



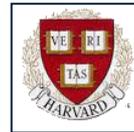
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Trinity College Dublin

**A Report on North South Experiences
 of Doctoral Training
 for Development in Africa**

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HEA

Higher Education Authority
An tÚdarás um Ard-Oideachas



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EXECUTIVE SUMMARY

‘North-South Experiences of Doctoral Training for Development in Africa’ is a study of three models of partnership between Trinity College Dublin (TCD) and higher education institutes in six African countries. The programme is co-funded by Irish Aid under the Programme for Strategic Cooperation (PSC) between Irish Aid and Higher Education and Research Institutes 2007-11. The goal of these partnerships is to deliver collaborative doctoral training programmes in global health, natural sciences and economics, to train researchers and build research and teaching capacity in African institutions. It is a joint doctoral training programme, with various elements and an overall emphasis on capacity building. Capacity building in this case does not refer solely to the training of the actual PhD students, but to building long-term capacity in African universities so that they (working with Northern partners where appropriate) can develop and expand their own capacity to train researchers in the future, this implies collaboration and learning from each other, and perhaps doing things differently to how either party would have done on their own. Three partnership models were employed by the programme:

- **African-led** – African Economics Research Consortium (AERC).
- **Bilateral** – TCD and Makerere University (Environment and Medicine).
- **Multilateral** – Indigo International Doctorate in Global Health.

The purpose of this study is to evaluate the three models employed in the Irish Aid/HEA project titled “Doctoral Training for Development in Africa” in order to understand the strengths and weaknesses of the three different doctoral training models, capture lessons learnt from our partnerships and make recommendations to others who wish to establish North-South doctoral training programmes.

Findings from qualitative interviews revealed several strengths, weaknesses, opportunities and threats for each of the models. All three models were found to support capacity building.

Specific strengths identified as inherent in the African-led model include its collaborative nature, cost effectiveness, dynamic nature, and link to policy makers. Other strengths identified included the potential of retaining students in Africa and the strong partnership structure between Trinity College Dublin (TCD) and the Africa Economic Research Consortium (AERC). The Collaborative PhD Programme (CPP) adopted by AERC was a major strength. Weaknesses identified include the limited nature of the partnership, the programmes limited emphasis on the research process, the variability and differences in quality of the different awarding universities and lack of qualified and experienced lectures to teach the core courses in some awarding universities.

The strengths of the bilateral partnership include it being cost effective, student-centred and also the equitable nature of the partnership. However it was seen to have limited capacity with huge administrative and financial costs involved.

Programme strengths identified for the multilateral model include the collaborative and interdisciplinary nature of the programme, its ability to encourage research within the student's context and its support for capacity strengthening of students and supervisors amongst others. Findings also indicated several programme weaknesses including the governance and administrative structures within participating institutes, logistics of managing different partners/expectations and establishing good communication and effective working relationship between supervisors in different parts of the world and the expensive nature of the programme

Recommendations and implications for future programme improvement are highlighted and discussed.

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Table 1: Categories of strengths, weaknesses, opportunities and threats outlined by respondents on the African-led Model.

Table 2: Categories of strengths, weakness, opportunities and threats outlined by respondents on the Bilateral Model.

Table 3: Categories of strengths, weakness, opportunities and threats outlined by respondents on the Multilateral Model.

List of Acronyms

AERC	African Economic Research Consortium
ALP	African Led Partner
ALS	African Led Supervisor
ALST	African Led Student
BP	Bilateral Partner
BPS	Bilateral Supervisor
BS	Bilateral Student
COHRED	Council on Health Research for Development
CPP	Collaborative PhD Programme
EA	External Advisor
HEA	Higher Education Authority
HEI	Higher Education Institute
HSRC	Human Science Research Council
INDIGO	International Doctorate in Global Health
MDG	Millennium Development Goals
MP	Multilateral Partner
MS	Multilateral Supervisor
MSc	Masters in Science
MST	Multilateral Student
MUIENR	Makerere Institute of Environment and Natural Resources
PSC	Programme for Strategic Cooperation
SAHA	Social Aspects of HIV/AIDS & Health
TCD	Trinity College Dublin
TIDI	Trinity International Development Initiative
WP	Work Package

Introduction

This paper deals with the process undertaken by the researchers and project management committee to evaluate three PhD training models adopted by the Irish Aid/Higher Education Authority (HEA) funded programme titled ‘Doctoral Training for Development in Africa’. The purpose is to identify each model’s strengths, weaknesses, opportunities and threats and to make recommendations to both Irish Aid/HEA and others who may wish to engage in North-South doctoral training programmes.

1.1 The Context of the Project

It is important to provide the context of the study as well as the larger context of the grant and how the various programmes/models are situated within the study.

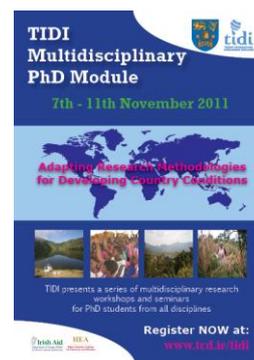
1.2 The Project

In 2006 Irish Aid and the Higher Education Authority (HEA) launched the “Programme of Strategic Cooperation between Irish Aid and Higher Education and Research Institutes 2007-2011”(Aid, 2007-2011). The intended outcomes of the programme are ‘*strengthened institutional capacity for development research and teaching in Southern Higher Education Institutes (HEIs) and sustained and flexible collaborative partnerships by 2015*’ and ‘*to support capacity building in HEI and research institutions in key poverty related thematic areas in Ireland and countries benefiting from Irish Aid support by 2013*’. The programme is ultimately intended to ‘*support Irish Aid’s mission in reducing poverty by contributing to the achievement of the Millennium Development Goals*’ (Aid, 2007-2011) The programme aims to bring together and highlight the important role of development assistance and higher education in combating problems specific to Africa. According to Nakabugo et (2011) such focus represents a “*new impetus for inter-institutional research for development*” in Ireland. Through the support of the above partnership, Trinity College Dublin (TCD) initiated the *Doctoral Training for Development in Africa Programme*. Through collaborative delivery, with African partners, of doctoral training, this programme aims to strengthen higher education in and for Africa.

An overriding objective of the Doctoral Training for Development in Africa Project is ‘*to strengthen higher education in and for Africa, by establishing Irish-African partnerships to provide collaborative doctoral training in disciplines relevant to Irish Aid*’ This objective is being achieved through the delivery of three work packages (WP):

1. WP1 focuses on establishing three models of doctoral training partnerships and programmes.

2. WP2 involves the delivery of cross disciplinary postgraduate modules to Ireland-based researchers entitled, “Adapting research methodologies for developing country conditions”.
3. WP3 aims to resource and develop the Trinity International Development Initiative (TIDI), TCD College Dublin’s platform for promoting research, teaching and outreach activities relating to international development.



TCD employs three different partnership models to facilitate the delivery of doctoral training mainly to African students based largely in Africa in three contrasting disciplines namely the multilateral model, bilateral model and African-led Model.

1.2.1 African-led: This partnership is led by the African Economic Research Consortium (AERC), a public not-for-profit organization, established in



1988 and devoted to advanced policy research and training in economics. The AERC’s multi institutional doctoral programme represents the discipline of economics. Through this project, funding is provided by Irish Aid and administered by TCD to support training within the AERC. This model relies mainly on already existing management structures and already existing doctoral training programmes.

