Lessons Learned About Coordinating Academic Partnerships From an International Network for Health Education

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Abstract

There is a growing trend of academic partnerships between U.S., Canadian, and European health science institutions and academic health centers in low- and middle-income countries. These partnerships often encounter challenges such as resource disparities and power differentials, which affect the motivations, expectations, balance of benefits, and results of the joint projects. Little has been discussed in previous literature regarding the communication and project management processes that affect the success of such partnerships. To fill the gap in the literature, the authors present lessons learned from the African Health Open Educational Resources Network, a multicountry, multiorganizational partnership established in May 2008. The authors introduce the history of the network, then discuss actively engaging stakeholders throughout the project's life cycle (design, planning, execution, and closure) through professional development, relationship building, and assessment activities. They focus on communication and management practices used to identify mutually beneficial project goals, ensure timely completion of deliverables, and develop sustainable sociotechnical infrastructure for future collaborative projects. These activities yielded an interactive process of action, assessment, and reflection to ensure that project goals and values were aligned with implementation. The authors conclude with a discussion of lessons learned and how the partnership project may serve as a model for other universities and academic health centers in high-income countries and low- and middle-income countries that are interested in or currently pursuing international academic partnerships.

As people—and the diseases they carry—become ever more mobile, interest in global health issues has grown. Government agencies and foundations have devoted substantial resources for international collaborative projects for health research and education,[1,2] and many universities and academic health centers in the United States, Canada, and Europe have established partnerships with medical schools and health centers in low- and middle-income countries.[3–5] These partnerships aim to improve professionals' educational, research, or clinical abilities; to facilitate student and scholar exchanges; to pool resources for mutually interesting research; and to provide researchers with physical and information access to geographically bounded diseases and their treatment.[1]

International academic partnerships offer many benefits for the participating institutions, but the interaction of disparate organizational and national cultures may introduce administrative, political, economic, social, and technological challenges. When the partnership involves institutions from both high-income and low- and middle-income countries, additional challenges arise, such as resource disparity and power differentials.[6] These challenges affect the motivations, expectations, balance of benefits, and results of the joint projects and can hinder project goals if not addressed.[7,8] Some of these attitudes and structural factors have been previously discussed in the literature, in anecdotal reports, editorials, or thematic introductions.[3,8,9] The literature still lacks, however, a systematic analysis of the communication and project management processes that affect such partnerships.[10]

In this article, we present lessons we learned in a multicountry, multiorganizational partnership called the African Health Open Educational Resources Network (the "Network").[11–13] We begin with an introduction to the history of the Network, which evolved over three distinct phrases and was largely grant funded until May 2012. Next, we analyze the communication and management processes and practices (ongoing professional development, relationship building, and assessment activities) we used to actively engage stakeholders throughout the project's life cycle (design, planning, execution, and closure). On the basis of our analysis, we identified a model to enact our shared values of transparency, collaboration, and active participation. The result was an interactive process of action, assessment, and reflection, which enabled us to achieve the desired outcomes.[14] Last, we discuss the lessons we learned and how our collaboration model may serve as a template for other partnerships between universities and academic health centers in high-income countries and low- and middle-income countries.

History of the African Health Open Educational Resources Network

The objective of the Network project was to advance health education in Africa by creating and promoting Open Educational Resources by African academics to share knowledge, address curriculum gaps, and support

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health education communities.[12] Open Educational Resources are teaching/learning materials that are free, publicly available, and openly licensed to allow anyone to view, download, copy, translate, adapt, and redistribute the content.[15] The founding members of the Network were the University of Michigan (located in the United States), the South African Institute for Distance Education (with offices in South Africa and Kenya), Kwame Nkrumah University of Science and Technology and the University of Ghana (both in Ghana), and the University of Cape Town and the University of the Western Cape (both in South Africa).

