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# Academic Collaborations: Do's and Don'ts

**Patrick Kyamanywa**[1] · **Kaitesi B. Mukara**[2] · **Nelson K. Sewankambo**[3]

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**Abstract** Collaborations happen when individuals or organizations work together towards a common outcome. Academic collaborations date back to the colonial times but the advent of global health especially in the twenty-first century has led to an upsurge in north-south collaborations. In health, collaborations date back before 1978 when medical diplomacy was described as a way to transcend conflicts and improve international relations. Today, academic collaboration is not only an institutional initiative but also trainees continue to show interest in involvement and active participation. One of the major drivers is the desire by the north to bridge the unmet needs in the south through mutually beneficial capacity building efforts. The success of collaboration is a result of careful consideration of the many facets of the puzzle. In this paper, we review the literature and outline the dos and don'ts to be considered for fruitful and mutually beneficial academic collaborations in global health.

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✉ Patrick Kyamanywa
patkyama@yahoo.com

Kaitesi B. Mukara
kaibat@hotmail.com

Nelson K. Sewankambo
sewankam@infocom.co.ug

[1] Kampala International University – Western Campus, P.O. Box 71, Bushenyi Ishaka, Uganda

[2] Department of Ear, Nose, Throat and Neck Surgery, University of Rwanda, Nyarugenge P.O. Box 4686, Kigali, Rwanda

[3] College of Health Sciences, Makerere University Kampala, P.O. Box 7072, Kampala, Uganda

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## Introduction

There has been increasing interest and literature on collaboration [1] partly driven by globalization and interdependence of countries world over [2]. Collaborations happen when individuals or organizations work together towards a common outcome. The Merriam-Webster dictionary defines collaboration as, "working jointly with others or together especially in an intellectual endeavor" [3]. Similarly, Bozeman and colleagues [4] define collaborations as "social processes whereby human beings pool their human capital for the objective of producing knowledge". These definitions embrace the notion of mutual benefit for the collaborating parties and achieving an agreed goal. According to Lewis and colleagues [5], research collaborations entail "working on a project together from designing to publishing the findings". In a different context, collaboration is considered in clinical practice when people with different expertise share in treatment of a patient; be it direct involvement or giving opinion remotely [6].

Academic collaborations date back to the colonial times and the cold war era and in health, date back before 1978 when Bourne [7] described medical diplomacy through collaboration as a way to transcend conflicts and improve international relations. Reports show that in 1978, 5.8% of American medical graduates had attended a clinical placement abroad and this figure rose to 22.2% in 2004 [2]. Today, academic collaboration is not only an institutional initiative but also trainees both at undergraduate and graduate levels continue to show interest in involvement and active participation [2, 8–10]. Drain et al. [8] report that only 22% of US

institutions had international health programs in 1991. Given the increased interest, almost all medical schools in the US offered the program by 2005 [8] and there were at least 40 global health programs by 2009 [11].

Although global health has many definitions, in this article, we adopt a more widely accepted definition by Koplan et al. [12] of global health as, "an area for study, research, and practice that places a priority on improving health and achieving health equity for all people worldwide." Collaborations in global health focus on international health, determinants of health and disease with multi-country involvement in equitably addressing health disparities and the disease burden [13]. This article reviews the dos and don'ts in the design, implementation and evaluation of academic collaborations with a view to global health.

## Academic Collaborations

Globalization, increased mobility of people, ease of travel and immigration have led to breaching of geographical barriers to the spread of disease and consequently an upsurge in demand for global health [8]. Despite the global 10-year increase in life expectancy at birth between 1980 and 2015 [14], the low and middle income countries (LMICs) carry a larger burden of disease than the high income countries (HICs), with sub-Saharan Africa accounting for 25% [9]. In addition, LMICs have only 3% of the global health workforce and spend less than 1% of the world's finances on health [15]. Scheffler [16] estimated a shortage of 792,000 health care professionals in sub-Saharan Africa in 2015. Global health is primarily concerned with a participatory process in solving the disease burden of LMICs through service, training, and research [11, 17••] and to foster international unity and cohesion [7]. While this initiative is noble, to what extent do interests and priorities of LMIC inform the global health agenda and implementation plans by HICs?