The partnership between AERC and TCD supports two students, who commenced studies in September 2009, to participate in the AERC’s Collaborative PhD Programme (CPP). The (CPP) in Economics was launched by AERC in 2002 with eight universities in Sub-Saharan Africa. It is a structured PhD programme where students follow a programme including core modules, Summer schools and bi-annual workshops. A second strand to this collaboration involves the input of expertise from TCD researchers. Professor Frank Barry, School of Business, TCD teaches on the CPP programme, including on the CPP Joint Facility for Electives. AERC’s doctoral programme specifies that research should focus on "African problems in search of African solutions" (AERC, 2011). This partnership essentially involves TCD input into an existing and successful African-led model.

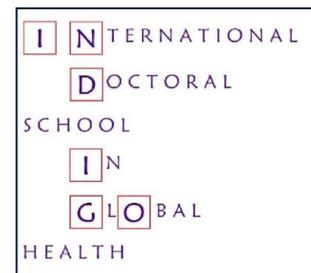
1.2.2 Bilateral: The bilateral partnership is between TCD and the Makerere Institute of Environment and Natural Resources (MUIENR) at Makerere University, Uganda. This partnership represents the environment discipline of the programme. One student is supported with supervisors at MUIENR and TCD. The student began the programme in September 2009 and will be awarded his degree from Makerere



University on completion in 2013. This partnership is based on the provision of support in research and teaching from TCD and the opportunity to carry out field-based research on an environmental issue in Uganda. In this case the research is on the sustainability of

wetlands in Uganda to provide multiple environmental services to Kampala. The schedule involved an initial 3 month period in Dublin where the student attended selected MSc modules and wrote a research plan. This was then followed by a period of two years in Uganda carrying out field work under the joint supervision of TCD and Makerere-based supervisors. The TCD supervisor makes one visit to Uganda during this period to support this field work. On completion of the field work the student returns to Dublin to start the process of writing up the thesis and attending further taught modules. The student then returns to Uganda to complete the process of writing-up and then submits the thesis.

1.2.3 Multilateral: The International Doctorate in Global Health (Indigo) is an innovative programme, launched in 2009 and coordinated by the Centre for Global Health (CGH) at Trinity College Dublin, with partners from Africa, Europe and North America. The programme partners TCD, the Mailman School of Public Health at Columbia University, Harvard Medical School and the Queens University Belfast with four universities in sub-Saharan Africa: Addis Ababa (Ethiopia), Ibadan (Nigeria), Makerere (Uganda) and College of Medicine (Malawi). The programme also works collaboratively with South Africa's Human Sciences Research Council's (HSRC), Social Aspects of HIV/AIDS & Health (SAHA) group and the Council on Health Research for Development (COHRED), based in Geneva.



The Indigo multilateral model provides an opportunity for students from diverse backgrounds to study at leading universities and to conduct research in Africa with an international panel of supervisors. Indigo is open to clinicians, managers and policy makers, practitioners and academic researchers from any part of the world and aims to produce leaders in global health research, policy and practice. The Indigo programme emerged from ongoing debates around aid effectiveness, academic collaboration between European universities and institutions in low and middle-income countries and, more specifically, the widely recognised need for health system research strengthening in Africa.

Between 2005 and 2008, the partners in the Indigo School undertook an intensive period of consultation, which included meetings of representatives of the partner institutions in Dublin in September 2006 and in Kampala in February 2008. Detailed planning was undertaken for the establishment of a joint degree programme with a strong capacity-building element. A funding proposal was developed and submitted under the Programme of Strategic Cooperation between Irish Aid and Higher Education and Research Institutes (2007-2011). This proposal, part of a wider Trinity-led programme of Doctoral Training for Development in Africa, was awarded funding for a five year period, beginning in October 2008.

The initial discussion about the Indigo programme (which took place between the international partners and potential funders) focussed on the recruitment of African students based in partner institutions in Africa, especially junior academic staff. Over time, however, this emphasis shifted to include the direct recruitment of students who do not come on to the programme through a partner institution in Africa but aspire to spend part of their study period at an African university. What follows here relates largely to the first category, albeit with some reference to the latter.

Indigo is managed through a nested structure involving all partner institutions. Overall responsibility for the programme rests with the International Doctoral School in Global Health, comprising representatives of every partner institution. Day-to-day coordination of the programme is in the hands of a three-person team based at the Centre for Global Health at TCD, comprising the Programme Director, Programme Coordinator and a part time Programme Administrator. A part-time administrator was appointed at the Human Sciences Research Council in South Africa.

Currently there are 12 students enrolled in the programme, the first cohort of 4 students was admitted in September 2009 – three African bursary student and one American non bursary student; an additional 8 students were admitted in September 2010 – 3 African bursary student and 5 non bursary student (2 African, 1 Canadian, 1 Finnish and 1 Irish). The Indigo students spend their first year in Trinity College, Columbia University and HSRC South Africa. From the beginning of the second year, students are expected to focus almost exclusively on their individual research projects, but attendance at research seminars and conferences, as well as occasional teaching duties in their African university base, also contributes to the ongoing PhD experience.

Supervision of research students is, in theory, based on an international supervisory panel, drawn from across the Indigo network. In some cases, however, this is turning out to be more of a '2+2' model, with the first two joint supervisors being at the students 'home' university (typically in Africa) and at Trinity College Dublin, respectively. This pairing of joint supervisors, which is established at the point of admission to the programme, provides intensive support throughout the first year and remains central to the research project up to the point of thesis submission. The third and fourth co-supervisors (if applicable) are appointed at the end of the first year or early in the second year, and are expected to play a more limited role – possibly of short duration – such as the provision of specific technical support in the area of research design, data analysis or skills training. During their first year, students are encouraged to identify potential co-supervisors from any of the institutions they attend or from elsewhere in the Indigo network.

1.3 The Importance of PhD Training in Economics for Poverty Alleviation and Economic Growth

Proposition One: Growth is Good for the Poor

Dollar and Kraay (2002) examine the impact of growth-enhancing policies on the income of the bottom 20 percent of the income distribution, after controlling for their impact on mean income, in a panel covering 80 countries and four decades.

They find that percentage changes in incomes of the poor are equal on average to percentage changes in average incomes.

Proposition Two: Growth is associated with a particular constellation of economic policies (i.e. trade openness, educational throughput, macroeconomic stability, rule of law etc.)

Importance of trade openness:

Well over half the developing world lives in globalising economies that have seen large increases in trade and significant declines in tariffs. They are catching up with the rich countries while the rest of the developing world is falling farther behind (Dollar and Kraay, 2004)

Importance of educational enrolment and other factors:

Groups of similar countries (such as the EU and OECD) and groups of similar sub-national regions (such as the states of the US or the prefectures of Japan) experience *convergence*, whereby the poorer regions grow more rapidly than the richer ones, while there is *divergence* across the nations of the world: poorer countries on average grow more slowly than richer ones. Differences in the educational attainment levels of the population are a major contributor to this outcome. EU and OECD countries tend to have fairly similar levels of educational enrolment (and hence experience convergence), while across the world economy, poorer countries have much lower rates of educational enrolment than richer ones and hence fail to converge (Barro and Sala-i-Martin, 1995). Equivalent differences arise in the case of macroeconomic stability and the rule of law.

Proposition Three: Institutional capacity is the factor that causes beneficial policies to be adopted as a group.

The policies correlated with growth (trade openness, macro stability, small government consumption, rule of law) are all highly correlated among themselves. When all of these policies are included in regression analyses, it can be difficult to identify the separate effects of different policies (Rodriguez and Rodrik, 2000; Levine and Renelt, 1992). The fact that appropriate policies tend to appear together as a constellation in successful economies suggests the presence of a common factor, which we label 'institutional capacity'.