The Network evolved over three distinct phases: (1) a six-month pilot in 2008 to incubate processes and relationships for developing Open Educational Resources; (2) a 12-month design phase to spur initiatives within four African partner universities to create Open Educational Resources in health; and (3) a three-year phase to scale up the initiatives within each partner university and extend them to include additional African institutions. During Phases 2 and 3, the University of Michigan and the South African Institute for Distance Education worked together as a central coordination team to cofacilitate the project's activities among the four partner universities (see Figure 1).

During Phase 3, we refined our programmatic approach for developing and sharing learning materials across the Network (see Figure 2). The African partner universities were responsible for adapting and creating new learning materials. The central coordination team took primary responsibility for gathering and distributing materials and for facilitating multilateral discussion around health education.

Lessons Learned

During the project visioning discussions, the participating organizations agreed that we should apply our shared values of transparency, collaboration, and active participation[14] to our Open Educational Resources as well as our process. To accomplish this, we actively engaged stakeholders throughout the project's life cycle (design, planning, execution, and closure) through ongoing professional development, relationship building, and assessment. These ongoing activities yielded an iterative process of action, assessment, and reflection for us to ensure that our project goals and values were aligned.

Design: Determining mutually beneficial objectives

All partners participated in the project design in order to ensure mutual benefits, sustainable value, and continuous support. In-person planning meetings facilitated a dialogue about individual institutions' and shared objectives. A multilateral workshop during Phase 1 determined the agenda and stakeholders for Phase 2; a similar workshop during the following year determined the scope for Phase 3. Following both in-person workshops, the central coordination team took the lead in drafting the grant proposals for Phases 2 and 3. Each African partner university authored a sub-subsection of the grant about activities at their particular institution. The central coordination team invited the principal investigators and coinvestigators at each partner university to provide feedback on the full proposal text and budget. Because of the transparency of the design process, the partner universities reported that they felt they were considered equal partners, and there were rarely concerns about cultural imperialism.[16,17]

Project planning: Understanding the effects of budget structures on collaborative work

Budget decisions made during the grant proposal stage have long-term impacts on project implementation.[17,18] Organizational autonomy and flexibility were shared values of all principal investigators. In Phases 2 and 3, each partner university had the freedom to determine how to allocate their tranche of the grant funds, with minor restrictions on the formats of budgets and on the activities themselves. This autonomy eased adaptation among the variations in organizational policies, procedures, and culture between institutions. For example, the standards for budgeting employee time differed between partner universities. At two of the universities, for salaried employees grants represent additional work at additional pay (i.e., a 20% grant appointment means a comparable

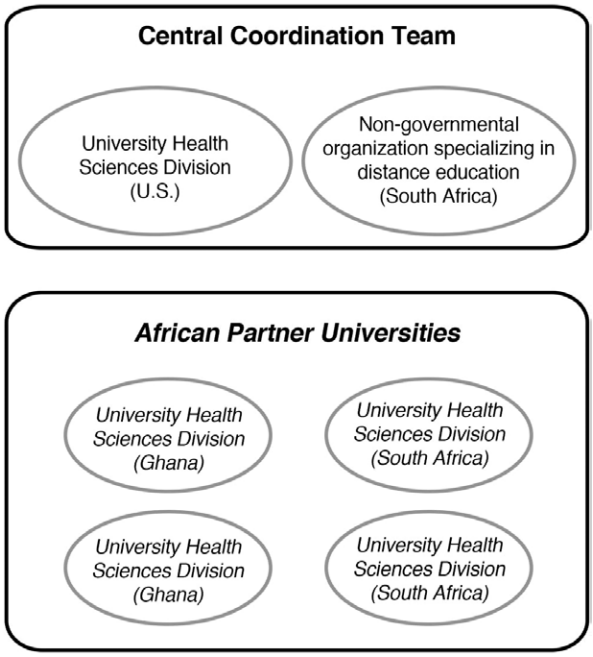

Figure 1 The African Health Open Educational Resources Network, established in May 2008, comprised six founding members: the University of Michigan (located in the United States), the South African Institute for Distance Education (with offices in South Africa and Kenya), Kwame Nkrumah University of Science and Technology and the University of Ghana (both in Ghana), and the University of Cape Town and the University of the Western Cape (both in South Africa). Individual organizations had senior administrators (including principal investigators), project managers, health educators, and multimedia/information services specialists. These roles varied within each organization, and each organization may not have had someone in every role.