Clinicians and trainers in LMIC institutions face challenges of being overwhelmed with demands from their institutions and students alike [17••]. Moreover, the threat of career stunting and the desire for a better education and life result in brain drain and further shortage of staff [11, 18, 19]. Shortage of in-country partners, competition for their time with other pressing needs especially in rural areas where the shortages are worse [15, 19] as well as welfare factors, negatively impact on presence and equity in the partnership [7, 20•].

## Why Academic Collaborations?

Global trends in systems building and systems strengthening are such that individuals and institutions have to work in increasingly larger teams [21•]. Although academic collaboration is an old practice in the science fields, the arts and social sciences have only recently embraced the team approach [22••]. Academic collaborations have become a must for any progressive scholar, researcher, or institution and the last two decades have seen a rapid increase in the number of international collaborations. In addition, funding organizations have shifted from supporting individual scholars or institutions to collaborative teams as a way of ensuring sustainable capacity building [23••].

In the era of global health, a north-south, north-south-south or south-south collaboration models are especially encouraged in addressing health challenges, conducting research and improving medical education and are more likely to receive funding from government, international donors, or corporate [24–26]. Driven by trainee demands for preparedness to face health challenges beyond home boarders [8, 13], the pursuit for medical diplomacy [7] as well as the growing need and drive to contribute to solving the problems of the developing countries [9, 13, 17••], academic institutions in HICs are rapidly embracing global health activities. However, initiators of such activities should define their scope and prioritize the benefits to the host countries where the burden of health challenges is greatest [11, 27••].

The world today is considered a global village with increasingly complex scientific, technological and social demands and as such, access to resources, information, and the challenges thereof require a networked community and collaborative teams for improved efficiency and effectiveness [28]. Collaboration has become the norm of best practices in research, academia, business, and social sciences [22••]. Although collaborations improve productivity, Bozeman et al. [29] view collaboration as just a social activity between or among academics that takes place within institutional contexts, rather than as a purely rational actor strategy to maximize productivity.

Academic promotions, ranking of academic institutions, and level of internationalization have been key drivers for collaboration [13, 26]. In addition, Thakur and Dhanaraj [26] argue that the number of grants, research projects, and publications as key criteria for academic promotion has motivated academics to seek partnerships. Institutions in the south offer great opportunities for field research while the northern partners usually offer better laboratory facilities to support bench research [30••, 31••]. Sandwich graduate training programs with north-south or south-south movement have received huge funding from organizations such as the Swedish International Development Cooperation Agency (SIDA), Fogarty International Center of NIH, and others as an avenue to promote academic collaboration for capacity building [25, 31••].

Although collaborations are started for different reasons, and take on varying extents in scope, duration, and formality

[32], the success of collaboration is a result of careful consideration of the many facets of the puzzle. A mammoth of benefits for HIC trainees attributed to collaborations in global health have been described. Clinicians who have been involved in global health programs have tendency to show more humanitarianism, better clinical skills and an inclination to primary health care as opposed to other specialties [8, 10]. Benefits such as capacity building of facilities, exposure to modern technology, imparting skills to host clinicians and trainees cannot be overstated [17••]. However, such exchanges are not devoid of demerits such as ethical challenges related to distribution of benefits, quality of patient care, cultural barriers as well as fairness in resource allocation and utilization. The Working Group on Ethics Guidelines for Global Health Training (WEIGHT) addresses these challenges and outlines guidelines that should underpin such collaborations [10]. The guidelines take into consideration as key players in global health including trainees, host institutions, their communities, and sponsors [10].

## Dos and Don'ts

The growing number of academic collaborations especially in the twenty-first century has fueled deeper reflection and discussion on how best to design a meaningful, productive, and equitably beneficial academic collaboration. The inception, agreement negotiations, selection of priority areas, sourcing and allocation of funding, documentation, and publication continue to be challenges despite growing literature on the same. In this section, we present the key considerations in the collaboration life cycle highlighting the do's and don'ts of an academic collaboration.

