Toronto Addis Ababa Academic Collaboration: A Relational, Partnership Model for Building Educational Capacity Between a High- and Low-Income University

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Abstract

Educational partnerships between academic health sciences centers in high- and low-resource settings are often formed as attempts to address health care disparities. In this Perspective, the authors describe the Toronto Addis Ababa Academic Collaboration (TAAAC), an educational partnership between the University of Toronto and Addis Ababa University. The TAAAC model was designed to help address an urgent need for increased university faculty to teach in the massive expansion of universities in Ethiopia. As TAAAC has developed and expanded, faculty at both institutions have recognized that the need to understand contextual factors and to have clarity about funding, ownership, expertise, and control are essential elements of these types of collaborative initiatives. In describing the TAAAC model, the authors aim to contribute to wider conversations and deeper theoretical understandings about these issues.

Editor's Note: This New Conversations contribution is part of the journal's ongoing conversation on social justice, health disparities, and meeting the needs of our most vulnerable and underserved populations.

Educational partnerships between academic health sciences centers in high- and low-resource settings are often formed as attempts to address health care disparities.[1–3] When entering these collaborative relationships, it is impossible to ignore the colonial legacies that created the inequities everyone is trying to overcome. In this Perspective, we consider key issues of ownership, control, expertise, and resources that influence the nature of international educational partnerships. We describe the Toronto Addis Ababa Academic Collaboration (TAAAC), an educational partnership between the University of Toronto (UofT) and Addis Ababa University (AAU), in which we have attempted to move toward egalitarian forms of knowledge exchange and partnership, and draw out lessons we have learned from our years of work across our two institutions.

Our work together building and expanding the TAAAC model was spurred by the 2008 decision of the government of Ethiopia to expand the number of new universities under an initiative called the Ethiopian University Capacity Building Programme.[4] Between 2000 and 2010, Ethiopia's gross enrollment ratio[5] is estimated to have increased from 1.184% to 7.319% at the tertiary level of education.[6] At the same time, the country experienced a massive expansion from 3 to more than 50 universities. Taken together, these created an urgent need for teaching faculty in each new department at each new university. Following this expansion, AAU, the oldest and most established university in the country, was given a mandate to train PhDs, medical specialists, and master's-level graduates to serve as faculty members in these new higher education institutions. This has required a significant investment to address limited human resources and infrastructure limitations (e.g., administrative offices and staff and lecture halls to accommodate an ever-increasing student body).[7] The fast growth of higher education in the face of scarce material resources is not without risk: There is concern about quality at all levels of the graduate education process, including curricula, assessment, and models of clinical training.[8] Further, in addition to the significant infrastructure and equipment challenges this growth has posed, finding qualified faculty members is a key challenge.[9,10]

TAAAC was founded in 2008, expanding from our initial partnership in psychiatry (the Toronto Addis Ababa Psychiatry Program [TAAPP])[11] to address capacity building for health professions education and other graduate programs. From the outset, our goal for the TAAAC model has been capacity building and sustainability across all programs, which has included seeking ways to help ameliorate the serious problem of "brain drain," which is the name given to the significant trend of outward migration of educated Ethiopians.[9,12]

Models of Collaboration

These challenges are not unique to Ethiopia or AAU. Creating excellent higher education programs is essential as African countries emerge from the complex sequelae of poverty and

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colonization.[13] Across Sub-Saharan Africa, medical schools have struggled to develop the capacity for quality medical education and to retain graduates and faculty in-country in a manner that is sustainable in the long term.[14] Many of these schools have established partnerships with Euro-American schools. Such initiatives vary widely. Some are project based, including specific, time-limited grant-funded projects. Many projects are done on a one-off, ad hoc basis,[15,16] after a specific need or funding opportunity has been identified. Others are supported by the public sector (i.e., governmental organizations often linked to a nation's foreign policy), the private sector (through philanthropic granting agencies), or the plural sector (faith-based organizations or nongovernmental organizations [NGOs]).[17]