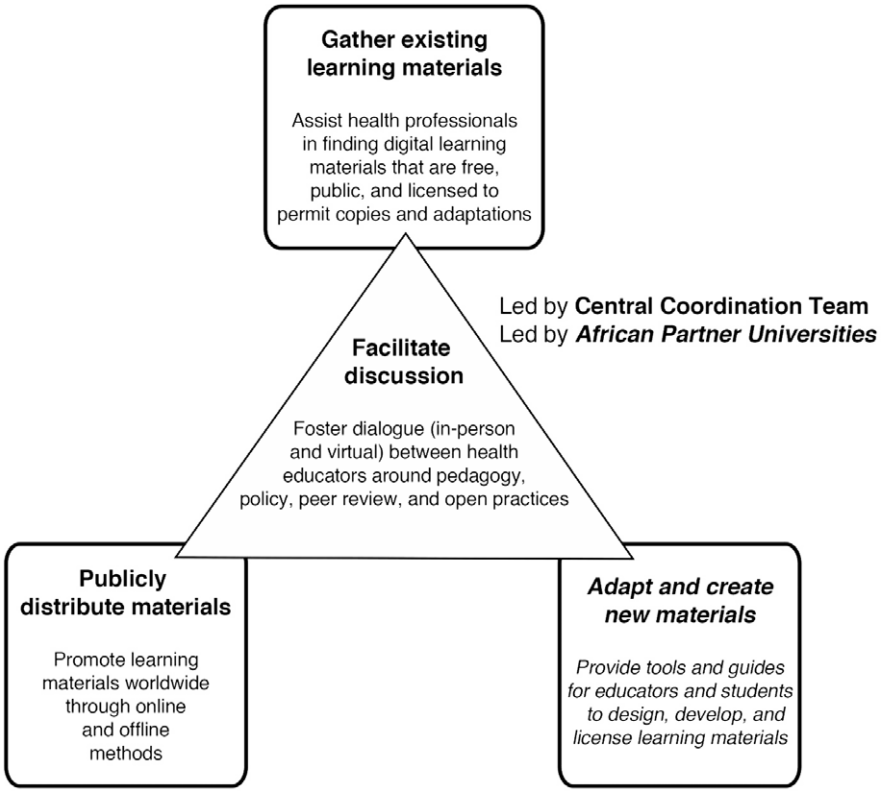

Figure 2 During Phase 3 of its project (2009–2012), the African Health Open Educational Resources Network refined its programmatic approach for developing and sharing learning materials across the Network. The African partner universities were responsible for adapting and creating new learning materials. The central coordination team took primary responsibility for gathering and distributing materials and for facilitating multilateral discussion around health education.

workload and paycheck increase). At other universities, an appointment on a grant meant reserved time, not increased workload or additional financial compensation.

Funds were distributed to partner universities up front for the coming year, with the provision that they complete all deliverables from the previous year. This strategy gave us flexibility to respond to unforeseen circumstances. For example, during Phase 3, a team at one partner university voluntarily withdrew from the Network because of limited staff capacity. Because of the autonomy of each institution, this team's withdrawal had little effect on the overall project progress. The remaining funds earmarked for that university were used to engage an alternative African institution.

When budgeting, the natural inclination is to focus on deliverables and to underestimate the effort towards the underlying processes that support and inform those outputs. During Phase 2, most African partner universities chose to allocate their funds toward software, hardware, and wages for health educators and technologists. They tended to neglect less tangible aspects, such as reserving time for someone to coordinate the project team, for quality assurance of deliverables, or for research. For example, the project manager at one partner university confessed that he had underestimated the time for project management and that he had not even budgeted for his own time during the first year, leaving him overwhelmed with responsibilities.