### Context

The negotiation and design of an academic collaboration should be informed by a good understanding of the context at both partnering institutions. Many collaborative partnerships are driven by a need at the initiating institution or individual but with oftentimes little background knowledge of the priorities, local challenges, and gaps at the other end. A wealth of literature exists on context-specific research to address the needs of the community where research is being performed [11, 13, 17••]. Most of research findings and recommendations lack implementation because they do not fit the local context [33•]. It is imperative to engage local stakeholders right from the outset during development of a research agenda [33•]. Key areas to consider include as follows:

- *National and institutional priorities and strategic plans*: Evidence shows that collaborations are more likely to succeed and be relevant if the research priorities, and objectives are aligned to the broader national and institutional goals [31••, 33•, 34•, 35••].
- *Source and level of funding for the envisaged objectives of the collaboration*: Funding can be from several sources including direct contributions from the collaborating institutions' budgets, national governments, corporate bodies, and international donors [26, 31••, 35••]. In a review of global surgery collaboration at Massachusetts General Hospital (MGH), Chao et al. [34•], noted that 89% of respondents (students and faculty) did not fulfill their experiences due to lack of funding. The active role of institutions and governments in sourcing funding for collaborations is exemplified in Rwanda's Human Resources for Health program [35••].
- *Infrastructure status and needs at hosting institution*: For the successful implementation of the collaboration's activities, the initial stages should involve taking stock of key infrastructure needs such as availability and reliability of the internet, laboratory capacity, housing for exchange staff and students among others [36•].
- *Human resource needs* and the key contacts for the day-to-day execution of the collaboration [10]
- *Sociocultural environment*: The design of academic collaborations and global health initiatives should take into consideration the sociocultural relevance and sensitivity to the needs of locals [7, 10, 37].
- *Knowledge and recognition of other players in the area*: The importance of embracing the role played by other partners and strategies to bring them to the same table to explore the potential for improved effectiveness and how to avoid duplication cannot be over emphasized [36•]. The Paris Declaration on Aid effectiveness 2005 and the Accra Agenda for Action 2008 emphasize the importance of recognizing existing partnerships and build synergies as a way of increasing the productivity of partnerships [38]. Collaboration with multiple players poses special management and coordination challenges requiring partnership management structures preferably with a reliable activity tracking system for timelines on key outputs and events [35••]. Good partner coordination ensures that collaborations translate into real benefits instead of just a long list of partnerships. The dynamics demand strong leadership and investment in the coordination capacity [21•, 35••].

### Capacity Building at Host Institution

Academic collaborations often have a defined set of objectives, the realization of which requires an investment of resources from the partners. Capacity building is one of the more constant measures of collaborations' success [17••]. Unfortunately, capacity building is often seen as only human, but as described by Sewankambo et al. [31••] should target the

individual, the institution, the collaborative network and global levels. Given that many of the collaborations in global health take on a north-south model, with the potential to increase capacity at both settings, the south partner is usually the main host institution for faculty and students exchange [31••]. The research component of the collaboration is also often largely hosted by the south partner. Hosting exchange students especially without an accompanying faculty, research management capacity and management of grant funding pile an additional burden to the hosting institution [13, 17••, 31••, 39]. Moreover, infrastructural and technological shortcomings may hamper the exchange experience.

Many of the institutions in the south either lack human or financial capacity to take on this additional load or where it exists; it is often stretched with local academic, research, and administrative demands [11, 17••, 31••]. It is vital that the planning stages of the collaboration take stock of the host institution's capacity so as to identify and mitigate the critical gaps.

Building local capacity through mentorship, formal training, and offering funding for special positions or additional staffing is recommended [10, 40•, 41]. This approach would be preferred to the model of flying over staff from the northern partner to set up off-site stations at the host institution, as it fosters sustainable transferable capacity [31••]. In addition, Talib et al. [23••] report a successful initiative by the Medical Educational Partnership Initiative (MEPI) to encourage in-country and south-south academic collaborations using external funding. A similar recommendation is made by Sewankambo et al. [31••]. Evidence shows that supporting local and south-south collaborations offers a higher probability of success [23••]. However, Holm and Malete [42] caution that strategies are put in place to sustain such south-south collaborations given that most cannot afford the funding beyond the grant period.