Institutional Capacity:

One of the fundamental pillars of good governance is the system of oversight of executive power, which serves to ensure that power is exercised to the benefit of society rather than in support of special interest groups. Separation of powers (e.g. between the executive, judiciary and legislature, but also frequently with independent audit and competition authorities and independent regulators) is an important component of this, as is civil-society and media scrutiny.¹ A second pillar is a meritocratic civil service bureaucracy. This ensures not only that executive decisions are implemented efficiently but that valuable policy initiatives will emerge from within the civil service.²

Proposition Four: The policies a country adopts depend not just on the prevailing constellation of interest groups but also on institutional capacity.

The theory of interest group influence on government policy stems from Olson (1965). Interest groups are more likely to form when the potential payoff is large, and are more likely to be successful when the costs of the policies lobbied for are dispersed across a larger population, as public resistance is weaker in this case. Thus an interestgroup's influence may be disproportionate to its size or importance to the economy. Indeed Garret FitzGerald (2000) famously wrote that "democratic national governments tend to be subject to such strong pressure from vested interests within their own territories that many of their decisions operate against the interests of society as a whole".

Olson's later writings however began to explore the role of ideas in economic performance (Considine and Butler, 2007). It is rational for the public to remain uninformed if the costs of accumulating additional information are greater than the expected benefits. The interventions of those with an occupational interest in public affairs can change this cost-benefit relationship, as seen in the influence of T. K. Whitaker in the turnaround in economic policy in Ireland in the late 1950s. Olson (1990) explicitly associated the strength of Swedish economic performance with the high percentage of economists in the population. This leads directly to Proposition Five.

Proposition Five: Post-graduate training in economics strengthens institutional capacity.

This point was explicitly recognised in the recent report analysing the performance of the Irish Department of Finance over the boom period (Independent Review Panel, 2010). Among the report's recommendations on strengthening the capacity of the Department of

¹ Brunetti and Weder (2003), for example, find evidence of a significant negative relationship between press freedom and corruption in a large cross-section of countries and show that the direction of causation runs from greater press freedom to lower corruption.

² Evans and Rauch (1999) find, for 35 developing countries over a 20-year period, that the degree to which core state economic agencies employ meritocratic recruitment and offer predictable, rewarding long-term careers significantly enhances a country's prospects for economic growth, even when initial levels of GDP per capita and human capital are controlled for. Rauch and Evans (2000) show that the more that recruitment and promotion are based on merit, the lower is the extent of corruption.

Finance were that the Department must increase substantially the numbers of economists (trained to Masters level or higher) and other staff with relevant technical qualifications.

More generally, all the findings reported upon in this research document are the work of economists and co-authors in related disciplines, and accord with conventional economic thinking. Economists are likely to base their policy advice upon these principles, and such policy advice, if acted upon, is likely to contribute to poverty alleviation and growth enhancement.

1.4 The Importance of Higher Education for Development for Africa

According to the Programme of Strategic Cooperation “*there is a greater recognition of the potential of higher education and research sectors in the developing countries to contribute to achieving the MDGs*” and further to this “*It is increasingly recognised that a well functioning higher education system is a necessary condition for economic and social development*”(Aid, 2007-2011).

Higher education as a means to contributing to the alleviation of social and economic inequalities is becoming a fully recognised tool in combating poverty, and therefore working towards building sustainable development. According to the Commission for Africa report “*starting with its system of higher education, particularly in science and technology*” (Africa, 2005) the report describes Africa’s tertiary education system as being in a “state of crisis,” and urges the international community to provide \$500 million a year to strengthen the region’s higher education institutions and up to \$3 billion over ten years to develop centres of excellence in science and technology. In spite of this, the Commission for Africa Report five years later (Africa, 2010) notes that investment in higher and technical education has not increased – contributing to a continuing shortage of trained teachers, doctors and other key professionals . This not only highlights the importance of higher education according to the Africa Commission, but also of the need of the North to actively engage in funding this development, strengthening the conviction that partnerships are necessary between the North and South.

“There are signs of progress for higher education in Sub-Saharan Africa, and some African countries have put in place innovative policies to strengthen tertiary education systems. But this progress is limited in comparison with the progress of other world regions. This may result from insufficient understanding of the positive effects that higher education can have on economic development” (Bloom et al., 2006)

In addition to this The Task Force report, “*Higher Education in Developing Countries: Peril and Promise*” argues that higher education is essential to developing countries if they are to prosper in a world economy where knowledge has become a vital area of advantage. “*The quality of knowledge generated within higher education institutions and its availability to the*

wider economy,” the report stressed, “is becoming increasingly critical to national competitiveness.”

According to Nchinda (2002) doctoral training is the “*longest, most important and comprehensive form of training given to young graduates from developing countries to prepare them for careers and future leadership in research*”.

1.5 Doctoral Training Partnership

Most of the literature on doctoral training partnership refers to researcher training in health, with some in science and economics more generally. There exists very little beyond this i.e. very little on doctoral training in general and there is little on the pedagogy of doctoral training. In addition to this most of the literature is Northern-driven, especially coming out of large-scale collaborations driven by the World Health Organization (WHO), the Wellcome Trust etc. There are few African perspectives evident (although some exceptions and some African scholars associated with the above). Some specific articles written by African scholars highlight key aspects of partnership, for example best practices in North-South research relationships (Mary Goretti Nakabugo, 2010), Good Practices in Educational Partnerships (Unit, 2010), problems that hinder partnerships (Malete, 2010) few however actually make reference to North-South partnerships or doctoral training.

The recently published “Irish African Partnership for Research and Capacity Building”(Partnership, 2011) attempts to draw on a research capacity building model for Irish African partnership for higher education in general, but does not draw exclusively from experiences relating to doctoral training. Whilst this piece clearly identifies a focus in terms of a research and capacity building theme between Irish and African partners, it appears that it was not within the study’s remit to explore various inputs needed to manage a partnership at a practical level.

Holm and Malete highlighted nine problems that hinder partnerships in Africa. These originated from the authors own experiences, and therefore should be recognised as being a practical list of what not to do if involved in the establishment or management of a North-South partnership. Whilst this literature is informative it provides little in the way of offering critical and accessible advice relating to the establishment of North-South partnerships as they relate to doctoral training of African students.

This study will attempt to formalise and document the practical mechanisms and inputs needed to affect a positive Irish African doctoral training partnership, through an analysis of TCD’s experience with the collaborative support and delivery of doctoral training in Africa.

2. Methodology

This study used a mixed method design. Qualitative and some descriptive quantitative data were collected from all partners, supervisors and students who are part of the Irish Aid/HEA project. Qualitative data was also collected from programme directors and external advisors to the project. This was achieved through a semi structured interview which was used to understand participants' experiences with the project. The interviews sought to capture as much information about respondents' perceptions of the structure and management of the programme, and also its strengths, challenges and lessons learnt. The interview consisted of open-ended questions which were used to enable the interviewee to answer with reference to their own experiences. Whilst the interview schedule was already firmly established, the loose framework around the interview structure encouraged interviewees to speak freely and honestly. The use of in-depth interviews was vital for gaining an understanding of the interviewees' own personal experiences and perspectives on the research topic. The flexibility incumbent in the structure of the interview means that the interviewer is able to ask questions that may not already be included in the interview schedule. This is important because certain responses may inform or elicit other questions.

