African Population and Health Research Center

BRIEF REPORT

Pedagogies of Inclusion: Gender, Pedagogy, and STEM in Higher Education in Africa

VIRTUAL ENDLINE STAKEHOLDER ENGAGEMENT: DATA VALIDATION WORKSHOP (FEBRUARY 27TH, 2025)

Introduction

The virtual endline stakeholder engagement held on February 27, 2025, brought together STEM stakeholders from various HEIs in Sub-Saharan Africa (SSA), the funding partner, and the research team to validate findings from the Pedagogies of Inclusion project.

Stakeholders in attendance consisted of network members from the following regional convening leads: the Association of African Universities (AAU), the Association for the Development of Education in Africa (ADEA), the Inter-University Council for East Africa (IUCEA), and the Southern African Regional Universities Association (SARUA). The discussions focused on gender-responsive pedagogy, active learning methodologies, and the role of institutional policies in bridging gender gaps in STEM in HEIs.

Through the scoping review, the Pedagogies of Inclusion project, examined the current state of evidence on the intersection of gender, diversity, inclusion and pedagogy in STEM disciplines in African HEIs, especially the underrepresentation of women.

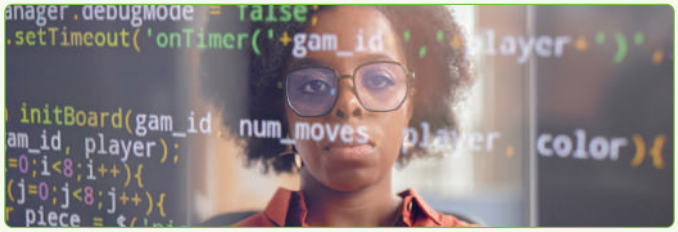
The goal of the scoping review was to identify innovative pedagogical strategies in higher education STEM courses and build a collaborative research agenda with STEM stakeholders across SSA's HEIs to influence inclusive STEM teaching and learning environments.

Reflections from the Opening Remarks

The speakers reflected on the persistent gender disparities in STEM education and emphasized the need for continued efforts to close these gaps. Professor Olusola Oyewula, Director General of the AAU, highlighted the importance of inclusive pedagogies in ensuring equal learning opportunities for all students. Dr. Ababacar Dieng, the Coordinator of the Inter County Quality Node- Higher Education and Scientific Research (ICQN-HESR), ADEA, proposed that study findings should be translated into actionable decisions.

A first step would be sharing of the findings across varied platforms such as webinars. This will allow for deeper discussions amongst stakeholders. Professor Renée Pellissier, the Knowledge Co-Production Lead at SARUA, emphasized the critical role of STEM education as the backbone of innovation and economic empowerment.

Therefore, ensuring gender equity in STEM fields is essential. Professor Philippe Shirambere, Senior Higher Education Research Coordinator, IUCEA, placed emphasis on the importance of inclusive pedagogies in creating equitable learning environments and the need for harmonizing policies for gender-sensitive higher education.



Highlights of Emerging Themes from the Scoping Review Findings

- Enrollment and retention rates for women remain lower in many African countries.
- Few studies focus on gender-sensitive teaching strategies.
- Bridging courses and extended programs are some of the strategies that have proven effective in supporting women in STEM.
- Women in STEM often face gender-based discrimination, so there is need of mitigation strategies to address cultural stereotypes and sexual harassment.

Study Limitation

A key limitation identified was the underrepresentation of research from Francophone African countries, which was attributed to the English-language search strategy. It was recommended that future studies should incorporate French-language sources to ensure comprehensive coverage.

Recommendations

The study made the following recommendations to address gender disparities in STEM education:

- Implementation of active learning pedagogies, such as project-based and collaborative learning approaches, to enhance academic performance and workplace readiness, particularly for female STEM students.
- Through educator training, equipping faculty with the capacity to address gender biases and adopt inclusive teaching strategies.
- Institutions should establish and enforce policies to prevent gender-based discrimination and harassment.
- Encouraging mentorship programs identified in literature as a critical approach in supporting women's persistence and success in STEM fields.
- Exploration of the benefits of open and distance education and learning as a learning option for female STEM students.

Highlights of Stakeholder Reflections

Stakeholders in the workshop provided insightful reflections on the findings:

- The need to rethink how success is measured across gender in STEM. More women could be graduating, but does this translate into them pursuing STEM careers afterward.
- The need for comparative analysis across regions to help the STEM teaching and learning community to learn from best practices in gender inclusion.
- Having mitigation strategies such as gender-segregated accommodation, campus safety policies, and sexual harassment policies to create safer learning environments in HEIs.
- Engaging universities that emphasize training in teaching and learning approaches.
- Examine capacities of women-centered academic environments with regards to teaching and learning resources, for instance availability of scholarships and opportunities to attend classes virtually.

Conclusion and Way Forward

IDRC, in closing the workshop, stated the significance of the Pedagogies of Inclusion project in understanding the barriers women face in STEM in Africa and identifying potential solutions.

The validation workshop provided a platform to discuss gender disparities in STEM and identify actionable strategies to foster inclusivity. The collaborative engagement of various stakeholders, through the convening support of the regional leads (AAU, ADEA, IUCEA, and SARUA) demonstrated the deep commitment to addressing these challenges through proposed policy reforms, improved pedagogies, and institutional interventions.

The findings and recommendations from this workshop will serve as a foundation for future research, policy and practice initiatives aimed at achieving gender equity in STEM education across Africa.

Contributors

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