In addition to the human capacity development, procurement of equipment should take into consideration details such as technical know-how and voltage rating at beneficiary site; remaining useful life span of the equipment(to avoid damping and environmental pollution), access to spare service parts, and the required maintenance needs/service agreements [43, 44•]. In a survey by Elobu et al. [45••], less than 25% of beneficiaries could use the donated equipment confidently.

While there can be opportunities for institutional or individual capacity building, the collaborating parties should be protective of their academic freedom and the institution's autonomy [17••, 46, 47]. Furthermore, where the collaboration is funded by a donor, the remits of the donor's influence should be well negotiated and documented, being protective of the academic aspects of the collaboration [47]. The tendency towards a power imbalance between the donor and the recipient academic institution that may negatively influence and conflict the implementation of the academic objectives of collaboration has to be in check [17••, 47].

## Communication

Communication is the gel that keeps a collaboration together [48••, 49•]. Because collaborations are continuously evolving relationships, with changing expectations and unanticipated challenges, it is important that a free channel of communication is maintained [10, 50]. There should be no power difference between the parties as this may stifle the communication. The failure of communication such as delay in replying to the other party, failure of declaration of conflicts of interest, omission of key information, or misrepresentation of the collaboration can permanently damage an otherwise thriving collaboration [48••]. The frequency, modes, and channels of communication for the various aspects of the collaboration's activities should be clearly agreed. In addition, the communication should be underpinned by trust, confidence and openness [27••]

## Leadership

Although collaboration is often initiated at individual level, the sustainability depends on a clearly defined leadership structure and selection of dedicated, motivated, and experienced leadership. In addition to being task oriented, the leadership should also have interest in furthering relationships [21•]. The people mandated should be able to engage the partners and stakeholders in a manner that ensures harmony and efficiency in realizing the collaboration's goals. Leaders who demonstrate vision, innovation, and ability to advocate for the success of the collaboration are more likely to maintain the cohesiveness of the team [27••, 30••] For example, academic collaborations have sometimes failed to realize staff and student exchanges due to visa restrictions [30••], and such a challenge calls for strong leadership to negotiate with relevant institutions.

The Paris Declaration on Aid Effectiveness (2005) and the Accra Agenda for Action (2008) provided recommendations that may be used to improve the design, implementation, and evaluation of collaborative programs [38]. The recommendations inform academic collaborations in that the partner institutions have to take leadership in identifying priority areas, implementing and evaluating collaborative programs. The value of "champions" cannot be overstated. Rivello et al. [9] in a review of academic collaborations for surgical training, highlight the contribution of champions from the partner institution to the success of the collaborations. The champions/leaders should be capable of navigating the cultural and institutional dynamics, be consistently committed, and able to maintain communication with the key stakeholders.

## Long-Term Commitment

Collaborations are first and foremost between individuals, who need time to build relationships and trust [5, 9, 22••,

31••, 41]. Short-term academic collaborations have been rightly criticized for not supporting the development of sustainable systems and long-term relationships; posing ethical challenges and often serving the interest of one and not all partners [10, 50–52]. The benefits of building long-term partnerships between individuals and between institutions are well-documented. In a case study by Semali ML et al. [48••], it was observed that long-term partnerships between the north institutions and the south seemed most fulfilling and offered greater chances for success. Similarly, Sewankambo et al. [31••] report on the benefits of long-term commitment in 15 years collaboration between Karolinska Institutet and Makerere University shows that it needed 10 years of funding and collaboration to realize 44 PhDs and more than 500 publications. Another example is the International Centre for Insect Physiology and Ecology (ICIPE) in Kenya [53]. To date, the Centre boasts of a 33 country membership, 608 postgraduate students trained and benefiting over 33,000 farmers [53]. As reported by Binagwaho et al., the duration of the collaboration should be long enough to deliver the intended outcomes [35••].

