AFRICAN EDUCATION RESEARCH FUNDING CONSORTIUM

Background Note I Unlocking the potential of transformative mentoring in Africa

Unlocking the potential of transformative mentoring in Africa

August 2023
Stephanie Nicolle

Key takeaways

- Transformative mentoring models for women and early career researchers have an overarching goal: to **nurture equitable research ecosystems**. These models go beyond the boundaries of conventional mentoring models, which prioritise the psychosocial and career development needs of individual mentees. Instead, they seek to remedy the systemic biases faced by women and early career researchers (ECRs) and meet their needs.
- All models present **benefits and drawbacks**. We recommend combining models in innovative ways, harnessing the strengths of each and crafting contextually-responsive models that align with the desired goals.
- The analysis identifies **relevant research areas** that are key to designing transformative mentoring initiatives: the research context of implementation, systemic biases against women and ECRs, and their mentoring needs.
- **Context-adapted mentoring matters**. When designing and implementing mentoring models, it is crucial to consider factors such as the institutional culture, support for mentors, and the availability of suitable mentors. These factors can influence the success of mentoring initiatives in the region.
- Models that facilitate a wider range of mentors, including male and female mentors and those from African and non-African backgrounds, offer two benefits: (1) **distributing the burden of mentoring** in a context where mentors are in short supply. Sharing the mentoring responsibilities can be particularly advantageous for female mentors to manage their mentoring roles alongside other caregiving and research-related commitments. (2) **Increasing the potential for scalability**.
- Designing and supporting transformative mentoring programmes entails numerous **practical considerations for funders**. Some of these include establishing clear goals, understanding the challenges of generating and monitoring systemic change, ensuring a diverse range of support streams for programme continuity, cultivating a supportive community of stakeholders, and adopting a long-term perspective.

Table of contents

Key takeaways 1
Table of contents 2
1. About the background note 2
2. Mentoring models 3
2.1 Characteristics, benefits & drawbacks 4
2.2 Reflections & lessons 15
3. Designing transformative mentoring initiatives 16
3.1 Context-adapted mentoring 16
3.2 Systemic biases against underrepresented groups 18
3.2.1 Systemic biases against women researchers 18
3.2.2 Systemic biases against early-career researchers 19
3.3 Needs of women researchers and early-career researchers 20
3.3.1 Needs of women researchers 20
3.3.2 Needs of early-career researchers 20
3.4 Mentoring as a vehicle for transformative change 21
4. Exploring practical design implications 22
4.1 Actionable steps for funders 22
4.2 Guiding questions 24
References 25

1. About the background note

This background note offers insights for funders interested in supporting mentoring interventions to empower women and early career researchers (ECRs) in the field of education in Africa. As highlighted in the previous background note, *Closing the gender gap in Africa's education research: progress, hurdles, & funding strategies* (Nicolle, 2023), mentoring is a crucial strategy to support underrepresented groups in Africa's research community. This note builds on the key findings in the previous background note, delving deeper into the complex interplay between context, gender, and mentoring models. This exploration attempts to shed light on how these components shape the progress of women researchers and ECRs in the African context.

Importantly, the aim of this note is to encourage funders to recognise and embrace the transformative potential of carefully designed and contextually-responsive mentoring models. Such models have the capacity to go beyond strengthening individual skills, laying the foundation for systemic change. With this overarching objective in mind, this note serves to complement the wider range of interventions designed by the African Education Research Funding Consortium to fulfil Recommendation 4.[1] This recommendation underscores the importance of supporting the inclusion of women, ECRs, and other underrepresented groups in Africa's education research sector.

To achieve this, the background note focuses on answering the following questions:

- What are some mentoring models that have the potential to be transformative? What are their limitations?
- What are the key lessons that can be derived from these models and their implementation in practice?
- What are the key factors that arise from the theoretical discussions on effective and transformative mentoring initiatives for women and ECRs?
- How do these key factors influence the practical implications of designing transformative mentoring initiatives?

This background note is organised into four sections. Section 2 provides an overview of six mentoring models, analysing their features, strengths, and limitations. It also discusses the insights and lessons that can be derived from studying these models. Section 3 explores the theoretical discussions that are relevant to designing transformative mentoring initiatives. Finally, section 4 adopts a practical perspective. It examines how the theoretical discussions can offer guidance on the practical steps that can be implemented when designing transformative mentoring initiatives.

[1] For the complete list of recommendations, see: 5 Recommendations to support education policy research in Africa.

The findings of this note are mainly informed by scholarly publications, case studies, and insightful think pieces. The existing literature on mentoring models for women and ECRs in Africa tends to be predominantly from academic institutions and STEM-focused. While the key findings in the current literature are broadly applicable across various disciplines, they highlight research gaps that warrant attention when designing mentoring interventions in the field of education research.

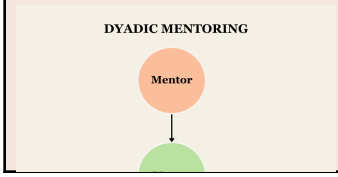
2. Mentoring models

The structural design of mentoring models exist along a spectrum, ranging from hierarchical to collaborative approaches. These models can yield significant impact at individual, institutional, and societal/systemic levels. Technological advancements have broadened the modes of mentorship delivery, offering face-to-face, virtual/online, and hybrid/blended approaches.

The mentoring models explored in section 2.1 mainly draw from the research conducted by Montgomery and Page (2018).[2] Notably, many of the models described below can be combined in creative ways to form innovative mentoring models that are contextually relevant and align with the desired goals. The description of each model is followed by at least one practical example, many of which are from Africa. The examples illustrate how these models can be combined, taking advantage of the inherent strengths in each.[3] In terms of implementation, the models can be adapted to virtual, in-person, or hybrid formats. Section 2.2 outlines key lessons and reflections that emerge from the models in section 2.1.

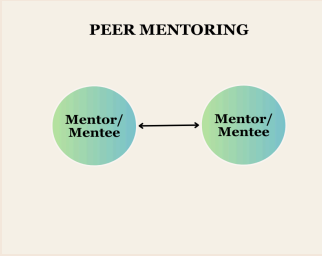
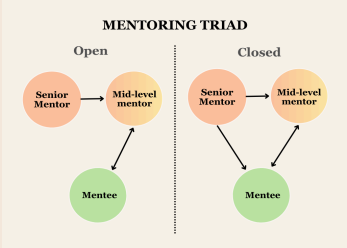
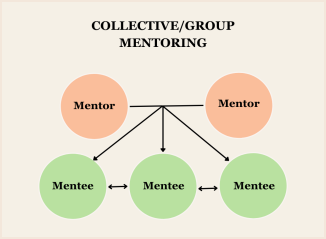
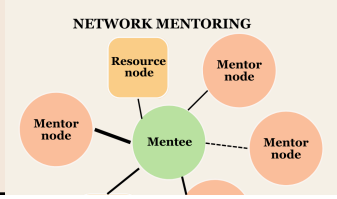
2.1 Characteristics, benefits & drawbacks

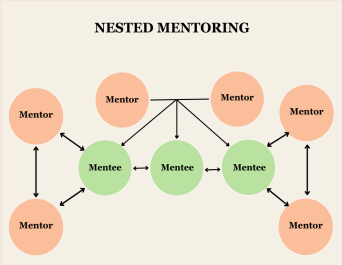
Summary of mentoring models

Model name	Key features
Model I: Dyadic mentoring 	A senior mentor is paired with a less experienced or junior mentee. **Pros:** Individualised learning experience. Mentees focus on their personal growth.