The target group for the study was the entire population involved in the 3 models of doctoral research being evaluated. It was important that all groups within each model were interviewed to gain meaningful data. Overall 58 semi-structured interviews were conducted over a three-month period as follows:

- Multilateral 37
- Bilateral 4
- African-led 10
- External Advisors 7

Three project researchers, all employees of the project based at TCD, conducted the interviews. The interview schedule was drafted by these researchers, based on the study objectives and was reviewed and approved by the project management team made up of five senior researchers based at TCD.

The project researchers sent a personal email to all potential participants indicating the nature and importance of the proposed study with a participant information leaflet and consent form attached. A research assistant followed up with requests for interview via telephone (some African and North American) or in person. One person declined to participate while one other could not make time within the time frame to be interviewed. The interviews were held at the time convenient to the participants and lasted between 30 minutes to one hour. Two of the researchers visited a sub-sample of partners to conduct face-to-face interviews. The partners who were visited include the AERC, Makerere University, and Human Sciences Research Council. These were chosen based on the volume of participants available per location and were undertaken to coincide with additional project objectives for economic reasons. In total,

51 interviews were carried out in person, 4 were carried out over the phone and 3 were carried out electronically, over email.

The interviews were digitally recorded and the data downloaded to one researcher's computer for analysis. Data was password protected and anonymised by giving each participant a unique code. The interviews were transcribed verbatim by two transcribers employed outside the university to do this work, and were uploaded into NVIVO. The data was analysed using thematic analysis. Two of the researchers read and categorised the data. Individuals were classified according to whether they are multilateral, bilateral, African-led, partners, students, supervisors, males, females, from the North or South.

The two researchers checked for consistency continually by comparing codes. The two researchers identified emergent themes. Any emergent themes which were independently identified by the researchers were compared and any differences resolved by discussion. Data was analysed at group level and at sub-group level according to location and status. Northern based researchers summarised the overall themes in short paragraphs relating to each model. In addition the themes were used to inform a SWOT analysis for each model. The reporting of themes that follows is supported in all cases by illustrative quotations.

3. Findings

In total 59 semi-structured interviews were conducted; 11 for the African-led model, 4 for the bilateral model, 37 for the multilateral and 7 advisors. The advisors comprise of project principal investigators, external advisors and advisory committee members. The findings were summarized for each programme using a SWOT (strength, weakness, opportunity and threat) analysis. Though each person used their own individual wording, there were clear similarities in responses such that grouping and summary of responses were possible.

3.1 African-led



In total 11 participants were interviewed, including the 2 students funded by the project, 2 supervisors and 7 other representatives from the AERC. Participants made comments both on the established AERC Collaborative PhD Programme and on the partnership with TCD which feeds into this programme. The majority of these stakeholders believed that the programme is strengthening capacity and rated it highly. The key findings are discussed and summarized.

3.1.1 Programme Strengths

Several strengths were identified by the partners to the programme. The majority saw the programme as dynamic and collaborative in nature and cost effective compared to PhD training in the North. Positive factors mentioned were the high retention levels of students in the programme, high quality of the programme due to the presence and work of academic boards and monitoring processes. In addition, a strong link to policy makers ensures that the programme is anchored in the reality of the African countries, which is beneficial.

It's an effective, most cost-effective programme, ALPI

The PhD students benefit from AERC which brings together leading institutions, international resource persons and senior African researchers to a biannual conference during which they make high quality input into the research process of the students. The biannual conference was seen as a key feature of the programme and an opportunity to network and build the capacity of AERC staff, research students and supervisors.

And also what I like about it is the biannuals. They give us exposure, not just in the networking aspect, because here we come and we meet with these people who report their papers and now you come face to face and, you know, they get to comment on your work, and it's really satisfying. ALST1

The third advantage of this module as I see it is this workshop, this integration between the doctoral research and the AERC, research. I think that integration is useful, because the students are able to get, I would say, the best advice for their research work. ALS

The programme attracts “highly motivated and well qualified” students with an added advantage of them being retained in Africa while they undertake their research.

Well, the feature with AERC that is positive is that the quality of the students is extraordinarily good, I think, you know, and I think they’re put through an extremely rigorous programme, which is achieved in a very student-centred way. EA1

So the fact that the students are doing their theses at African universities makes it much more likely that they’re going to remain in Africa so many students who go to Britain or Canada or the States to do their PhD end up staying there so essentially to a large extent are lost to their own countries so I think this is really advantageous. ALP3

Another strength identified relates to AERC’s process of tracking their alumni in order to monitor their professional progress and contribution towards economic development in Africa. Since the CPP has been in place since 2002 it is now becoming possible to use alumni career progression as an indicator to measure the success of the programme.

We have been updating that as part of a continuous part of really tracking this alumni group of students. So you would be able to notice where they are based and therefore how they are contributing on economic development in. ALP1

The programme was seen to contribute to capacity building by increasing access to doctoral programmes and strengthening economic training locally in universities.

First of all, is from this capacity building we’re trying – it’s not only capacity building of the individual, but capacity building of the institutions within African continent, yeah. ALP1

So these students which are funded by Trinity, even if it’s one or two or whatever, you can imagine the capacity that they are going to enhance or add to that capacity that is needed in Africa. ALP1

AERC reported that they have a range of partnerships with universities and funders outside Africa; therefore they appeared to evaluate the partnership with TCD in this context. The partnership structure between TCD and AERC was found adequate with the reporting format and financial management realistic and not complex

This partnership with TCD is quite good, in that the kind of requirements in terms of reporting and financial management is quite realistic. ALP2

What I like is that Trinity College knows our system and how it works I like the way the grant is structured. ALP1

3.1.2 Programme Weaknesses

Partners pointed out several weaknesses and areas for improvement. AERC had concerns about the nature and scope of the partnership with TCD which does not provide an overhead to AERC or cover administrative costs. They also expressed a concern about a lack of direct access to Irish Aid, the project funders. Their responsibility as a coordinating body of various research grants poses challenges at times, since they have many grants and relationships to manage. The fact that the partner reports having to deal with multiple funders as an issue points to a need for reference to some classic principles of aid effectiveness; harmonisation and alignment.

... you've only funded two things, the scholarship and the travel, which I mean, it's travel for these biannuals and all these kind of workshops. It kind of limits other costs that we incur when administering such kind of grants. ALP2

There's no overhead. Two, there's always a cost which is quite expensive which we usually do; usually we do, at least once in two years, monitoring visits. We – monitoring visit is where we visit the institution. ALP2

it becomes a little bit tricky... TCD funds two students, we have the money. So we either pay them or pay through the institution and they start to move on. Another donor comes and funds another may be five, but their rules are a little bit more stringent and diverse. These students are all supposed to be in the same class and move at the same pace, whereas in some of the terms, the money covers school fees or even, let's say research work. So you find that because, may be, TCD has given us money to go on ahead and issue, the student can go and do their research, another donor has not given, so they're left kind of behind. So usually one of the other challenges is that timing. Timing is usually very tricky for us, because you'll find some always left behind. ALP2

They mentioned a perception that a PhD under the AERC programme is probably less thorough than a PhD from the North. They believe that the requirement of students to produce one publishable paper from their thesis and the requirement for a 3 year PhD where one is spent on course work and 2 on the research itself is below average.

So the expectation, to me, of a PhD in the West is that you'll write 3 publishable papers. The expectation in the AERC is more like probably 1 publishable paper so it's less, so the time constraint is more pressing on them. I think that's just the way it is in African PhDs that they don't want people hanging around on their books for longer than the 3 years so they force them off the books so it's not seen probably within the AERC as a problem, you know, so I's be slightly critical there, viewing it as an outsider. I see that as something of a slight weakness but it's not generally perceived to be. ALP3

There were some concerns about AERC laying emphasis on the course work and not on the research.