The Medical Education Partnership Initiative (MEPI) is an example of a U.S. governmental, project-based initiative. In 2010, the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) launched MEPI, which involved 13 medical schools in 12 African countries. MEPI's stated objective was to improve the quality, quantity, and retention of local medical graduates.[18] Funded through five-year grants from PEPFAR and the National Institutes of Health, partnerships between African and American schools were a defining feature of MEPI. The funding design allowed for principal investigators in Africa to hold the monies and invite partners from the United States as well as to set the agenda for the partnership. Elements of foreign control remained, however, as African institutions were required to partner with an institution in the United States. Moreover, not-insignificant portions of the grant monies were used to pay for the American partners to provide consultative services to their African partners.

MEPI projects were expected to be built around five core themes: capacity development, retention, regionally relevant research, communities of practice, and sustainability. Though some might question the extent to which a time-limited, project-based structure is able to create sustainable practices and communities, with the completion of the MEPI projects in 2015, the international medical education community will learn much from hearing about aspects of the projects that endure and grow even after MEPI grant funding has ended.

Other international initiatives aim to be more relationship based, generally with less reliance on grant funding. The Academic Collaborative to Support Medical Education in Liberia, for example, was founded by a consortium of U.S. faculties in collaboration with a Liberian-American NGO, and ran successfully for seven years without significant funding.[19] This initiative was multipronged, with roles for U.S. faculty shifting over the course of the project from providing clinical services, to assisting with the creation of educational structures, to supporting faculty development and quality improvement projects.

Other long-term relational models can be found—for example, in Uganda,[20] Laos,[21–23] and Kenya.[24] Some of these models involve support from NGOs, while others involve governmental funding structures. From our experience with the TAAAC model, understanding contextual factors, as well as having clarity about funding, ownership, expertise, and control, are essential elements of these types of collaborative initiatives. Unfortunately, it is not always easy to discern from published articles and websites how other collaborations have handled these issues. We describe our model as a way to contribute to wider conversations and deeper theoretical understandings about these issues.

The TAAAC Model

Our TAAAC work has been built on a relational model with no external funding but with important investments from the two university partners. When we launched TAAAC in 2008, UofT and AAU had already developed a successful psychiatric partnership, TAAPP. The resulting graduate program was envisaged by three Ethiopian psychiatrists, realized through the commitment of psychiatrists from the Departments of Psychiatry at both AAU and UofT in 2003, and was the first to train psychiatrists in the country.[11] Members of the UofT Department of Psychiatry were invited by AAU in 2003 to partner in planning and providing seminar and clinical training to psychiatric residents in one-month modules three times a year. The curriculum, originally developed by the Ethiopian faculty, has been used to guide the needs of the program for the three UofT teaching trips each year. This curriculum can be modified regularly as the program continues to evolve. The subsequent TAAAC model, which as of 2017 includes over 20 graduate and 1 undergraduate program partnerships, drew on the principles and values of this psychiatry model.

From the outset, our aim was to ensure that the model was designed to support the educational capacity-building efforts of AAU. Teaching and training took place at AAU, with new graduates becoming faculty at AAU, and graduates whose study at AAU had been sponsored by other universities throughout the country returning to those institutions to become faculty. Although TAAAC has also helped to facilitate occasional one-year fellowships and several brief observerships for Ethiopian graduate learners (i.e., fellows or PhD candidates) at UofT, this is a very small part of the overall project.

As we recognized the importance of clear governance structures, we collectively designed a set of well-delineated principles and processes to guide the development of each new TAAAC program. At the same time, our partnership has a flexible governance structure with coordination of each program involving both a TAAAC coordinating lead at AAU and UofT, as well as discipline-specific program leads from both universities. While the TAAAC coordinating leads ensure that the model of engagement is in line with TAAAC principles and consistent across programs, the program leads ensure that the contexts of their specific programs are accounted for at all stages of planning. There is an overarching memorandum of understanding signed by our two universities and specific letters of intent between each of the faculties, departments, and divisions involved. Although each program is distinct, with different programs at different stages of development, each identifies strongly as being part of TAAAC and takes part in the pre- and postdeparture training activities. Both UofT and AAU TAAAC coordinating leads oversee and support the individual program leads, and there is a strong sense of camaraderie and connection across all of the TAAAC programs.

