19 challenged and stimulated the potential of population intelligence and creativity that, when driven by collaboration and solidarity, can be very high

Covid-19 → Minister of Higher Education, Research and Innovation

- National Observatory of Sciences, Technologies, Innovations(Ocovid-19) in response
- mobilize all the national expertise located in higher education and research establishments and institutions. of research.

#### The Ocovid19's missions are:

- serve as a framework for scientific and technical reflection
- analysis of the situations created by the Covid-19 pandemic in Senegal and
- propose solutions, under the coordination of the General Directorate of Research and 'innovation.

#### (Ocovid-19):

- provide technical insight to decision-makers in order to help them make the right decisions relating to the management of the pandemic;
- provide the populations with useful information on the pandemic;
- serve as a framework for collecting, exploring and processing data on the pandemic;
- serve as a framework for studies and research, particularly clinical; epidemiological, environmental, biological, technological, digital, economic and legal;
- serve as a framework for exchanges between the various actors to ensure surveillance and monitoring of the pandemic.

#### (Ocovid-19):

- Thematic Groups
- multidisciplinary scientific and technological
- response to a multidimensional health crisis.
- 6 Thematic Groups, components and Task Forces made up of very high level experts.
- The WGs have developed → research proposals and technological innovations,. The proposed activities are of 3 categories:
- Screening and management of the disease and its impacts (all dimensions)
- Understanding of the epidemic (clinical, biological, societal, etc.)
- - Responses (technological, economic, legal, societal, ...).

### (Ocovid-19) →

Contribute to the epidemic management action carried out by the MSAS;

- propose practical solutions to fight the pandemic;
- expand knowledge bases;
- propose the technologies and innovations necessary for the response (immediate actions) and the future (short-term and long-term post covid19).
- ensuring collaboration between researchers in order to develop structured trans-group or inter-group projects to be implemented in the medium and long term and to pool resources;

Establish > permanent post-COVID-19 STI Observatory

# Association for the Development of Education in Africa (ADEA) and Higher education

- Established in 1988 as a framework for better coordination among development agencies, it has evolved into a pan-African institution built on a genuine partnership between African ministries of education and training and their technical and external partners.
  - A forum for policy dialogue on education in Africa
  - A network of policy-makers, practitioners and researchers
  - A partnership between ministries of education and development agencies
  - A catalyst for accelerated educational and institutional reform
  - A platform for the promotion of critical knowledge, skills and qualifications

# Association for the Development of Education in Africa (ADEA) and Higher education

- Promoted consensus-building and the development of common approaches to the major issues facing education in Africa
- Reinforced African ministries' leadership capacities
- Raised agencies' awareness that their own practices should be adapted to the needs of nationally-driven education policies, programs and projects;
- Contibuted to increasing the knowledge on education in Africa through research, the sharing of good practices and publications;
- Contibuted to the development of a growing network of education specialists in Africa;
- Encouraged the sharing of African expertise through regional, sub-regional and cross-country cooperation and exchanges.

### Conclusion

- Funding are required to meet higher expectations expectations
- Mentorship ==> Overcome barriers for researchers in accessing funding
  - Language barriers / Project management
  - Developpement of transdisciplinary resarch
  - Developpement of applied research for communities
  - Resarch results valorization
- Partnership between universities/societies in term of :
  - · Research, Training, Field experience
  - Model of governance
  - Networking ++
  - Centers of Excellence
  - Promotion and stimulation /integration and retention of women in research.
  - Girls and women → in scientific disciplines and contribute to the discoveries so vital to the world ==> Quality of research, successful alumni program

### Thank you for your attention