[2]Montgomery and Page (2018) examine peer mentoring within the context of group or collective mentoring (see Model IV). However, this background note also delves into peer mentoring as a separate model, where two individuals act as both mentors and mentees. As peer mentoring is widely used, our examination enables an exploration of its strengths and limitations.

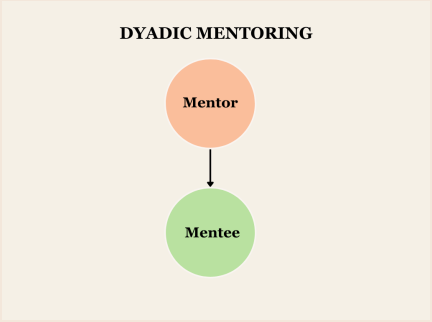
[3] The benefits and drawbacks of each model draw from various sources that study these models in-depth. The cases featured under each model were researched separately. We took efforts to look for cases specifically from Africa to envision how the models could work in practice. The case studies show how the key features of each model are used as the base, while the strengths of other models are combined to create unique mentoring programmes.

	Cons: Potential for hierarchical and paternalistic dynamics, and even abuse. Implementation hinges on mentor availability, and possible mentor burnout (this can particularly impact female mentors managing caregiving and research-related responsibilities).
Model II: Peer mentoring 	Peers act as both mentors and mentees. **Pros:** Reduces hierarchy, promotes greater relatability and trust, and facilitates bi-directional learning. **Cons:** Unclear mentor-mentee roles, peer inexperience, potential competition, and sustainability challenges if peer advancement rates differ.
Model III: Mentoring triad 	Involves a senior mentor, mid-level mentor, and a mentee. Triad relationships can be open (mentees do not have a relationship with the senior mentor) or closed (all three parties are connected). **Pros:** Exposure to diverse perspectives, potential for bi-directorial learning, and coaching for the mid-level mentor to become a senior mentor. **Cons:** Mentee can be unsure of whose guidance to follow, and coordination challenges.
Model IV: Collective/Group mentoring 	A team of mentors support a group of mentees. Mentors are multigenerational or peers. **Pros:** Sharing the mentoring burden, diverse perspectives, potential for scalability, and mentors learning about the systemic issues faced by mentees. **Cons:** Less individualised growth, concerns over confidentiality, meeting diverse mentee needs, and convening challenges.
Movel V: Network mentoring 	Mentees are linked to various mentors who serve as hand-on guidance figures or resource figures (providing information and connections). **Pros:** Mentee flexibility to select mentors and the strength of the relationship.

	Cons: Requires an existing relationship with mentors, time commitment for relationship development, and mentor availability depends on their demand within the network.
Model VI: Nested mentoring 	Community of mentors and mentees co-learning and working in partnership. Combines networking and group mentoring models. **Pros:** Robust support system catering to diverse needs, collaboration, shared learning, and dynamic relationships. **Cons:** Resource-intensive and coordination challenges.

In-depth exploration of mentoring models

Model I: Dyadic mentoring

Features	Benefits & Drawbacks
A senior mentor is paired with a less experienced or junior mentee. This model tends to be "dominant", particularly in higher education settings where academics tend to work alone and "competition for research grants and publications" are high (Darwin and Palmer, 2009). While this model has come under criticism in feminist scholarship, it is incorporated here due to its widespread use and to explore how its strengths can be adapted.  	***Benefits*** • The mentor's expertise is readily available to the mentee, fostering an individualised learning experience. • If the pair is a 'good fit', they can build a strong foundation of trust and open communication.[4] • Individual mentees tend to concentrate on their personal growth, thus reducing the pressure to compare their progress with that of their peers. • The model can be enhanced with a 'mentoring of mentors' or cascading approach for mentoring. Such an approach can support intergenerational learning and build a pool of mentors. ***Drawbacks*** • Hierarchical and paternalistic relations "that can serve to maintain business as usual" (Montgomery and Page, 2018). Moreover, the power dynamics in this mentoring relationship can be detrimental to the mentee, such as in the case of abuse. • Learning is unidirectional, with the mentee being exposed to a single perspective. • The heightened concentration on individual growth may further contribute to a culture of individualisation in academia (see section 3.1). • Contingent on mentor availability. Mentors may also experience burnout. This is particularly relevant in the case of female mentors who often have other responsibilities (e.g. care at home and administration roles in academia). • Diverse range of mentee needs are unlikely to be met by a single mentor.

[4] What constitutes a 'good fit' can vary between mentors and mentees. It can include shared characteristics such as intersectional identities, language of communication, gender, field of study etc.

Model in practice: HRP Alliance mentorship programme

In 2020, the Human Reproduction Programme (HRP) Alliance, funded by UNDP, UNFPA, UNICEF, WHO and the World Bank, launched a 12-month online mentorship programme. It specifically focused on enhancing the professional skills of women ECRs from low and middle-income countries through women-women mentoring dyads. The mentorship was supplemented by trainings, and separate support sessions for mentors and mentees. Due to a shortage of mentors, women mentors from high-income countries were invited to participate.

Key learnings: Mentees' desire to learn more about their mentors beforehand, need for language flexibility beyond English, and the inclusion of male mentors to share mentorship duties. Although initially designed as a dyadic model, the programme encouraged the development of a peer-network model.

Source: Brizuela, Chebet and Thorson (2023)

Model II: Peer mentoring

Features	Benefits & Drawbacks
Peers assume the dual roles of mentors and mentees. This model can involve multiple peers (e.g. a peer circle).[5] 	***Benefits*** • De-emphasises seniority/hierarchical power relations (Chesler and Chesler, 2022; DeForge et al., 2018). • Flexible, especially for those with care commitments. • Informal relationships and greater relatability, fostering an environment of trust and openness to share (DeForge et al., 2018). • Learnings are bi-directional. ***Drawbacks*** • Lack of clarity as to who coordinates or drives the mentoring. Additionally, it is unclear as to whose needs are met when they convene. • Peers are part of a larger environment that is competitive and are thus made to see each other as competitors (Chesler and Chesler, 2022). • Peers may lack experience if both have similar exposure and expertise. • Long-term sustainability may be challenging if the pair

[5] A peer circle or group may also be conducted through a group or collective mentoring model (see Model IV).