There is a clear differentiation between each of our institutions' duties and responsibilities. AAU is the host

university, so each AAU department has full autonomy and ownership over all aspects of program design, development, approval, and implementation. Each of the UofT departments or divisions provides support in any curriculum delivery area requested by AAU. Requests can include the provision of expertise for curriculum review or direct participation in teaching, supervision, and evaluation. TAAAC does not participate in direct clinical service delivery except when good teaching demands it; our surgery and emergency medicine programs, for example, require more hands-on engagement in clinical teaching than some other specialties.

TAAAC has followed a four-step approach to the establishment of each of its more than 20 working partnerships between the two universities. A detailed description of these steps is given in Table 1.

Whereas the ongoing growth and sustainability of TAAAC is dependent on sufficient funding from AAU, TAAAC is not reliant on grant funding for its operation. AAU covers the expenses for UofT visits of one month or longer, while UofT visitors must obtain support from their department leaders for clinical and teaching time that is missed. Thus, both AAU and UofT make significant commitments to supporting this program and have "skin in the game." AAU's monetary investment in the flights and accommodation for UofT faculty is substantial. Participation in TAAAC has been strongly supported by UofT department chairs and deans, resulting in a significant human resource investment.

Acknowledging the strong support of the institutional players does not diminish the degree of personal investment by faculty members from both Ethiopia and Canada. In many ways, the model is entirely inconvenient all round. AAU faculty have extremely heavy clinical and teaching commitments, with very limited administrative support. Hosting UofT faculty and codeveloping the curriculum are significant additions to their workload. UofT faculty contribute their time, losing clinical income while teaching in Addis Ababa. They often must catch up on local academic and teaching commitments upon their return to Toronto. In addition, accommodations in Ethiopian-owned hotels are comfortable but not luxurious, no consultation fees are paid, and only economy flights are provided. Unlike some grant-driven projects, this shoestring nature ensures that TAAAC work is not a "perk" or a "junket" on either side of the relationship. Perhaps paradoxically, as our model relies heavily on goodwill and personal commitment and is not bound up in funding-driven starts and stops, it seems to have supported the development of long-term partnership commitments.

TAAAC by the Numbers and Experiences: What Has Been Achieved?

As of 2017, TAAAC has involved six UofT faculties, one institute, several academic hospitals in the Toronto Academic Health Science Network, and the UofT libraries system, including the Gerstein Science Information Centre. TAAAC has also involved over 200 faculty and staff from UofT and 50 senior residents, fellows, or PhD candidates who have visited AAU to participate in learning and teaching in the various residency, fellowship, master's, and PhD programs in health sciences, engineering, and social sciences. On the AAU side, 222 AAU graduates have become faculty with assistance from TAAAC, 32 have attended UofT for a period of training, and 143 students are currently enrolled in TAAAC-supported programs (see Table 2).

Although numbers are one way to understand the impact of any collaborative model, our collective experience through our work with TAAAC is that the numbers only tell part of the story. One aspect that is difficult to measure is the ways in which TAAAC is embedded within developing AAU programs. TAAAC is not an add-on; rather, it provides relationship-based facilitation, problem solving, and logistical support to AAU programs and departments. Anecdotally, one of the most exhilarating aspects of TAAAC teaching that many of us experience is the in-the-moment realization that our assumptions are flawed or our teaching approaches are not fit for the context, requiring us to adapt on the spot. Working together closely to bridge our cultures and contexts, AAU and UofT faculty seek creative ways to develop high-quality, context-appropriate programs. Further, the TAAAC model has supported educational capacity building for graduate programming even in the development, launching, and implementation phases of two new graduate programs—emergency medicine and family medicine—which initially had no AAU department and/or faculty. In most other programs, there were one to three AAU faculty when the TAAAC program started.