We now realize that, though some instructors and staff were interested in collaborative research or authorships, our strict separation of each university's budget did not provide any financial incentive for such cross-institutional interactions.[17] If individuals could have applied to a dedicated pool of funds for interuniversity activities, they may have been motivated to collaboratively produce or research Open Educational Resources.

Project execution: Implementing the plan in an efficient manner

Dedicated project management is essential to effectively achieve project goals. In the Network, there were two levels of project management: one to coordinate tasks and communication *within* each organization, and a second level to coordinate activities *among* the organizations. The two project managers within the central coordination team coordinated activities within their respective organizations and between all the organizations. The cross-sector pairing of the University of Michigan and the South African Institute for Distance Education for the central coordination team enabled us to blend diverse strengths and resulted in an agile approach to engaging the African partner universities. The South African Institute for Distance Education provided contextual knowledge about higher education in Africa, geographical proximity to the African partner universities, and logistics experience with large workshops. As a medical school within a large research university, the University of Michigan had insights into the operational aspects of higher education and health sciences in particular, including competing demands on faculty for research, education, and clinical service.

Retrospectively, we wish we had initiated discussions of project management during the design phase. Those African partner universities with dedicated project managers were more easily accessible to the other five organizations and were able to complete their deliverables in a timelier manner than were the universities that had no project managers. Across the universities, only one project manager had formal training or certification in project management. New project managers tended to underestimate the foresight, communication, and persistence necessary to manage complex projects, though they improved significantly as the project progressed. In hindsight, it would have boosted productivity across the Network if the central coordination team had facilitated an opportunity for experienced project managers to share techniques and tips with those who were new to that role.

Professional development: Building and sharing skills and knowledge

Each African partner university had varying levels of experience with media-enabled learning and intellectual

property. Many of the central coordination team's activities focused on formal and informal ways to share foundational knowledge and build skills across the participating organizations. These included workshops, interest groups, on-site collaborative projects, and external training opportunities.

Through workshops, the central coordination team brought together participants within and across universities for a mix of presentations, discussions, and hands-on exercises. Participants from the partner universities reported that workshops strengthened their confidence in the design and creation of learning materials and in how to resolve intellectual property and privacy issues before making those materials publicly available.

The central coordination team created interest groups to bring together individuals who perform similar roles across the partner universities. (More information about how participants connect with colleagues is available at http://openmi.ch/healthoernetwork-connect.) The three interest groups, conducted primarily via audio conferences and complementary e-mail lists, provided informal communication channels for sharing experiences, helping each other troubleshoot design challenges, and collectively brainstorming strategies for working effectively with faculty members.

On-site collaborative projects were a catalyst for knowledge transfer. Through these visits, individuals at the central coordination team and partner universities were able to learn from each other by working together on joint Open Educational Resources projects. A health educator from the central coordination team devoted his yearlong sabbatical to work primarily on Network activities at two African partner universities. One of the project managers from the central coordination team had extended site visits at three of the four universities. As a result, the central coordination team better understood the partner universities' available resources and their organizational structures and cultures, allowing it to tailor its support accordingly.

We benefited from coinciding relevant externally funded training opportunities. For example, with the assistance of the central coordination team, a lecturer from one partner university obtained a six-month research fellowship at the University of Michigan, where he gained a deeper understanding of instructional design. He subsequently introduced quality assurance models within his university, helping ensure the effectiveness of the Open Educational Resources developed there. Consequently, he was invited as a guest speaker at two interuniversity workshops.

Managing relationships: Actively engaging dispersed and varied stakeholders

The Network spanned six organizations, four countries, and diverse cultures. Each organization had worked with at least one of the other organizations, but none had worked with all five. Some individuals had worked together before, but most encountered a new group of colleagues. The previous institutional relationships provided a crucial foundation for the Network.

Face-to-face meetings, especially in the initial stage, were invaluable for building rapport. After individuals met each other in person, they felt more comfortable approaching each other with questions and feedback and were more tolerant of challenges of remote communication (e.g., inconsistencies in audio conference quality). The workshops, interest groups, and on-site collaborative projects were instrumental in strengthening the central coordination team's ability to be an effective relationship broker.