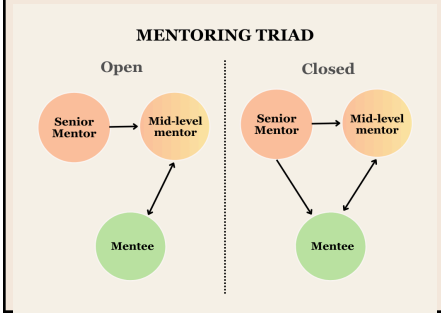
	advance at different rates.

Model in practice: PMCD programme

The Peer Mentoring Career Development (PMCD) programme was conducted under a partnership between the Uganda Cancer Institute and the Hutchinson Center Cancer Alliance. It drew inspiration from a facilitated peer mentorship model, where a facilitator supports the mentoring activities of a group of peers. The programme was peer-driven by individuals at the Uganda Cancer Institute. It featured: (1) weekly research progress meetings, (2) a peer mentoring consultant programme, leveraging the expertise of both Ugandan and Seattle-based experts, (3) a journal club for discussing scholarly articles of interest, and (4) research integrity workshops mainly led by Seattle faculty. While primarily conducted in-person, the programme integrated an online element to accommodate Seattle-based consultants.

Source: Phipps et al (2018)

Model III: Mentoring triad

Features	Benefits & Drawbacks
A triad typically has three tiers: • Tier 1 - Senior mentor • Tier 2 - Near-peer, peer or a mid-level mentor • Trier 3 - Mentee Mentoring triads can be open or closed. In an open triad, the mentee does not have a relationship with the senior mentor. In a closed triad, all three mentoring tiers are linked.  	***Benefits*** • Mentees get access to different perspectives and levels of experience. • Bi-directional learning between the mid-level mentor and the mentee. • When the mid-level mentor is a near-peer or peer mentor, the mentee feels less isolated and can counteract the "imposter syndrome" associated with dyadic mentoring (Montgomery and Page, 2018). • The presence of the senior mentor allows for a comprehensive approach to the mentee's development as s/he can provide insight into the mentoring relationship, ensuring that it is on track. The senior mentor's input is also valuable for the growth of the mid-level mentor to strengthen their mentorship skills. ***Drawbacks*** • Mentor support in the closed triad can vary based on the degree of communication, or lack thereof, between mentors.

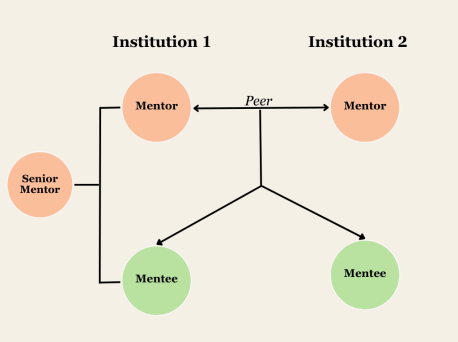
	• Coordination and planning can be challenging, especially if there are conflicting commitments or geographical differences. • Power imbalances and contrasting mentor opinions can make the mentee feel uncertain about whose guidance and advice to follow.

Model in practice: Community of Young Research Peers (CYRP)

CYRP was formed under the Transforming Health Professions Education in Tanzania (THET) project – a consortium of three Tanzanian and two US health science higher learning institutions. For its second mentorship cohort, CYRP employed a triad model and combined it with peer mentorship model (see Figure 1). It also adopted a (1) cascading approach between its first and second cohort, and (2) cross-institutional learning. These approaches facilitated intergenerational and cross-institutional knowledge transfer.

Senior mentors from CYRP's consortium institutions selected peer mentors from the first CYRP cohort of graduates. These peer mentors were then paired with two mentees – one from their own institution and another from a different consortium institution. The senior mentor oversaw the mentoring relationship.

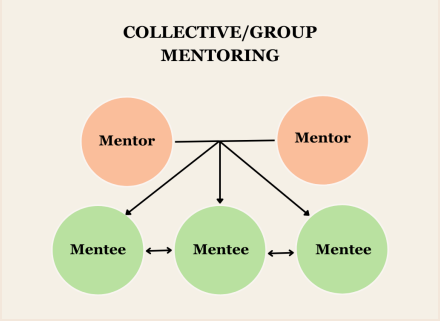
Figure 1. CYRP mentoring model[6]



Source: Balandaya et al. (2022)

[6] This visual representation was designed using the description provided in Balandaya et al. (2002). It is not featured in the source publication.

Model IV: Collective or group mentoring

Features	Benefits & Drawbacks
Multiple mentors working collaboratively to support multiple mentees. The mentees may also engage in peer support. This model can be multigenerational or peer-based. 	***Benefits*** • Multi-generational models offer developmentally-adapted mentoring across relevant career stages (Montgomery and Page, 2018). • Promotes building social capital, identity development and empowerment, socialisation, and career progression (Montgomery and Page, 2018). • Can inspire a collective goal for transformational change beyond individual development. • This model is easier to scale in contexts like Africa where there is a scarcity of mentors. A small team of mentors can support groups of three to four mentees. This enables the mentoring burden to be shared between men and women mentors or African and non-African mentors (see the models in practice below). Sharing the mentoring burden can enable women, who have other commitments and responsibilities outside of research, as well as other under-represented groups, to be included in a team of mentors. • Mentors gain from "repeat mentoring," where exposure to similar stories from multiple mentees leads them to recognise the systemic issues affecting mentees (de Vries, 2011). ***Drawbacks*** • Less individualised support. • Managing the needs and expectations of different mentees. • Some participants may be concerned about confidentiality and may limit their participation. • Convening a large group at a common time.

Model in practice: MEPI-MESAU PhD Training Programme

The Medical Education for Equitable Services for All Ugandans (MEPI-MESAU) is a consortium of higher learning institutions in Uganda. Two of the institutions, the Johns Hopkins University and the Case Western Reserve University, were brought in as international partners. Due to limited resources in Uganda, consortium members devised a group mentoring model to support PhD students. This model involved group meetings led by a PhD coordinator to guide mentees on the PhD process and to obtain feedback on draft manuscripts. Occasionally, external experts were invited to share at these meetings. Additional group meetings were organised to enable mentees to develop their presentation skills. E-mentoring via email and Skype was offered for manuscript reviews and final presentations. The group mentoring model was aimed at complementing the PhD supervision process.

Source: Manabe et al. (2018)

Model in practice: Mawazo Fellowship Programme

The Mawazo Institute offers a 15-month non-residential fellowship for women ECRs. The fellowship combines three mentoring models: (1) a slightly larger group of peers with oversight from a near-peer alumni mentor, (2) smaller peer groups of mentoring pairs, and (3) dyadic mentoring.

Within the dyadic mentoring component, each mentee is carefully matched with a mentor based on the results of a survey. The mentors themselves, possessing PhD qualifications, encompass men and women, individuals with academic or non-academic careers, and those located either within Africa or beyond its borders. If based outside Africa, these mentors are either part of the African diaspora or international experts focusing on Africa-related research. Their role is to complement the support that the mentees receive from their academic supervisors. The Mawazo Institute facilitates initial meetings between mentors and mentees to provide guidance on establishing effective mentoring relationships. They also conduct regular check-ins to assess the relationship dynamics—whether hierarchical or collaborative—and to address mentor and mentee needs. Additionally, a dedicated e-learning platform and virtual sessions covering core subjects are accessible to all mentees.