Challenges

Of course, like any program, TAAAC faces ongoing challenges. Coordination of joint efforts is hindered by AAU's limited number of well-trained administrative personnel, overstretched university infrastructure, and relatively inflexible bureaucracy. Department chairs and program leads run most programs with minimal administrative support. Despite the high motivation of the Ethiopian faculty, the increase in workload that each partnership brings is significant. Although some of the UofT program leads are supported by nominal program or departmental stipends, all faculty (UofT and AAU) must devote personal time to attend to the numerous tasks TAAAC requires.

Second, Ethiopian telecommunication infrastructure (while improving annually) remains limited. What services there are, including cell phones and texting networks, are quickly overloaded. Power interruptions without automatic generator backup can limit access to the Internet. Meetings via Skype and conference calls are not consistently reliable. Western partners are often unaware of this and consequently unsympathetic about technological issues which are unavoidable in Ethiopia. Despite this, identifying interested faculty and learners from UofT has not proved to be difficult. The relative irregularity of Internet access puts a stronger emphasis on the need for UofT teachers to teach on-site and with text references. Although eventually it will be possible to run courses online, this simply is not the current reality. Furthermore, even when online courses are routinely possible, the question of the appropriateness of Western courses for students in a low-income country without on-site visits to tackle thorny contextualization issues will remain.

TAAAC attempts to mitigate the impact of the "brain drain" on Ethiopian health

Table 1

TAAAC Partnership Steps, Objectives, Processes, and Responsibilities

Step	Objectives	Processes	Responsibilities	
			AAU	UofT
1. Initiating a new program	Identify the educational needs of the AAU program.	Contact is made between AAU program lead and UofT program lead.	AAU program lead makes contact with the AAU and UofT TAAAC coordinating leads.	The UofT TAAAC coordinating lead contacts the appropriate UofT program lead to determine interest, capacity, timing, etc.
2. Partnership development	Discuss the proposed partnership; determine existing resources; and identify enablers, barriers, and gaps, thus guiding the development of a plan of engagement. Perceptions and assumptions are clarified, and realistic, achievable program goals are set.	A meeting is held between the discipline-specific UofT program lead and his or her counterpart at AAU.	Discipline-specific AAU program lead meets with incoming UofT faculty to thoroughly explore partnership possibility.	The discipline-specific UofT program lead visits his or her counterpart at AAU. Travel and accommodation are paid for by UofT dean or chair.
3. Program design, part 1: development of syllabus for 1-month module to support the larger AAU curriculum	Collaboratively develop 1-month syllabus relevant to the needs of the AAU specialty curriculum, considering local contexts and the community being served.	There is a system of 1-month training modules, each with its own syllabus. Each 1-month syllabus is taught by UofT faculty volunteers, based on requests for explicit expertise aimed at specific gaps identified in local teaching capacity by Ethiopian colleagues who provide context and determine cultural relevance. Each final syllabus is sent ahead of time to the AAU program lead with PDFs of required readings so that learners can be prepared in advance.	Codesign and guide the development of each syllabus with UofT program lead.	Work closely with the AAU faculty to codesign and develop each specific 1-month syllabus, which UofT faculty volunteers will teach at AAU.
3. Program design, part 2: delivery of syllabus	Ensure effective learning through the building of educational relationships with adequate time to fully understand the context within which individual students work and learn.	Although some TAAAC programs have shorter on-site teaching modules (e.g., master's of health sciences education), TAAAC emphasizes the need for 1-month on-site modules for programs that require both practical and didactic training. These 1-month on-site training modules are repeated in each of the TAAAC programs 2–4 times per year with different UofT faculty and UofT trainees taking part.	AAU facilitates TAAAC teaching by advising and assisting the UofT faculty to adapt to the local context.	Two UofT faculty teach the syllabus and provide practical supervision in person. They are accompanied by a UofT senior resident, fellow, or PhD candidate. The number of UofT teaching faculty is purposely kept small to ensure maximal engagement with Ethiopian students and faculty.
3. Program design, part 3: observerships at UofT	Participation in short-term observerships at UofT provides a benchmark for developing appropriate organizational infrastructure in Ethiopia as fellows or PhD candidates become faculty leaders in their field. Ethiopian trainees sometimes fear that their training programs are substandard. Through their experience at UofT, they can appreciate the quality of their local programs.	AAU fellows or PhD candidates participate in short-term (1–3 months) observerships at UofT or occasionally in 1-year fellowships at UofT.	Funding of flights and other travel expenses.	Facilitate learning experiences at UofT for AAU fellows or PhD candidates.
4. Transition to local program delivery	Ensure the successful transition of each program to full AAU faculty teaching capacity.	Once enough graduates have been produced to run the program locally, the number and diversity of the required UofT faculty are determined by AAU.	AAU directs the ongoing involvement of UofT to specific needs that follow from program capacity and supporting sustainability.	UofT shifts to joint research projects and more support for overall educational capacity building.