Although we had originally envisioned connecting the Network participants through social media, we decided against it because they used different platforms (e.g., LinkedIn, Ning, Facebook, Google+), preferred not to mix their personal and professional profiles, and did not want to maintain another account.[19] As an alternative, we used photos and short bios to personalize interactions through e-mail, the Web site, and audio conferences.

Assessment: Analyzing impact and responding to feedback

To stay abreast of progress and address reported challenges as they arose, the central coordination team scheduled regular internal and external assessments. The team facilitated four types of evaluations. Each evaluation provided leaders at the central coordination team, the African partner universities, and the funding agency with valuable insights about motivations, challenges, and achievements, as well as about the global reach of the resulting Open Educational Resources. Where possible, we encouraged joint authorship (e.g., [12,13,17,20,21]) and review of publications. With multiple levels of evaluation, we were careful to coordinate the timing and scope of the interviews to avoid duplication of efforts and interview fatigue. The four types of evaluations are outlined in Table 1.[16,17,22-28]

Project closure: Ensuring a sustainable transition to local ownership

When we envisioned the Network, we considered its economic as well as its social sustainability,[29] so that it would progress even after the final grant ended in mid-2012. The robustness of the Network is dependent on continuous engagement in Open Educational Resources production and promotion within and between individual partner universities.

The central coordination team aimed to assist the African partner universities in developing their institutional capacity to be able to take long-term ownership for the Network activities themselves. We wanted to avoid the dreaded "white elephant" scenario, where an outside organization or individual introduces an extravagant gift or program that is too costly for the grantee to keep or maintain, thereby being of little value to or unwanted by the grantee.[30,31] When the production and sharing of Open Educational Resources are integrated into an institution's existing education routines and processes, they will become a part of the institutional standard for teaching and learning. Guided by this belief, and with the assistance of the central coordination team, the African partner universities have been enacting numerous changes to strengthen their institutional policy and technological infrastructures. Two universities have developed policies that recognize creating Open Educational Resources as an eligible part of instructors' teaching obligations.[32,33] A third university has a similar policy currently under review with the academic board.

We have also integrated the Network's activities into the regular responsibilities

Table 1

Systematic Evaluations Coordinated by the Central Coordination Team to Assess the African Health Open Educational Resources Network, 2008–2012

Type	Phase*	Description	Impact of evaluation
Annual impact assessment report	2,3	The Central Coordination Team hired an independent evaluation consultant to assess the impact of the project within each partner university every year.[16,22–24]	Provided an objective analysis of whether project objectives were being met across the various phases, which helped revise the Central Coordination Team's and the funder's expectations and understanding of the extent and timeline of related outcomes in health education at the partner universities
Cross-institutional collaboration study	2,3	A social scientist from the Central Coordination Team led this two-part study (2009 and 2012), which focused on the communication between the six organizations, and the policies, processes, and technologies that influenced those interactions.[17,25] A second researcher from the Central Coordination Team and one from a partner university acted as coinvestigators.	Confirmed partner universities' interest in cross-institutional collaboration and identified approaches for Central Coordination Team to offer more opportunities for the partner universities to interact with each other. For example, the findings from the 2009 study inspired the creation of the three interest groups.
Institutional case studies	3	The Central Coordination Team project managers developed case studies about the partner universities for an in-depth look at an institution's motivations, strategy, processes, and lessons for open educational resources.	Enabled the partner universities to learn more about how other partner universities had implemented open educational resource activities within their institutions and how open educational resource materials were adopted by instructors and students[26–28]
Periodic monitoring of web analytics	3	Two to four times per year, the Central Coordination Team aggregated a report of the usage statistics from Google Analytics for the two main network Web sites, associated YouTube channels, and newsletter.	Demonstrated the growth in creation and usage of open educational resources over time, both quantitative (e.g., views, downloads, demographics, five-star ratings), and qualitative (e.g., textual analysis of user comments). This aggregation also led to discussions of how the partner universities could integrate analytics in their own open educational resources distribution channels.