The larger group mentoring component involves dividing mentees into groups of five. Each group benefits from an alumni member who serves as a ‘big sister’, facilitating discussions on personal matters and areas for development. This alumni member also acts as a teaching assistant, offering support for core subjects within the peer group of mentees.

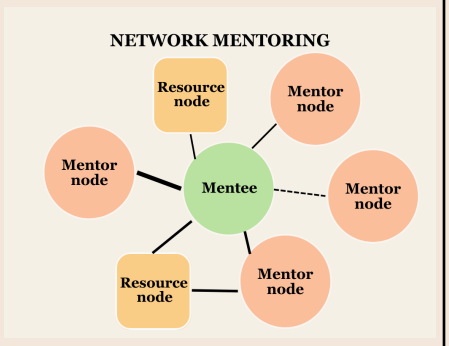
The smaller group of peer mentoring involves matching one mentee with another. This arrangement of several groups of mentoring pairs enables each pair to jointly learn the core subjects and engage in collaborative discussions.

Source: Mawazo Institute (n.d.)[7]

Model V: Network mentoring

Features	Benefits & Drawbacks
The mentee benefits from the expertise of various mentors and resource persons in a broader network. These mentors and resource persons are referred to as 'nodes', indicating their interconnectedness within the network and their distinct roles. A mentor node takes on a more active role, offering hands-on guidance. In contrast, a resource node primarily offers information and facilitates connections for individuals seeking to learn or advance in a particular field. The lines in the figure below represent the strength of each relationship (thinner and dotted lines represent weaker relationships).	*Benefits* • Offers flexibility to engage a diverse group of mentors to meet the diverse needs of the mentee. • Not all relationships are hierarchical. Some may be relational and reciprocal. • Longitudinal studies show increased long-term outcomes from engagement with mentoring networks than short-term goals achieved in conventional, hierarchical dyads (Montgomery and Page, 2018). *Drawbacks* • When mentee-driven, the mentee may feel the weight of cultivating their desired mentor relationships. • Time commitment to maintain the relationships. • Some mentors may be more in demand in the network, limiting their availability.

[7] Information about the Mawazo Institute's Fellowship Programme was obtained from the institute's website as well as via email correspondence.



Model in practice: FSNet Africa fellowship

The Food Systems Research Network for Africa (FSNet Africa) fellowship, funded by the Global Challenges Research Fund, is a partnership between UK Research and Innovation and the African Research Universities' Alliance. It empowers ECRs, particularly women, to strengthen food systems research in Africa. Each mentee receives funding for their project and guidance from two mentors – one from an African partner university and the other from the University of Leeds. Mentees can access their mentors' networks and also attend summer schools, where they can connect with peers and other mentors, expanding their own network.

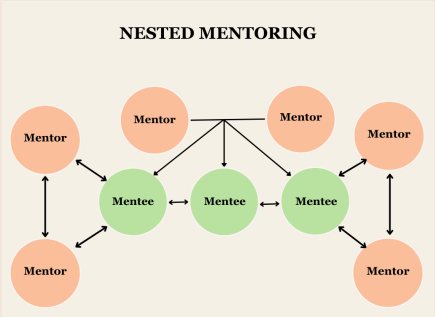
Source: University of Leeds (2022)

Model in practice: AuthorAid

AuthorAid employs a networking model to assist researchers from low- and middle-income countries. Within this framework, AuthorAid extends e-mentoring to mentees, offering a choice between short-term and long-term mentoring. The mentor network spans across global locations and encompasses diverse fields of study. AuthorAid also hosts an online platform that enables mentees to pursue personalised learning by enrolling in various training courses and accessing resources. Moreover, the platform facilitates group discussions, fostering interaction within the broader network.

Source: AuthorAid (n.d.)

Model VI: Nested mentoring

Features	Benefits & Drawbacks
Combines group and network mentoring. Establishes a community of multiple mentors and mentees co-learning and working in partnership. 	*Benefits* • Multifaceted mentorship enables the creation of a well-rounded support system that caters to diverse needs. • Collaborative and shared learning involving several actors. This allows for the growth of "multiple, malleable, contingent and dynamic" relationships (Fouché and Lunt, 2010). *Drawbacks* • Resource-intensive. • Group dynamics and coordination can be challenging to manage.

Model in practice: GRIP initiative

The Growing Research in Practice (GRIP) initiative brought together academics, practitioners, agencies and funders to develop a research culture among social service agencies in New Zealand. The core team, comprising academics, a cultural advisor and a project manager (appointed by the funder), mentored each other and eight social service agencies over a 15-month period. This mentoring approach, combined with peer mentoring between the social service agencies and expert-led workshops, fostered the unprecedented growth of a network beyond the group. Overall, the mentoring relationships within the model allowed for richer and non-linear interactions that were 'nested'. Such relationships were viewed to be dynamic and continuously reworking all the relationships within the model. Two benefits of these nested relationships were: (1) discouraging power hierarchies emerging in the mentoring relationships, and (2) developing a network of acceptance as individuals would be introduced to each mentoring component by a trusted colleague.

Source: (Fouché and Lunt, 2010)

2.2 Reflections & lessons

- **Combining mentoring approaches can generate tailored results:** The practical examples in section 2.1 underscore how combining mentoring models, instead of implementing pure dyads or peer mentoring models, can serve to achieve a broader range of outcomes. The flexibility of these diverse models enable tailoring them to the desired mentoring objectives. Moreover, some of the combined models nurtured the development of broader networks. These networks are crucial to building a strong and close-knit research community that can help underrepresented groups, such as women researchers and ECRs, to counter feelings of isolation (see section 3).

- **Mentoring for change is a shared burden:** The scarcity of mentors in the African context, as analysed in section 3, urges the consideration of models with mentoring teams that can share the mentoring responsibilities among men, women, Africans and non-Africans (e.g. group mentoring). The benefits of sharing the mentoring burden, such as better support for women mentors with care responsibilities and incorporating men into the process of systemic change, are further explored in section 3.

- **The potential for scalability is impacted by the availability of mentors:** In regions characterised by mentor scarcity, there are limitations to the scalability of mentoring dyads and peer mentoring models. This constraint is particularly evident when placing the responsibility of mentoring solely on African women. As analysed in section 3, women are underrepresented in senior levels, contributing to the limited availability of potential women mentors. However, mentoring models where mentoring responsibilities can be shared offer better avenues for scalability.