So the push is not coming from the research side in terms of the actual progression of the students in terms of writing papers and getting a PhD done and supervision, it doesn't actually address that issue. EA2

Maybe one thing I would say is initially I was actually concerned about the fact that they leave a student at just – after work in progress, you're back with the university and that's it, but AERC say that the reason they do that is they want to detach – they want you to understand that it's not them to offer the degree but the university. ALST1

Though AERC is a coordination body there appears to be variability and differences in quality of the different universities awarding the PhDs. This factor is seen as one that may affect the quality of the PhD overall. .

I am not sure if the qualification of the teachers is up to standard. The method of selecting instructors in electives, it does not appear to be transparent for me, so there was some complaint from the students. I am not blaming the management, maybe they could not get qualified people for the money they give. Maybe because of that, or in spite of that, there is some complaint about the qualifications of the instructors, this is one thing. Another one is the dissertation advising process. It is very variable. Like in South Africa, in Tanzania, they are very strict. On the other hand, to our surprise, in some other participating universities people do their PhD with relative ease. So there appears to be variability. ALST1

The students specifically mentioned the lack of qualified and experienced lectures to teach the core courses of the PhD as a challenge as well as the lack of access to recent journals and publications. .

...Sometimes it happens that you find some lecturers who are not serious in their teaching, especially the core courses and you get so frustrated, wanting to learn and yet maybe the best is not being given to you, but we still had very good lecturers. ALST1

The only challenge I think it's only Cape town University; they have facilities for students to access these journals, subscribed journals, like Science Direct. You know, for us we are accessing the archives, the JSTOR. So to get the recent – that's very challenging. ALST2

3.1.3 Programme Opportunities

In relation to opportunities partners indicated that there is an unmet demand for the programme due to lack of resources. The programme can be extended using resources from

collaborative programmes like that of TCD and AERC to support additional students. Therefore there is scope to expand the type of partnership that exists with TCD.

The total number of applications (sic PhD training) we get on an annual basis is in excess of eighty per year, yeah, and with our limited resources we can support maximum thirty. So there is a huge unmet demand. ALP4

Partners also indicated that they are interested in increased knowledge exchange through participation in the workshops and that specific resource persons are considered a very valuable input and a very good way of feeding into the AERC model.

3.1.4 Programme Threats

Three major categories surfaced in terms of threats. The first is that of financing. Donor agencies are dramatically reducing their funding especially for PhD programmes and this has already affected the overall level of support for AERC. The increase in the cost of living also affects the standard of living of students.

The main challenge facing AERC currently because of – right from the financial crisis period of 2008, 2009, quite a number of donors especially from this reduced their funding. Yeah, dramatically reduced their funding, and therefore it has affected to some extent the level of support that probably AERC would have wanted. ALP1

The second category is the political environment. Lack of enabling political and immigration environment in some African countries reduces the coverage and expansion of AERC.

So, an enabling immigration and political environment is key. We have some countries in Africa where it is still illegal to – almost, to be found with foreign currency. One of the countries is Ethiopia. In Ethiopia there are a lot of foreign exchange restrictions, which make it very difficult for a foreign person to operate inside that country. We, for example, wanted to take the Joint Facility for Electives to Ethiopia at some point. We found a very good facility there, which was slightly cheaper than the Nairobi facility. But we realised that we could not go there because we normally transact a lot in dollars, and it would be a problem because every time you transact in dollars, you have to get authorisation from somewhere in the government. So there are several factors we look at, and then we categorise our universities into two groups. ALP5

The third is the huge management cost and burden of administering programmes under resource poor environments and the ability to maintain and find leading experts in Africa who will teach the recommended core models and supervise students in some collaborating countries.

The method of selecting instructors in electives, it does not appear to be transparent for me, so there was some complaint from the students. I am not blaming the management, maybe they could not get qualified people for the money they give. Maybe because of that, or in spite of that, there is some complaint about the qualifications of the instructors, this is one thing.
ALST1

3.1.5 Recommendations and Implications

Collaborative PhD Programme

If the aim of the collaborative doctoral programme is to build capacity then this should be done in a way that it will be effective in low income countries. To achieve this it is necessary to increase the training capacity and have some sort of arrangements where professionals from collaborating institutions would be available at agreed times to teach in CPP.

Partnership between AERC and TCD

AERC is a sub regional organization which covers most of sub Saharan Africa; it is recommended that Irish Aid identify AERC as one of its working partners with a capacity to develop an agenda for Irish Aid which takes into account AERC expertise and knowledge of the African context. Irish Aid can sign on to the AERC Voluntary Code of Conduct which amongst other things standardises outline procedures around reporting. If funding agencies would accept audits carried out by the AERC this will; reduce the volume of paper work and avoid any repetition in the paper work, therefore being more efficient. Unrestricted funding may be more attractive or beneficial as it provides for overheads as well as impacting on the reporting requirements. Increased access to academics and researchers who would be available to teach on the Summer School component of the programme would be very helpful to the AERC.

It may be necessary for AERC to harmonize its PhD by developing guidelines for appointment, supervision and training.

Table 1: Categories of strengths, weakness, opportunities and threats outlined by respondents on the African-led Model

African-led Model Strengths	African-led Model Weaknesses
<ul style="list-style-type: none"> • Contributes to capacity building by increasing access to doctoral programme • Strengthens economics training in local universities in Africa • Good partnership structure with adequate reporting format and financial management • AERC process of tracking their alumni in order to monitor their professional progress and contribution towards economic development in Africa • Programme attracts highly qualified students and retains them in Africa • Biannual conference brings together leading institutions, international resource persons and senior African researchers who make high quality input to the students proposals • Programme is dynamic and collaborative • Cost effective • Links to policy makers make research utilisation possible 	<ul style="list-style-type: none"> • PHD Programme under the AERC is less thorough compared to Northern PhDs • AERC strong emphasis on the course work (CPP) and not on the overall research process • Variability and differences in quality of the different universities awarding the PhDs • Lack of qualified and experienced lectures to teach the core courses of the PhD • Lack of access to recent journals and publications. • The responsibility of AERC as a coordinating body for various research grants means that there is a large administrative burden on staff • Lack of direct access by AERC to the project funders Irish Aid/HEA • Partnership is limited in nature and does cover administrative costs and overhead
African-led Model Opportunities	African-led Model Threats
<ul style="list-style-type: none"> • Unmet demand due to lack of resources • Building on collaborative networks like the AERC/TCD • Knowledge exchange 	<ul style="list-style-type: none"> • Ability to maintain and find leading experts in Africa who will teach the recommended core models and supervise students in some AERC collaborating countries • Huge management cost and burden of administering programmes under resource-poor environments • Reduction on PhD funding by donor agencies • Increase in the cost and standard of living in some African countries • Lack of enabling political and immigration environment in some African countries reduces the coverage and expansion of AERC.

3.2 Bilateral Model



We interviewed four people under this programme; the only student registered in the programme, the 2 partners/supervisors and the departmental head at Makerere. Seven other project advisors interviewed commented on this model including programme directors and project management committee members. Most of those interviewed rated the model very highly.

3.2.1 Bilateral Model Strengths

Partners, advisors and students interviewed identified a number of strengths within this model. The bilateral model was seen as a cost effective programme that will benefit the individuals and institutes.