Institutional long-term relationships can have significant spin offs [31••, 48••] such as attracting further large funding, development of joint academic programs, and research networks. Important lessons are learned in the early stages of collaboration that require time to analyze and remedy [10]. Such lessons include understanding the local institutional politics and cultural nuances that are vital to a successful partnership [50]. It is not unusual for partners from the north to feel frustrated by the unfamiliar work styles and setups [48••] or behave in a manner that is considered culturally inappropriate at the host institution in the south [10]. In the same way, the host needs to learn and understand the cultural differences and find appropriate channels to minimize friction [50]. Trust and institutionalization of the collaboration are a result of such intended efforts.

Although long-term collaborations should be the norm, a strategy for the retention of the resources developed during the collaboration especially the human resource beyond the project lifetime should be well conceived. Setting up training and research programs in these regions may mitigate mobility assuring strengthening and sustainability of collaborations [11, 17••, 31••]. Retention strategies that support a training cadre for the future are cornerstone to successful partnerships today and tomorrow.

## Equity

Failure to address equity concerns in a collaborative partnership can account for a great proportion of suboptimal outcomes [54]. While academic collaborations for global health may be spearheaded by HIC to address the needs in LMIC, evidence shows a persistence of the dominance by HIC in determining the collaboration's objectives [45••, 51]. Additionally, the efforts to engage the local partners are often met with a "business as usual" attitude thus missing the overarching essence of the initiative [9, 13]. Perhaps the reason for being aloof regarding the global health initiatives could be that it is the HIC who determine research to be carried out in the hosts countries [17••] denying host's input and agreement in matters dealing with solving one's problems in the way that suits them best [11, 13, 20•, 27••, 31••]. According to Holm and Malete [42] at the University of Botswana, partners in the north often have unrealistic assumptions made about the south, that lead to inequitable relationships in academic collaborations. The assumptions could be underpinned by the disparate resource distribution and sociocultural environments [48••].

To address this, early involvement of host partners even during the informal stage and enforcing accountability along the process may contribute towards cultivation of a strong sense of ownership and beneficial involvement [20•, 30••]. Additionally, the ethical guidelines outlined by the WEIGHT group include transparency, discussion, and agreement before implementation and consideration of local need and priorities among other pillar points [10].

## Mutual Recognition and Benefits

Research, academic exchanges, and capacity building are major drivers of academic collaborations. The assumption at the outset is that there is agreement to cooperate in achieving mutually agreed goal and that the motivations are similar but, a recent study shows that the drivers for collaboration between institutions and individuals in the north are not necessary the same as for the south [26]. In addition, the inherent inequalities due to colonial legacies, disparity in resources, research, and publishing opportunities are a constant threat to the realization of an equal partnership [39, 48••]. There has been a trend in the majority of north-south academic collaborations, for more funding and academic movement to come from the northern partner. As such collaborations, increase there is an accompanying requirement for increased capacity at both partner institutions; it is important to clearly agree and document the sharing of benefits, co-authorships and other intellectual property arising out of the collaboration [54]. Although co-authorship can be used as a measure of a collaboration's success [26], there has been a tendency to underplay the contribution of the south partner in claiming credit for the collaboration's achievements [17••, 31••, 54]. There are many publications reporting on work done by academic collaborations in the south that lack an equitable representation of the contributors from the partner in the south institutions, and where this is done often the partner from the south is neither first nor last author [17••]. Collaborative research between visiting and local researchers can boost multiplicity [4]

of co-authored publications to increase visibility of the institutions in research, and provide potential to propel a local context and acceptable research agenda [30••]. This is however not to advocate for "hyperco-authorship" without regard to the each author's contribution to the paper [22••].

Canto and Hannah [55] argue that some academic collaborations are hindered from realizing mutually beneficial partnerships due to historical colonial and aid relationships. In addition, some reports show a discomforting level of inequality of remuneration among HIC and LMIC staff whereby the staff in a LMIC setting earn disproportionately less than what their HIC counterparts serving at the same location in the same portfolio. Fairness in the compensation for effort and time invested by faculty and staff at both ends of the collaboration can enhance participation and ownership [10, 27••, 45••]. In the event of externally funded academic collaborations, it may require to engage the funding organization in negotiating institutional overheads.