- **Understand the relationship dynamics that can enhance the quality of interactions:** Mentoring relationships have the potential to become hierarchical or seniority-driven, limiting the space for openness and collaboration. Some examples discussed in section 2.1 incorporated a coordinator role to oversee mentoring activities and mentoring dynamics. In the case study from New Zealand (GRIP initiative), a notable inclusion was the role of a cultural advisor, highlighting the importance of diverse and culturally-sensitive perspectives. Within certain examples, partnerships were established with non-African institutions to tap into their research expertise. However, it's important to acknowledge the potential challenges that can arise from such partnerships, including the inadvertent imposition of external research standards and practices in contexts where they may not be entirely suitable. This unintended consequence has the potential to hinder the equal recognition of African expertise. In such scenarios, it can be beneficial to raise questions like who determines the agenda and the implementation trajectory, and how can the equal recognition of all contributors be assured.

3. Designing transformative mentoring initiatives

This section aims to highlight the systemic issues and factors that affect mentoring initiatives in Africa. Such an understanding can help to design mentoring initiatives that rectify these issues and promote an equitable research ecosystem. Thus, this section explores the following areas based on the prevailing literature, including the literature on the models discussed in section 2:

- What are the broader contextual factors that affect mentoring in Africa?
- What are the systemic biases that specifically disadvantage women researchers and ECRs?
- What are the mentoring needs of women researchers and ECRs?

Section 3.4 draws from the insights in the above sections to examine how mentoring initiatives can be developed to transcend individual-level changes, garnering systemic changes that empower women researchers and ECRs.

3.1 Context-adapted mentoring

Lescano et al. (2019) explore the contextual issues affecting mentoring models and relationships in low- and middle-income countries (LMICs) which are applicable to countries in the African region (see Table 1). They also suggest strategies to address these issues by adapting mentoring initiatives.

Table 1. Adapting mentoring programmes to LMICs[8]

Type of issue	Description of the issue	Mentoring adaptation
Availability of mentors	Scarce, limited mentoring training.	Phased implementation, trainning the mentor, joint-mentoring with high-income country researchers, group mentoring, progressive mentoring (near-peer mentoring), and peer mentoring.
Culture	Tends to be hierarchical, requiring acceptance of senior's ideas and discouraging critical thinking or challenging the mentor.	Establishes rules to allow respectful disagreement. Explicit support for diversity. Promotes use of appropriate and acceptable language to express differences in opinion.

[8] Certain sections of Lescano et al.'s (2019) table have been adapted for this background note. Minor changes have been made, such as the names of column headings.

Relationship	Paternalistic, dependence.	Prompted independence and growth.
Institutional resources	Low	Includes institutional resources in funding proposals.
Institutional support for mentoring (in academic settings)	Low or non-existent	Phased implementation via postgraduate programmes and selected, promoting undergraduate scholars. Works with institutional champions and interested research groups.
Awareness and recognition of mentoring activities	Limited, not usually considered for academic promotion.	Institutional recognition and reward of mentoring as a key academic role with dedicated time for mentorship activities. Dissemination of concept and process of mentoring among faculty and students, coupled with training. Consideration of personal value and psychosocial support. Advertise benefits of mentoring and success of mentors and mentees.

A key concern highlighted by Lescano et al. is the scarcity of mentors. Women ECRs are notably affected, facing a double-disadvantage that stems from both the scarcity of mentors and the underrepresentation of experienced women researchers who can serve as mentors (see the next section on systemic biases against women). Ngongalah et al. (2021) further emphasise that the scarcity of mentors is not just a matter of numbers but also a question of suitability. In contexts with limited staff, seniority often becomes a proxy for mentoring, overlooking whether senior mentors have received formal training in effective mentoring techniques (ESSENCE, 2014). This dynamic contributes to another issue identified by Lescano et al. (2019), which pertains to the hierarchical and paternalistic nature of mentoring relationships involving senior mentors.

Scholars (Brizuela, Chebet and Thorson, 2023; Lescano et al., 2019; Harle, 2011) contend that the solution to the scarcity problem is to incentivise mentors through various measures: formally recognising mentoring and providing institutional support, such as dedicated mentoring time, training and financial support. For example, the 'Becoming a mentor' section of the Collaboration for Research Excellence in Africa's Mentoring Scheme (n.d.) communicates the benefits of engaging in mentoring as a way of recognising mentors' contribution.

However, a drawback of this proposed solution is that it may not adequately consider the practical time commitments of senior researchers. These commitments include tasks such as conducting research, applying for research grants, attending conferences and research events, and, for those engaged in academia, fulfilling teaching and assessment-related responsibilities. While the proposed solution does suggest dedicating time to mentoring, it's important to recognise that

mentoring involves both meetings with mentees and other tasks such as preparation and progress assessments.

Ultimately, even if senior researchers are incentivised to undertake one-on-one mentoring alongside their current responsibilities, this mentoring approach may pose challenges to scaling models that are centred on individualised mentoring. As discussed in the previous section, an alternative avenue is to explore group mentoring models. These models allow for the mentoring burden to be distributed among African-only mentors (male and female) or a combination of African and non-African mentors.

3.2 Systemic biases against underrepresented groups

3.2.1 Systemic biases against women researchers

Studies from Africa have highlighted that the prevailing research system is male-dominated (Jackson and Kelly, 2019; Kraemer-Mbula, 2020; Young, 2023). Our findings across academia and think tanks conducting education research in Africa confirm this (Nicolle, 2023). They demonstrate a disparity in gender representation, with women being notably underrepresented in senior positions. As highlighted in section 3.1 on context-adapted mentoring, this results in the reduced availability of senior women for mentoring roles. The evidence further points to women's negative experience in these settings, with many experiencing discrimination and exclusion from informal networking and decision-making spaces (Nicolle, 2023; Skovgaard, 2023).

The current research system also seems biased towards rewarding behaviours conventionally associated with masculinity such as prioritising research outputs over teaching and guidance, displaying confidence, and taking risks. Obers' (2015) study of the Rhodes University in South Africa exemplifies this trend. Obers found that women with caregiving responsibilities gravitate towards teaching rather than research; they also miss out on key opportunities, such as conferences, which are important for building partnerships and raising one's profile. These factors translate into a slower career progression for women than their male counterparts. Obers also noted that women were less likely to engage in risk-taking behaviours. Unlike their male counterparts, women experienced low self-esteem and a lack of confidence when considering higher academic positions, leading them to pursue these roles only when they were certain of meeting all the criteria.

An understanding of how these institutional and cultural contexts negatively affect the mentoring of women is crucial to consider (Sawatsky et al., 2016). While mentoring is often prescribed as a solution to enhance women's career progression, feminist scholars view this as a "misguided" approach (de Vries, 2011). Drawing from feminist scholarship, de Vries contends that such an approach conveys to female mentees that they are lacking and need to 'catch up'. In doing so, such approaches overlook systemic issues, inadvertently teaching women to both navigate and

perpetuate male-favoured systems (Dennis and Behie, 2021; de Vries, 2011). Although feminist scholars do not oppose the mentoring of women, they view prevailing mentoring frameworks as short-sighted and requiring a comprehensive analysis of the broader context. This aspect is further examined in section 3.4.