Abbreviations: TAAAC indicates Toronto Addis Ababa Academic Collaboration; AAU, Addis Ababa University; UofT, University of Toronto.

Table 2

Participants in TAAAC-Supported Programs

Supporting faculty or institute and program at UofT	Start date	Nature of partnership with AAU	No. of fellowships/ observerships	No. of AAU graduates	No. of currently enrolled AAU students
Faculty of Medicine					
Department of Anesthesia	2010	Support existing residency		8	12
	2016	One-year UofT fellowship	1		
Department of Family and Community Medicine	2012	New residency program		7	20
	2013	UofT observerships	4		
Department of Medicine	2011	One-year UofT fellowship (hematology internist)	1		
	2012	Fellowship in endocrinology		3	1
	2012	Fellowship in hematology		2	1
	2012	Fellowship in gastroenterology		7	2
	2013	UofT observerships	4		
Division of Emergency Medicine	2010	New residency program (no existing emergency medicine faculty at AAU)		15	29
Department of Paediatrics	2011	Pediatric emergency training into the new adult emergency residency program		15[a]	
	2014	One-year UofT fellowships	3		
Department of Psychiatry[b]	2003	New residency program		50	23
	2004	One-year UofT fellowships (including two visiting professors)	9		
Department of Medical Imaging	2011	Fellowship in abdominal imaging		2	3
	2012	UofT observerships	4		
	2014	Fellowship in chest, vascular, or thoracic imaging			2
	2015	Fellowship in musculoskeletal imaging			2
Department of Occupational Science and Occupational Therapy	2012	Mental health rehabilitation training of staff and psychiatry residents		30[a]	
Wilson Centre	2015	Master's of health sciences education program		15	14
Faculty of Nursing	2010	Nursing master's program		90	
	2014	Critical care training into nursing master's program		10[a]	
Faculty of Pharmacy	2011	PhD in social pharmacy		2	3
	2014	UofT observerships	4		
Faculty of Dentistry	2015	Doctor of dental surgery program		21	25
	2016	New fellowship program in oral and maxillary surgery			6
Faculty of Applied Science & Engineering	2011	Training into master's and PhD development programs		1[a]	3[a]
	2012	UofT fellowships	2		
UofT Library System	2008	Medical library literacy skills (undergraduate medical students, nursing students, allied health professions students, fellows, residents, faculty, and staff)		Over 1,000 trained on-site[a]	
Total			32	222[c]	143[c]

Abbreviations: TAAAC indicates Toronto Addis Ababa Academic Collaboration; UofT, University of Toronto; AAU, Addis Ababa University.

[a]TAAAC training into programs—that is, while TAAAC was involved in training individuals within these programs, the programs were not TAAAC programs.

[b]TAAAC expanded from an initial partnership in psychiatry, called the Toronto Addis Ababa Psychiatry Program (TAAPP).