*The network evolved over three distinct phases: (1) a six-month pilot in 2008 to incubate processes and relationships for developing Open Educational Resources; (2) a 12-month design phase to spur initiatives within four African partner universities to create Open Educational Resources in health; and (3) a three-year phase to scale up the initiatives within each partner university and extend them to include additional African institutions.

for managerial and technical support within each partner university and the central coordination team. At one university, all of the general media specialists assist with not only Open Educational Resources but also other multimedia services, and at the time of this writing, roughly half their salaries were funded by various grants. Another university is able to keep salary costs low by pairing authors of Open Educational Resources and media specialists with student volunteers who provide multimedia support as part of class projects. In 2011, a third university launched a campus-wide initiative to bridge activities, including Open Educational Resources in health, general Open Educational Resources, open scholarship, and other open activities. Two partner universities have already incorporated a clause in their health education grants that addresses the development of Open Educational Resources. By aligning the Network's activities with organization structure, we anticipate that the Network will be able to persist even if key personnel within the partner universities or the central coordination team leave the organizations.

To ensure the Network's sustainability after the grant ended in May 2012, it was essential to maintain some of the central coordination team's activities. Without such a central coordinating mechanism, there would be neither aggregation of African-produced Open Educational Resources in health nor a facilitator of a discussion through which the African partner universities could share practices and learn from each other. On the basis of the various assessments, we decided to maintain some central coordination team activities on a smaller scale, including gathering existing materials on request, continuing to publicly distribute existing and new materials, and facilitating the interest groups.

With this scaled-back approach, the central coordination team can financially sustain itself—the South African Institute of Distance Education with funds from another grant that lasts through 2016, and the University of Michigan through internal funds. Since the Network's funding ended, the central coordination team has facilitated quarterly audio conferences for the technology interest groups and has continued to distribute the quarterly newsletter to over 1,030 individuals. The audio conferences provide a channel to train participants from the partner universities on additional skills for distributing, monitoring, and analyzing the use of Open Educational Resources. Each newsletter consists predominantly of guest articles from the partner universities and other institutions in Africa. Additionally, the central coordination team periodically updates the Web sites to inform people about newly available Open Educational Resources, other global developments in health Open Educational Resources, and progress at the African partner universities. Since May 2012, the central coordination team has responded to 12 search requests for existing Open Educational Resources for various health topics.

Discussion and Conclusions

Our five years with the African Health Open Educational Resources Network were a formative experience in managing multicountry and multiorganizational collaborative education projects. We learned that global academic partnerships benefit from a process based on values of collaboration, participation, and transparency. By making the process iterative (acting, assessing, and reflecting), we could analyze and address social and managerial factors or any other challenges as they arose, thereby making progress toward objectives and ensuring that the partnerships were effective, sustainable, and mutually beneficial to all stakeholders. In other words, by promoting open discussion and stakeholders' active participation in the project's design, we created equal, effective partnerships. We learned, too, that budget and subcontract structures should be carefully aligned with project activities, and that dedicated project managers—in both a central coordination team and participating institutions—enhance coordination, communication, and the timely completion of project goals. Recurrent training and sharing of knowledge, both in-person and remotely, help project members build skills, which then enable their institutions to develop technical infrastructure and human resources. These, in turn, foster local ownership and the successful transfer of responsibility when the project comes to an end.

We hope that the Network's collaboration model and the lessons we learned will serve as a template for other universities and academic health centers in high-, middle-, and low-income countries that are interested in or currently pursuing international academic partnerships. The Network's central coordination team has adopted open practices to share what we learned by making our documentation (e.g., technical guides, form templates, evaluation reports, many research papers) publicly available and licensed to be viewed and adapted by anybody in the world. The central coordination team has also brought people from other institutions into the interest groups, where they can learn from the experiences of their peers at the African partner universities and brainstorm approaches to their common challenges. We hope our shared documents not only provide a reference for planning and implementing similar projects but also reflect the inspiration at the core of our work: to advance health education through mutually beneficial, resilient, and sustainable international partnerships.

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