De Vries (2011) transitions from critiquing the broader context to examining how conventional mentoring models and their associated dynamics are biased against women.[9] She observes how the concept of conventional mentoring is "fundamentally gendered"; it reflects patriarchal features by emphasising the journey of a single "hero", prioritising technical aspects over psychosocial needs, and employing hierarchical and paternalistic approaches (Chesler and Chesler, 2022).

3.2.2 Systemic biases against early-career researchers

Harle (2011) observes that research institutions in sub-Saharan Africa lack a supportive research culture due to prolonged underfunding. ECRs who have completed overseas PhD programmes encounter an "unwelcoming environment" upon returning. The lack of a research culture has also contributed to a culture of "individualisation" in the sector. In the absence of supportive policies and resources, research has become "deinstitutionalised". It is up to individuals to assume the responsibility of charting their career path.

Amidst this context, senior researchers tend to perceive ECRs as "a threat to be checked, rather than as potential to be nurtured and encouraged" (Harle, 2011). They also expect ECRs who have completed PhD programmes to undertake more teaching responsibilities as compensation for their time away. Thus, ECRs bound by teaching commitments are unable to leverage their postdoctoral phase, which is key to building on their doctoral research, as a platform to enhance their research profiles.

There is another factor that may contribute to senior researchers' reluctance to engage in mentoring: the escalating ratio of staff to students. Assuming mentoring responsibilities places a significant strain on senior researchers who are already overworked and lack support.

According to Harle (2011), African ECRs lack a structured pathway unlike their counterparts in the Global North. Northern universities tend to have structured career pathways, with the availability of postdoctoral research roles under senior researchers or engagement in multi-year funded projects. The lack of similar options for African ECRs contributes to uncertainty about their future prospects, requiring mentoring for guidance.

Broader cultural factors pose additional challenges for ECRs to establish and sustain effective mentoring relationships. For instance, in countries like Malawi, deeply entrenched social norms such as the "respect for elders" (signifying seniority) and "politeness" can discourage ECRs from

[9] Feminist scholars generally critique the dyad mentoring model, tracing its origins to Greek mythologies of the male hero being guided to face challenges (Chesler and Chesler, 2022).

proactively initiating and steering mentoring connections or voicing their thoughts openly (Sawatsky et al., 2016).

3.3 Needs of women researchers and early-career researchers

3.3.1 Needs of women researchers

The Mawazo Institute (2023) offers insight into the needs of women researchers in Africa, drawing from its experience in facilitating mentoring opportunities for women. Given the underrepresentation of women in the research sector, the institute underscores the importance of creating spaces for women to connect. These interactions can foster a sense of belonging within a larger community, broadening the support they receive. Additionally, these interactions can inspire collective action to improve the research landscape for women. For example, the national platforms developed by INASP – the Ethiopian Gender Learning Forum (EGLF) and the Gender Equity in Research Alliance (GERA) in Uganda – are key spaces where researchers have raised the issue of gender disparities in the research sector and advocated for strategic measures to redress these imbalances (Holmes, 2023). These platforms united both male and female researchers, emphasising the need for collaborative efforts to develop an equitable research system.

The Mawazo Institute (2023) also proposes the establishment of intergenerational, cross-sectoral, and transdisciplinary mentoring networks. In its recent two fellowship cohorts, it was observed that 46% of fellows already had mentors, yet 100% expressed the desire for an additional mentor. This is a key finding as it highlights that women researchers have diverse needs, requiring multiple mentoring relationships.[10]

As women researchers confront the dual challenges of balancing careers and caregiving responsibilities, institutions can adopt empathetic and feminist approaches (Mawazo Institute, 2023). This could entail the provision of flexible timelines or additional financial support for women researchers with caregiving responsibilities to attend conferences.

3.3.2 Needs of early-career researchers

Similar to women researchers, ECRs highly value engaging with the broader research community and supportive institutional environments. Building connections not only helps ECRs to build research partnerships for career growth but it also lessens feelings of isolation (Harle, 2011). In particular, developing relationships with senior researchers can support ECRs with navigating a sector that is relatively new to them.

[10] Different mentors may fulfill distinct mentee requirements: understanding research processes and generating outputs, addressing patriarchal workplace norms and career advancement pathways, and offering support on managing work-life balance, family commitments, and psychosocial well-being.

Harle (2011) also proposes introducing institutional policies, processes, and monitoring efforts aimed at enhancing the overall progress of ECRs. Institutionalising support mechanisms in this way may serve to counter the culture of individualisation identified by Harle.

The research support that ECRs desire appears to slightly differ from that of women researchers. While women researchers may also require research guidance, ECRs often require foundational-level assistance. This can include guidance in developing research agendas and questions, navigating funding processes, peer review and publication procedures, increasing the visibility of their work within the research community, and communicating their findings beyond the research community (Harle, 2011).

3.4 Mentoring as a vehicle for transformative change

Conventional mentoring models and programmes generate impact at the individual level, focusing on the psychosocial and career development needs of mentees (Chandler, 1996). However, they can achieve more when designed with a transformative vision that accounts for potential impact at the institutional and societal levels. Such models and programmes possess the capacity to meet mentee needs while also rectifying systemic biases and challenges (de Vries, 2011; Chesler and Chesler, 2022).

Harle's (2011) analysis of ECRs underscores this perspective. He emphasises that support for the individual growth of ECRs should translate into enhanced research capabilities at the institutional level. Harle contends that this objective should be clearly defined and accompanied by institutional mechanisms and policies for its effective implementation. He also recommends integrating senior researchers into the mechanism of institutional transformation.

Similarly, Geber (2010), examining the impact of academic mentoring on gender and race dynamics in South Africa, highlights that transformative mentoring requires a commitment to both organisational and social change. This view aligns with broader feminist scholarship, which advocates for mentoring to shift from being a vehicle that reinforces the status quo to becoming a driver of systemic change (de Vries, 2011). For instance, de Vries (2011), drawing from the concept of bifocal spectacles, proposes a "bifocal approach" to mentoring. This approach simultaneously focuses on the "close up vision" of developing individuals and the "distance vision" of generating organisational change. It involves outlining the programme objectives for mentors, mentees and the institution, and training mentors (both men and women) to be agents of change within their institutions. In the context of advancing feminist mentoring for women leaders, feminist rights organisation CREA outlines eight principles. Some of these principles include mentors and mentees serving as "collaborative change agents", providing mutual support, valuing different forms of knowledge and experience, incorporating individual and collective learning, and recognising intersectionality (Singh Bhogal and Batliwala, 2021).

As evidenced in the above discussions, several scholars acknowledge the importance of transformative mentoring and propose various approaches. However, a common thread that emerges is the need for greater clarity in the practical implementation and monitoring of processes that drive this change.

4. Exploring practical design implications

This section builds on the theoretical foundation of transformative mentoring initiatives discussed in the previous section. It aims to take a practical perspective, considering how those insights can be applied during the process of designing and implementing such initiatives. The points in section 4.1 outline actionable steps for funders and their roles. We have also provided a list of guiding questions in section 4.2 that funders could direct towards their grantee-partners for the implementation of transformative mentoring initiatives.