[c]Total only includes graduates from TAAAC programs and excludes graduates of programs that TAAAC trained into (see footnote a above).

care. In spite of the lure of the West, with its economically rich lifestyle, the current combination of the availability of good in-country graduate training and mentorship from committed Ethiopian faculty has meant that students have not had to leave the country to pursue their academic ambitions. In addition, new graduates are able to find the right balance between their obligation to public duty as socially responsible health professionals and their desire for a middle-class lifestyle by working in the private health system. This is reflected in the fact that currently over 90% of TAAAC graduates remain in Ethiopia.

Discussion

From informal beginnings, TAAAC has grown into a sustained partnership model based on several key elements. One is Ethiopian ownership with Canadian support as invited. The regular well-negotiated and -prepared UofT faculty training visits provide a bolus of teaching and supervision into new graduate programs, which are led and run by very few local faculty. Our experience suggests that this bolus model is an effective way to provide ongoing, periodic support to Ethiopian colleagues who lead these programs. Moreover, because it is the Ethiopian faculty who lead each of the projects, there is a built-in cultural contextualization that occurs to counterbalance the otherwise-wholesale imposition of Western values and principles. Academic preparation for each trip is codeveloped with the Ethiopian context in mind, including attention to the prevalence of diseases and disorders in the country; the availability of material and technical resources; and the use of local journal articles, when available, for teaching and journal clubs. Mandatory predeparture TAAAC orientation and the sustained relationship of each of the UofT program leads with their Ethiopian counterparts ensure a shared vision and purpose and contribute to the stability and continuity of each of the partnerships.

Another key element is that TAAAC is relationship based. Freed to run without grant deadlines, there is a sustained process of acquisition of experience and familiarity between the universities. This provides the opportunity for innovation, creativity, patience, and flexibility. Through this process, mutually beneficial learning occurs as each university gains from the experience in different ways. AAU gains as excellent graduate programs are developed, while UofT gains experience from educational engagement with a low-income-country university while assisting in the development of its graduate programs. Both universities' faculty and students grow in cultural competency and skills, and both partners make research gains.

A third key element is that TAAAC neither is imposed by the government nor do the university faculties, departments, or hospitals involved enforce a corporate structure on the partnership. TAAAC is run and populated by educators, who believe that education is not a market commodity but, rather, a way to share and exchange knowledge. For those UofT faculty involved, this work reinvigorates their experience of teaching and sense of being a global citizen. Unlike some other institutional partnerships, the TAAAC model is not religious or faith based and is not mandated by Canadian or Ethiopian foreign policy. As an academically rigorous partnership, it avoids the more haphazard and unsystematic volunteering that well-meaning people undertake in low-income countries in their spare time. Further, it has provided departments and divisions at both universities with an example of a global health project that they have chosen to accommodate and through which they have developed global expertise. At the same time, the partnership has remained committed to the principle that only programs that support AAU's requests should be developed. In so doing, this model has avoided imposing potential UofT desires for research and student placements on AAU.

These three key elements contribute to TAAAC being a sustainable model of educational partnership between two universities—one situated in a low-income country and the other in a high-income country. It has demonstrated that a dearth of university faculty, a key challenge to Ethiopia's investment in higher education, can be addressed through the systematic engagement of willing and capable partners.

Our findings are neither conclusive nor authoritative. The limitations of the model include that the TAAAC experience may not be generalizable to other host contexts and other Western partners. Additionally, it is not certain how this model will hold up once implemented on a larger scale, and although TAAAC has been in operation since 2008 and appears to be running sustainably, only time will tell how the project will evolve. Regardless of the future of TAAAC, we believe that it is critical for the international community of medical educators to pay increased attention to the structures and models of international educational partnerships, particularly those between high- and low-resource settings. If the community is serious about addressing global health disparities, we must be willing to address legacies of colonial thinking and question assertions of Western superiority. Careful examination of issues of ownership, resources, expertise, and funding will allow educators to develop sustained partnership models that can reduce the imposition of Euro-American assumptions and enable greater sustainability and contextual relevance of educational programs.

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