I think my gut feeling is that this is a very cost effective way of doing thing and ensuring that the benefit is eventually in Uganda, in a developing country. I think what we are doing is training a person that we have identified as having skill in this area that needs training and can contribute something in Uganda if given the opportunity and this is somebody that wanted a PhD as a basis for their future in the university, and I think it's given an opportunity for him to get that and I think if it does and he can take those benefits back to Gulu (University in Northern Uganda) then I would see that as a success. BP

The model is seen as a traditional model of research which is built on two academics, in two different places (North and South) coming together to determine the hypothesis for the research. This traditional model sees the student at the centre of the relationship and the research question being formulated in contextually relevant and appropriate way.

and that's the biggest strength of that, and you have researchers, both of equal renown, who are treating each other with great levels of respect and who are very determined to see the student complete their studies in the appropriate time, all of which makes for a very happy mix. EA1

The sandwich aspect of the training was seen as a major strength where a student works in their own country addressing its country research need but also has a chance to get exposure and interact with supervisors, mentors and students in the North and build a network for future collaboration.

know it's a good programme. you are training the student which is already existing in the country, so it's a hands-on training and also that would sandwich whereby a student works in his or her home country but also has a chance to go and get an exposure and interact with other supervisors and other supervisors can also come and see the student in the field. It's more supportive than a student that does all their studies in Dublin with sophisticated equipment but which you cannot go and apply in the field. BP2

Because of that contact, I developed when I was in Trinity. I've been communicating with some students that side, particularly when I look on the net, I get a paper and I cannot access it from here, I send the details to them, they get it from that side and send it back to me. BS1

The supervision model adopted by the programme was seen as a major strength as it encourages some degree of independence for the student and a capacity building mechanism for the Africa supervisor.

Personally there's been growth, that academic growth, and when I look at the write-up, I see myself, you know, progressing towards a better quality. Sometimes I say I am blessed to have supervisors who have been reviewers in international journals, and they want that quality work and that is, to me, the challenge, to produce the quality work. To me, the rating is high because I am getting the value. BS1

They are very clear on who are the supervisors and what the progression looks like and who's responsible for what and when, right. EA2

Another major strength was the nature of partnership which respondents view as equal in nature where opinions are suggested and shared and agreed in an amicable manner. The partnership is well structured with clarity around roles, milestones and responsibilities.

what I've liked, BP is like a partner so you don't get someone who is bullying you, ...and he also makes nice comments like for example this, that type of thing and he takes them up, so he puts them as a suggestion, not as criticism, which I find is also very, very good. BP2

In addition to this the role of TIDI was recognized as filling an administrative gap

I think from the point of view of the TIDI administration here. I think its been a very useful things and very helpful, I think it's worked well to actually see how with the regular reporting what you have to do, I'm updated on what happens. I can see how this details, quite a lot of details and expenditure is important. BP1

3.2.2 Bilateral Model Weaknesses

Four categories emerged in relation to weakness from interviews. The first is that of scale. The model was perceived as a small personal relationship which may be productive but without making much impact.

One advisor said *it just doesn't have scale, you know, and that over time, those research questions need to be matched to something greater than the desires of those individual researchers, more to the desires of the university or the department as a whole. EA*

The second category is that of the nature, timing and planning of the sandwich programme. Though this programme was useful to the student, the timing was not optimal and therefore the value of the sandwich programme was not optimized. The time allocated for the TCD component of the programme was short (about 3 months) and there were not enough faculty members available to attend to the student's research and training needs during the period. The accommodation provided was not ideal for learning and the student was obliged to use his study time for prayer and social interactions as required by accommodation.

Things are intensifying, this is not good because if I don't work hard – the period I'm supposed to be here is a bit short and I'm doing very many things. I'm attending certain modules, I'm supposed to develop a proposal, so if I don't give adequate time, it will be a bit of a problem for me. I may not go back. So I stayed in Ireland and managed to do what I could with the cooperation of the people, and I travelled back". "Okay? So all these things have to run concurrently, and if you are working with different people and they don't give their programme to you in advance, sometimes you get mixed up. But when you're working with people who are organised, they give you their programme before time, then you know how to fit in. Otherwise, you may end up missing others. You may end up missing others because it's a bit hectic BSI.

The third category was the administrative and financial cost of setting up a programme with one student.

there's too high an overhead involved in setting it up. EA4

The fourth category is the limited capacity of the programme. Partners believe the impact of the programme is quite small and it is dependent on a pair of individuals who may not make impact on a broader level.

it's a more typical kind of relationship where it's, sort of, supervision of a student and I think it builds more personal relationships, maybe, between the individual, sort of, supervisors and individual departments, it goes a bit beyond that but is harder to bring to a wider audience or build, you know, broader capacity. EA3

3.2.3 Bilateral Model Opportunities

The opportunity to scale up the programme was the major one identified by most of the people interviewed. The programme could identify new areas of expansion building on the current research and initiative. It could also be broadened to include exchange programmes which will involve short-term training of a number of researchers in the South in good laboratory practice and use of modern laboratory equipments.

what we would hopefully do is develop much stronger relationship and there for see much more student coming from Makerere and then more people from TCD going there. I think what we are missing out on is the opportunity to scale from this. You know I think first

instance if we can show this type of model actually works in producing a PhD at the end of it and somebody that can make a contribution back in Uganda, I think that's a start but then I think there is further to go. BP1

One person, you know, can only contribute so much to the existing capacity so if there is opportunity in the future to train more people under the same programme that'd be great. Then you would see a much bigger impact on the college than when there is only one student who is being trained. BP2

3.2.4 Bilateral Model Threats

Two major threats were identified. First is the unavailability of funds for field research, which is a high priority in this type of programme studying the environment. In a broader global context, research funds often come from international funding agencies which often have other priorities thus it can be challenging to build research capacity in the field of natural science which is where the partnership is established.

There's no money in site research. There's money for salaries but there's no money to do research so the money to do the research comes from international funding opportunities, which often are HIV/AIDS, TB, Malaria, the usual areas so how do you then try to go beyond that and say 'if our country really needs this particular capacity how are we going to develop that? MP2

The second threat is that the project is on such a small scale that it does not have the capacity to build collaboration between departments and institutions within the southern university and between the Southern and Northern Universities.

My only concern is the – how the programme can be expanded and how the programme will run after this first phase because if it is a continuous thing, there must be a strategy that must be in place because if it stops all of a sudden, yes, we shall have benefitted alright. But since we are going to be the product of the system, we want to see a situation whereby all of us participate in helping others even benefit or grow in the system. That's what I am looking forward to. BS1.

3.2.5 Bilateral Model Recommendations and Implications

This kind of initiative should be scaled up but at what scale it is needed should be carefully considered and determined; selectively picking out various topics and skills that need to be strengthened and supported. Integrating other departments within the institution and building collaboration between southern institutes should be encouraged. Supporting and promoting the awarding of joint degrees between the two collaborating universities (North and South) should be part of this model. The programme should be clear on expectations and deliverables for both students and lecturers e.g. the number of papers to be produced and published from the thesis; this may be a big incentive for supervisors in the South where

promotion is largely based on publications. The sandwich nature of the programme is laudable but should be properly planned and managed to ensure it achieves its desired objectives.