4.1 Actionable steps for funders

1. **Be intentional and clear about the goal**: Effective mentoring programmes benefit from a clear commitment and an agreement on the objectives. While mentoring programmes can be designed to enhance individual skills, feminist approaches to mentoring underscore the need for systemic changes that go beyond individual growth. These approaches can be combined with a range of interventions to address systemic biases and nurture an equitable research ecosystem. For example, the African Women's Leadership and Mentoring Initiative focuses on developing new African leaders with the broader aim of changing negative gender perceptions and prioritising gender parity in national dialogues (Urgent Action Fund Africa, n.d.). However, as examined earlier in section 3.4, defining the scope of systemic change and effectively monitoring its progress can be complex and challenging.

2. **Develop context-responsive models:** Shifting from a one-size-fits-all "best practice" approach to a "best fit" for context approach (Pearson, 2011) ensures that mentoring models are optimally aligned with their contexts. As explored in section 3.1, factors such as institutional cultures and capabilities encompass elements like hierarchical versus collaborative contexts, institutional recognition of mentoring, mentor support, and mentor availability. Thus, the development of mentoring initiatives can benefit from trusting local grantee-partners to develop and take ownership of mentoring programmes, including conducting a needs assessment (ESSENCE, 2014). Such an assessment serves to better inform mentoring programmes by identifying baseline conditions, potential duplication, barriers, enablers, gaps, and partner capacity and commitment.

3. **Diversify the streams of support:** Funders can complement financial support with non-financial support, such as introducing grantee-partners to other funder networks to

attract additional or long-term funding, work together with local grantee-partners to plan for sustainability, connect their grantee-partners to co-learn and share knowledge, and promote the mentoring programme.

4. **Demonstrate a willingness to embrace openness and transparency:** Countries across the Africa region encounter their own distinctive challenges. ESSENCE (2014) recommends adopting a "trial and error approach" and having honest conversations that enable funders and grantee-partners to analyse, reflect, and be flexible. This culture of openness can be cultivated from the onset, during the grant application stage. Funders can identify ways to make grant-giving processes easier, facilitate discussions with programme officers to explore ideas, be transparent about the scope of financial and non-financial support, and outline the degree of funding flexibility.

5. **Build a community of collaborators**: Systemic change calls for collaborative approaches to enhance the uptake, scalability and sustainability of mentoring programmes. Conducting a preliminary needs assessment can help to recognise the centrality of relationship building for a programme's success, and whether local grantee-partners possess pre-existing connections or need support in establishing them. Incorporating male allyship (Brizuela, Chebet and Thorson, 2023), particularly from senior male researchers or higher-level actors, can help to better distribute the mentoring burden and address cultural issues and misconceptions (e.g. that women researchers and 'inexperienced' ECRs require mentoring to 'catch up'). Instead, the collaboration of multiple partners fosters a research community that values diverse experiences and perspectives, supporting overall growth. In recognition of the time and resources needed to facilitate collaborative efforts, certain funders have taken steps to provide supplementary financial support (ESSENCE, 2014).

6. **Adopt long-term thinking**: Meaningful progress takes time, especially in complex implementation contexts. Evaluation strategies for mentoring programmes in such contexts demand a long-term perspective that incorporates the space for continuous learning and flexibility. In-depth conversations between funders and their grantee-partners can be initiated to understand the minimum and optimal conditions that are necessary to create an enabling environment, outline desired outcomes, assess the suitability of the metrics used to measure success, explore the potential and the need for scalability, and determine the spheres of impact and influence–ranging from individual and institutional to systemic.

4.2 Guiding questions

1. **Mapping current efforts**

   i. How does your organisation currently incorporate mentoring as part of its education research initiatives? Can you provide examples of these programmes and activities?

   ii. Has your organisation conducted a needs assessment prior to designing your mentoring programme? Or how have you evaluated potential gaps, institutional capacity, enablers and barriers to carry out your mentoring programme?

2. **Determining the level of impact and programme design**

   i. What are the objectives of your organisation's mentoring programme for: the mentor, the mentee, and the institution or research system? How will these objectives be achieved?

   ii. What methods does your organisation use to assess the impact of mentoring on education researchers and the research ecosystem at large? (this question is an alternative way of phrasing the previous question).

   iii. What mentoring design best suits the intended objectives and purpose?

3. **Mentor selection and support**

   i. How does your organisation select mentors?

   ii. What institutional resources and support does your organisation provide to ensure that mentoring is recognised and effectively integrated into the education research ecosystem?

   iii. How does your organisation plan to address the scarcity of suitable mentors, especially concerning underrepresented groups like women?

4. **Mentoring relationship**

   i. Can you elaborate on the strategies your organisation employs to promote respectful and equitable mentoring relationships?

   ii. Does your organisation have guidelines or policies to promote openness, diversity and different viewpoints in mentoring relationships?

   iii. How does your organisation assess the quality and progress of mentoring relationships?

5. **Mentee needs and requirements**

   i. How does your mentoring programme factor in the needs of women researchers/ECRs? And how does your programme aim to address these needs?

6. **Donor and grantee-partner relationship**

   i. What forms of support (financial and non-financial) would your organisation require from a donor to develop, sustain, and scale your organisation's mentoring programme?

   ii. What recommendations do you have to facilitate a transparent and open dialogue on addressing challenges and discussing progress regarding the mentoring programme?

   iii. Do you have any local or international partners in mind that you'd want to collaborate with for the mentoring programme? Have you established any prior connections with them, or would you appreciate assistance in establishing a connection?

References

AuthorAID. (n.d.). *Mentoring and collaboration*. AuthorAID. https://www.authoraid.info/en/mentoring/

Balandya, E., Sunguya, B., Kidenya, B., Nyamhanga, T., Minja, I. K., Mahande, M., Mmbaga, B. T., Mshana, S. E., Mteta, K., Bartlett, J., & Lyamuya, E. (2022). Joint research mentoring through the community of Young Research Peers: A case for a unifying model for research mentorship at Higher Learning Institutions. *Advances in Medical Education and Practice*, *Volume 13*, 355–367. https://doi.org/10.2147/amep.s356678

Brizuela, V., Chebet, J. J., & Thorson, A. (2023). Supporting early-career women researchers: Lessons from a global mentorship programme. *Global Health Action*, *16*(1). https://doi.org/10.1080/16549716.2022.2162228

Chesler, N. C., & Chesler, M. A. (2002). Gender-informed mentoring strategies for Women Engineering Scholars: On establishing a Caring Community. *Journal of Engineering Education*, *91*(1), 49–55. https://doi.org/10.1002/j.2168-9830.2002.tb00672.x

Darwin, A., & Palmer, E. (2009). Mentoring circles in higher education. *Higher Education Research & Development*, *28*(2), 125–136. https://doi.org/10.1080/07294360902725017

De Vries, J. (2011). (rep.). *Mentoring for Change*. Universities Australia Executive Women & the LH Martin Institute. Retrieved August 8, 2023, from https://www.academia.edu/710253/Mentoring_for_Change.