Mutual and equal partnerships should be pursued from the early stage of developing the collaboration to implementation and subsequent evaluation. The extent of ownership of the program by local partners should be well outlined and observed [10, 11, 20•, 30••, 31••].

## Negotiating Formation of an Equitable Collaborative and the Memorandum of Understanding

Negotiating an equitable collaborative requires careful attention to details, assessing whether there is a real need for it and whether the partners have a similar vision for the collaborative and shared values. The contracting process before the beginning of the partnership is a defining step that often disadvantages LMIC institutions over their counterparts from HICs because the latter may not have the necessary legal services to scrutinize the contents of the proposed agreement. As an example, the South Australian Community Health Research Unit [56] developed an evaluation tool which includes a guide with some relevant questions to consider at this stage and later throughout the implementation of the partnership.

Formalization of academic collaborations is an important and necessary milestone. Careful consideration should be made of each party's objectives, roles and expectations as well as the policy landscape likely to impact on the collaboration [50]. An agreement that clearly defines each party's roles and how products of the collaboration such as publications, patents shall be shared [10, 20•, 30••, 47, 50] enhances equity and open dialog. In addition, being explicit about such matters from the outset, promotes a spirit of mutual respect and benefit allowing both parties to contribute equitably while retaining their identity, core missions and values [47]. Although the memorandum of collaboration is mutual and need not be a deterrent to a free relationship between the parties, we advise seeking legal guidance especially at the draft stages. In addition to the critical considerations detailed in this article, other important issues for inclusion in the memorandum include clear objectives of the partnership and the funding sources for their realization [31••, 35••, 36•], procedures for conflict resolution, overall leadership; leadership at the collaborating institutions and the roles of each [13, 35••]. In addition, the Memorandum of Understanding (MoU) should be clear about what is and is not negotiable [50].

## Monitoring and Evaluation

Evaluation of the collaboration's performance is important, and many reports arising have been published. However, the perspective is often from one institution's viewpoint [45••]. The benefits and experiences of the individuals in the collaboration are underreported. In addition, evaluation tends to come late but, Deckelbaum et al. [41], recommend that the evaluation should be planned, inclusive of the local stakeholders and started early.

## Winding Up a Collaborative

A collaborative may have to be dissolved either because it is dysfunctional and is failing or failed to realize its goals or because it has achieved its set goals and there is no need for it to continue. Winding down is time consuming and requires good planning which includes deciding very early on prior to the start of the collaborative what success and failure would look like. In general the governing document(s) spell out when, how, and by whom the decision for dissolution is to be reached and how the assets are to be disposed of. Care should be taken to ensure compliance with the governing document(s), contractual agreements, and other statutory obligations and liabilities. Where a formal exit engagement can be realized, the party initiating the closure should formally communicate its reasons in writing, remain open to discussion, and abide by the provisions of the Memorandum of Understanding. All key stakeholders including students and community should be duly informed and plans made to minimize disruptions in ongoing activities.

In case of a failed collaborative, there is a need to be strategic and leverage learning from this unsuccessful experiment. This may be achieved by applying the intelligent principles laid down by McGrath [57] along with a three step disengagement process. It is advisable to periodically evaluate progress all through the life of a collaborative so as to decide early when to discontinue or put in place corrective action. An effective analysis should be accompanied with identifying the factors that facilitated success and caused failures. An important process that is sometimes forgotten or neglected especially in a failed collaborative is documenting the experiences in both the successful and failed collaborative, and summarizing lessons learned for future initiatives to learn from.

## Conclusion

As more academic collaborations emerge and the number of players grows, the need to reflect on the ethics, equity, and mutuality of the collaborations is becoming even more important. In the absence of a global collaboration policing body, sharing of experiences and best practices will be the guide for shaping of effective collaborations.

### Compliance with Ethical Standards

**Conflict of Interest** Patrick Kyamanywa, Kaitesi B. Mukara, and Nelson K. Sewankambo declare that they have no conflict of interest.

**Human and Animal Rights and Informed Consent** This article does not contain any studies with human or animal subjects performed by any of the authors.

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