Table2: Categories of strengths, weakness, opportunities and threats expressed by respondents on the Bilateral Model

<p style="text-align: center;">Bilateral Model Strengths</p> <ul style="list-style-type: none"> • Equitable partnership structure • The adopted model of supervision which builds capacity of the African supervisor and offers some degree of independence to the student • Sandwich nature of the programme which enables the student to research within his environment and also get exposure and input from the North • Cost effective, high value and very beneficial 	<p style="text-align: center;">Bilateral Model Weaknesses</p> <ul style="list-style-type: none"> • Limited capacity of the programme • Disproportionate administrative and financial support needed to set up a small scale programme • Nature, timing and planning of the sandwich programme • Small scale and may not make remarkable impact beyond the individuals involved
<p style="text-align: center;">Bilateral Model Opportunities</p> <ul style="list-style-type: none"> • Opportunity to scale up and broaden the programme 	<p style="text-align: center;">Bilateral Model Threats</p> <ul style="list-style-type: none"> • Small scale of the programme • Programme incapacity to build collaboration between departments and institutions • Lack of availability of research funds within the field of environmental research



Research being undertaken by Mr. Alfonse Opio, Uganda, 2010.

3.3 Multilateral Model

Thirty seven people were interviewed under this initiative, 20 partners, 12 students and 4 supervisors. The 7 advisors interviewed commented on this initiative. The programme was rated highly by most of the people interviewed.



3.3.1 Programme Strengths

Various strengths were identified for this model. It was seen as collaborative in nature involving partners with diverse experiences that add value to students, in addition to the strength of the joint supervisory model and application of locally relevant research. .

I think it is a very exciting programme in that it brings together a number of institutions, and I think each institution has something to bring to the table regarding PhD training. Our members of staff don't have a lot of time to devote to supervision of these students, which is not the case when we have partnerships with colleagues from Ireland, colleagues from other universities, where they can devote a lot of time to PhD supervision, and that helps the students to move fast in their work and also to get exposed to various ways of doing the supervision, and also being exposed to a number of other courses which may be relevant to their PhD training. MP3

I mean, I think it is an ideal way to capacity-strengthen because of the nature of the partnerships, because we have selected partnerships into it that are doing similar types of research, that are all researching in the health systems area, that we have knowledge of, that we have worked with in the past, so there's a good kind of solid base of research to embed the students in, and I think that's a very positive thing because, you know, one of the big difficulties with PhD programmes is that students are often left kind of isolated or not connected to anything, and it's very difficult then for them to develop a career beyond the PhD, whereas I think this, because it's based on a stronger collaboration and a similarity of interests, there are lots of opportunities for the PhD students, while they're doing their PhD but also beyond that, to become part of a network of researchers in an area that they're interested in. MP4

The sandwich nature of the programme was seen as a specific strength because it encourages research within the student's context and discourages brain drain. The research areas pursued by students are connected and relative to a real context where they're researching, and not divorced from reality. The Northern partner does not determine what the research priorities should be. Universities in the South determine what their research priorities are, and that is what the students pursue.

A real context, you know, where they're researching, so that it isn't that they're researching divorced from reality. MP3

We don't determine for them what kind of research, you know, what the research priorities should be. They determine from their universities what are their research priorities, and that is what the students pursue. MP3

The partnership structure and its inclusivity were perceived as a great strength for the programme.

I think Indigo was a very brave experiment and I think it's probably going to bear great fruit, you know, and from a ideological perspective I think Indigo is so inclusive that it's really to be cherished, you know. It's – I think it's ideologically an excellent programme. EA1.

Another specific strength is the programme's ability to attract and recruit additional students not funded under the Irish Aid/HEA grant. Indigo provides a platform for these additional students to seek and secure funding from civil societies and NGOs.

The fact that there is definitely a large appetite for this area, and I think that's indicated by the fact that, you know, there's a lot of applicants for the funded positions and also a lot of other people coming, you know, there is a, you know, high ability to attract students to these kind of programmes. EA3

The programme was seen to support capacity strengthening: there is institutional buy-in from all the partners that goes beyond individual students or staff members, there is a good co-supervision arrangement that broadens the experience of both supervisors and students, professional development of supervisors through various methods including the Indigo Summer School, professional development of staff, the interdisciplinary nature which adds to students/supervisors experiences and knowledge, promotion of research between junior and senior staff, the programme focus on the South and training and exposure of students to the international world.

I talk about the strength; strength is capacity building, especially in this health, especially for Makerere and the School of Psychology, of which I am the Dean. We are bottom heavy, I think 70% of our staff are all teaching assistant lecturers and we don't have senior staff members and you cannot be senior staff without a PhD so we see this research as a very great opportunity to train our staff. MP5

Young members are being empowered and also senior members are being empowered and also we are getting to know each other. We are being connected. The South-South co-operation is there and also the North-North South co-operation. As I've already said we can only aim for more. MP5

The programme design and structure was another strength highlighted by the partners. The course content is good, empowering and focusing on current issues that are designed to answer local needs. The structure creates a supportive environment for the student with a lot of modules to choose from, giving them the capacity to structure their learning, with a lot of sharing happening across the group. The flexible nature of the programme for non-bursary students was also highlighted.

Yes. I felt the courses were very relevant, and I'll give an example. So in terms of selecting courses, we were given a choice to select courses at the Centre for Global Health, or else outside the university, in the sense that Indigo supported us in getting in contact with different schools and taking courses from there. So in my case, I was taking also quantitative research methods, which is not offered by the Centre, but I was taking it at the School of Nursing and Midwifery. MST1

I don't know whether it's proactively prescribed (learning?) oriented, in case you're missing out on something, you have that opportunity to say I need to cover this. I take the example of NVivo. I remember that was at the beginning of, maybe, October, when people mentioned that, I think we will need some training in NVivo. MST2

Actually, to be honest, I feel really lucky to be part of this Indigo. MST7

The inter-institutional element of the programme is a major strength identified by students and partners. The structure broadens the student's academic focus and networks and will have a huge influence on their future career.

The inter-institutional elements similarly have opened them to new forms of scholarship and so on and have made them quite genuinely global scholars in a genuine sense and begin to understand how the world works in terms of knowledge creation and dissemination by not having affiliation just with one place like Trinity, but visiting and being part of others. MP6.



Pictured (left to right): Indigo Programme Director, Prof. Malcolm MacLachlan, Richard Mugambe, Prof. Alastair K. Ager, Mailman School of Public Health, Columbia University, Amarech Obse and Vincent Jumbe, Columbia University, NYC 2010.

I think this exposure is very important in building capacity for younger researchers and I think it can be applied in future projects and programmes. The other lesson – the other lesson was the aspect of – especially for training programmes, the aspect of having an internship. Yeah. I think it's also a very important lesson because somehow it takes away the student from the academic and helps the student to – the academic or the theoretical, let me call it the theoretical perspective of research and helps the student to dive into the practical aspects of research and challenges of research MST3.

Another category of programme strength highlighted is its multidisciplinary focus and exposure to different learning environments, the vast pool of expertise possessed by the various institutions and partners serves as a veritable source to support teaching and research.

The programme's multi-disciplinarity really gives it a great rating. The programme exposes the student to top universities, top expertise, in different parts of the world. MP1

The greatest – some of the greatest strengths of the programme, one is in terms of the multidisciplinary of the supervisory team. MST

I think one of the recognised strengths of the Indigo programme is its multi-disciplinarity, and then obviously within that there's the strengths of each individual and their knowledge of their discipline, and it certainly does add, I find, so much to the programme. MST4.

The partnership structure was perceived to be a useful mechanism to build research infrastructure in partner institutions in the South. There are wide-spread consultations before decisions are taken hence all the partners are involved in the decision making process. The Southern partners determine their research priorities and nominate students. Everyone within the programme feels respected.