DeForge, R., Colquhoun, H., Richmond, S. A., Emberly, D., & Newman, K. (2018). Developing a theory of peer mentorship in a knowledge translation trainee context. *Studies in Higher Education*, *44*(12), 2385–2401. https://doi.org/10.1080/03075079.2018.1504909

Dennis, S., & Behie, A. (2021, May 23). Why mentoring for women risks propping up patriarchal structures instead of changing them [web log]. Retrieved August 15, 2023, from https://theconversation.com/why-mentoring-for-women-risks-propping-up-patriarchal-structures-instead-of-changing-them-157965.

ESSENCE. (2014). (rep.). *Seven Principles for Strengthening Research Capacity in Low- and Middle-Income Countries*. Retrieved August 15, 2023, from https://www.ukcdr.org.uk/resource/essence-seven-principles-for-strengthening-research-capacity-in-low-and-middle-income-countries-2014/.

Fouché, C., & Lunt, N. (2010). Nested mentoring relationships. *Journal of Social Work*, *10*(4), 391–406. https://doi.org/10.1177/1468017310378780

Geber, H. (2010). Equity development programmes: Does mentoring make a difference in individual and social transformation for South African wonderwomen? *International Journal of Learning and Change*, *4*(2), 99–118. https://doi.org/10.1504/ijlc.2010.032707

Harle, J. (2011). (rep.). *Foundations for the Future: Supporting the early careers of African researchers*. The British Academy. Retrieved August 8, 2023, from https://www.thebritishacademy.ac.uk/documents/1861/Nairobi-Process-Foundations-for-Future.pdf.

Holmes, S. (2023, March 16). Tackling the gender divide in African research systems [web log]. Retrieved August 15, 2023, from https://blog.inasp.info/tackling-the-gender-divide-in-african-research-systems/.

Jackson, R., & Kelly, M. (Eds.). (2019). *Women researching in Africa: The impact of gender*. Springer International Publishing.

Kraemer-Mbula, E. (2020). Gender diversity and the transformation of research excellence. In T. R. J. W., M. L. Wallace, & R. McLean (Eds.), *Transforming research excellence: New ideas from the Global South* (pp. 79–91). essay, African Minds.

Lescano, A. G., Cohen, C. R., Raj, T., Rispel, L., Garcia, P. J., Zunt, J. R., Hamer, D. H., Heimburger, D. C., Chi, B. H., Ko, A. I., & Bukusi, E. A. (2019). Strengthening mentoring in low- and middle-income countries to advance Global Health Research: An overview. *The American Journal of Tropical Medicine and Hygiene*, *100*(1), 3–8. https://doi.org/10.4269/ajtmh.18-0556

Manabe, Y. C., Nambooze, H., Okello, E. S., Kamya, M. R., Katabira, E. T., Ssinabulya, I., Kaddumukasa, M., Nabunnya, Y., Bollinger, R. C., & Sewankambo, N. K. (2018). Group mentorship model to enhance the efficiency and productivity of Phd research training in Sub-Saharan Africa. *Annals of Global Health*, *84*(1), 170. https://doi.org/10.29024/aogh.25

Mawazo Institute. (2023). Recommendations for supporting women researchers. Mawazo Institute. https://drive.google.com/file/d/1CAdQs73FGrSXJPLEeordoSVJNFxRoc9v/view

Mawazo Institute. (n.d.). *Mawazo Fellowship*. The Mawazo Institute. https://mawazoinstitute.org/fellowship

Montgomery, B. L., and Page, S. C. (2018). Mentoring beyond Hierarchies: Multi-Mentor Systems and Models. Commissioned Paper for *National Academies of Sciences, Engineering, and Medicine Committee on Effective Mentoring in STEMM*. https://nap.nationalacademies.org/resource/25568/Montgomery%20and%20Page%20-%20Mentoring.pdf

Ngongalah, L., Rawlings, N. N., Musisi, J., Awanchiri, K., Akwah, E., Ngeh, E., & Ssemwanga, A. (2021). *Mentorship as a Strategy to Improve Research Ability of Students and Young Researchers*

in Africa: An Exploratory Study and Initial Findings on the Core Africa Research Mentorship Scheme, 1–16. https://doi.org/10.1101/2021.01.29.428492

Nicolle, S. (2023). (publication). *Closing the gender gap in Africa's education research: progress, hurdles, & funding strategies* . On Think Tanks. Retrieved August 15, 2023, from https://drive.google.com/file/d/1KsonZ-b94xSZJeIoc6sRleev1bkLXqhH/view

Obers, N. (2015). Influential structures: Understanding the role of the head of department in Relation to Women Academics' Research Careers. *Higher Education Research and Development* , *34*(6), 1220–1232. https://doi.org/10.1080/07294360.2015.1024632

Pearson, J. (2011). *LenCD Learning Package on Capacity Development Part 1: The Core Concept*. Learning Network on Capacity Development. http://www.lencd.org/learning

Phipps, W., Kansiime, R., Stevenson, P., Orem, J., Casper, C., & Morrow, R. A. (2018). Peer mentoring at the Uganda Cancer Institute: A novel model for career development of clinician-scientists in resource-limited settings. *Journal of Global Oncology*, (4), 1–11. https://doi.org/10.1200/jgo.17.00134

Sawatsky, A. P., Parekh, N., Muula, A. S., Mbata, I., & Bui, T. (2016). Cultural implications of mentoring in sub-Saharan Africa: A qualitative study. *Medical Education*, *50*(6), 657–669. https://doi.org/10.1111/medu.12999

Singh Bhogal , T., & Batliwala, S. (2021). (publication). *Feminist mentoring for feminist futures: Part 1*. CREA. Retrieved August 15, 2023, from https://creaworld.org/wp-content/uploads/2021/07/FMFF-Part-1.pdf.

Skovgaard, M. (2023). (rep.). *An equitable knowledge ecosystem must include the voices of women and men*. INASP. Retrieved August 15, 2023, from https://www.inasp.info/publications/voecrs-2023-gender.

The Collaboration for Research Excellence in Africa. (n.d.). *The CORE Africa Research Mentoring Scheme*. The Collaboration for Research Excellence in Africa (CORE Africa). https://coreafrica.org/ourprogrammes/mentorship

University of Leeds. (2022, November 18). Building Africa's capacity in food systems research. Retrieved August 9, 2023, from https://medium.com/university-of-leeds/a-fellowship-for-the-future-117961db784c.

Urgent Action Fund Africa. (n.d.). *African Women's Leadership and Mentoring initiative*. Urgent Action Fund Africa. https://www.uaf-africa.org/what-we-do/african-womens-leadership-mentoring-initiative/

Young, J. (2023). (rep.). *Enabling Equitable Knowledge Ecosystems in Africa and Asia*. INASP. Retrieved April 26, 2023, from https://www.inasp.info/sites/default/files/2023-02/Enabling%20Equitable%20Knowledge%20Ecosystems%20in%20Africa%20and%20Asia%20Report.pdf