My experiences of the Indigo programme have been pretty amazing. I've been much bowled over by the way we are treated at a human level. So this has been so kind of nurturing as a programme, so respectful of all of us as individuals and all of our, you know, kind of, subjects MST4

Like, the centre really genuinely sees the relationships with Addis Ababa University, Makerere, whatever it is, as a mutually beneficial relationship and equal relationship, and that doesn't happen elsewhere. Like, it's extremely unique in that respect. MST5

The Indigo summer module (systematic review, case studies in global health delivery and NVIVO) and the practical learning through student's internship with the Human Science Research Council in South Africa were cited as strengths by both partners and students.



Pictured: Dr. Joe Rhatigan, Harvard University, Case Studies in Global Health Care Delivery, 2010

*NVIVO training is excellent, excellent module. First of all, we had a lot of time to learn, it was practical, the lecturer was very engaging and he really wanted us to understand the process, rather than memorising things, and he was there to help us to understand all the issues.*MST6

So that was all fine, but the – (names of two lecturers) courses were just exceptionally good, like, they're both extremely good lecturers, brilliant individuals at the top of the field globally in what they do. Like, literally, both of them are the top of the field in what they do. MST5

The high quality of students participating in the programme was another category of strength identified by both partners and students

*but you all have been really able to attract great students from the target countries, from the countries that were most interested in building capacity and I am not quite sure how that happens.*MP7

3.3.2 Multilateral Model Weaknesses

Several categories of weaknesses were identified. The first is the lack of appropriate governance arrangements in TCD which have arisen with the Indigo project being, at least in part, nested within a larger institutional funded project. The arrangement diffuses the ownership of the project and also creates a huge administrative burden.

I think also the way the programme has been funded to date, which is a sub-grant of a larger grant, the HEA Irish Aid grant, that has made it very difficult because ownership of the programme then is quite diffuse and it isn't – I mean, although the centre runs the programme, the finances are managed elsewhere and that makes it incredibly difficult then. MP4

The second category is the administrative challenges that have characterised the relationship between Trinity and some of the partners and challenges between Trinity partners. The partnership structure was perceived as strong with widespread consultation before decisions are taken but partners observed that sometimes such decisions are reversed by Trinity citing administrative and donor requirements.

I think it seems it has become run as a basically a TCD programme where fees and funds go to TCD and there is some fee or transfer for service. MP6

*I mean, I think the differences in terms of administrative requirements within the different institutions have been quite difficult at times.*MP4

I suppose there have been very few problems other than problems in Trinity, which was TCD had gone back on what it had agreed when we put in the submission. It was keeping all the

money. So when TCD went back on that, it caused us huge damage amongst our partners, which – I think they thought the Centre for Global Health was grabbing the money. They didn't realise that we weren't getting any of it. MP8

The third category is the logistics of managing the different partners and establishing good communication and effective working relationships between supervisors in different part of the world.

Partially about the logistics of managing that number of partners, the, you know, the movements, the – even the budget support, I think, for students, student stipends, that kind of thing. EA3

The challenge – one of the challenges would have been, I suppose, communication because of the nature of the programme. there have been some issues in terms of communication, say, with some of the students or particular partners whereas, say, contracts, there have been difficulties there or just delays in getting contracts signed or amended, and that's tended to draw out the process". MP9

Communication within projects, among – you know, within individual projects, within the individual programme I think, basically, you know, for me, it's communication. MP10

The fourth is the very expensive nature of the model and the huge cost involved in administering the project. This questions the sustainability of the project.

One of the problems with the model is it's very expensive. The whole thing, the living, the travel, the fees, the living, the insurance over there, all these sorts of things, it's – for a few months, it's a really expensive – for that three months, I would estimate you could pay for a whole PhD in Uganda for the three months they spend in Columbia in terms of fees and living expenses, you know? So sustainability comes down to money. MP8

Well, I think the fundamental difficulty, which is not in some senses a fault, it's just a challenge, is that the programme is inherently complicated and quite high-cost. It's inherently complicated because of the number of different partners in the system and it's inherently high-cost because of the amounts of travel and coordination that's needed for it. MS1

The fifth category is non availability of funds to achieve earlier stated objectives e.g. supervisory meetings, annual Indigo workshops etc and even when funds were available; at times they were not used effectively to meet the programmatic goals

How are we going to do this joint research and publications when we don't have enough money? So this is becoming a challenge, I think. We might end up, or Indigo might run out if we don't organise this so we are already 2 years into the project and no workshop has been done except the ones we had in TCD last year. MP5

The second step was not only was the funding not there, but the funding that was there was then not made fluid or not able to be directed to what were seen to be the programmatic goals of the programme, and I think that then further depleted the opportunity to incentivise activity and make it run as smoothly as had been intended. MP6

The sixth category of weakness identified is Trinity's inability to institute a joint degree with each of the four partner universities, leading to questions on the genuineness/authenticity and equitability of the partnerships. The awarding of a joint degree was intended to bolster the attraction, credibility and status to the African universities' PhDs and allow students to gain an internationally recognised doctorate through their own university. It was also intended to benefit TCD by broadening and deepening its portfolio of global health research.

So the aim with Indigo originally was that we would offer joint PhDs between TCD and the Southern universities. However, that's proved extremely difficult to progress through the system in Trinity. MP8

For me the greatest challenge is that of the joint degree. That was a very laudable initiative but because of the bureaucracy in TCD this has not been achieved. It would be great if this is promoted as it will foster a very strong North South relationship and will build the southern universities. I believe strongly that TCD should do something about this. MP11

The seventh weakness identified was the difficulty for students of retaining focus on individual research proposals during a sometimes hectic first year spread across three continents, where they undertake taught modules without any academic credit. Related to this is the requirement for students to work part-time in their Universities while undertaking their PhD.

So that I could see might be a disadvantage to people over time, and to some extent moving around, getting those taught element experiences may – you would hope that they would inform your thinking about the research proposals, but it may also distract a little bit from the research proposals. EA1

not a full course that the Masters students were doing, but a lot of courses and then ,at the same time, be developing all of our PhD ideas. And I don't know, I just felt like it wasn't – there wasn't a lot of organisation around what was – where our time would go. Do you know what I mean? MST5

I think it might be overwhelming for the students, okay, because it's a lot. Okay? MS2

I work part time because it's a requirement by the department, by the university, that even when someone is on – is doing a PhD, they have to allocate some time to teaching, allocate some time to supervising students, allocate some time to attending departmental meetings and board meetings and also find some time to participate in other research projects within

the department, which I've been doing. Yeah, so you – the condition is that as much as you're on study leave, you don't use all your time for your PhD research and your PhD studies, but you also find time to participate in other university and departmental activities. MST3

The eighth weakness identified is the co-supervision arrangement which allows a student a maximum of 4 supervisors both from the North and the South with the primary supervisor from the South for the bursary students. Although the supervisory structure was considered successful to a degree, elements of this structure also demonstrated intrinsic challenges and difficulties. Communication difficulties were reported and attributed to the high student mobility and the fact that supervisors were in different physical locations. In addition it was reported that supervisors lacked knowledge of each other's disciplines which was described as having the potential to "penalise" the student. Furthermore supervisory roles in the South are often voluntary therefore there is little incentive to engage.

but the greatest challenge at the moment is not so much the networking, it's more around the co-supervision between supervisors here or in the States or in the UK and those in country. So encouraging the students in country and the supervisors in country to communicate with us – the project has the merit of the African supervisor as the lead supervisor. However, they are getting a PhD from Trinity, so it's quite politically sensitive in terms of, you know, one doesn't want to necessarily be seen to be saying to one's colleagues in Africa, you're not being a very good supervisor, because they're the lead supervisor. So it's – you know, the whole thing is an act of faith that people have to buy into the idea that once students go to Africa that the, sort of, supervisors there take over and that they continue with frequent communication. In some cases that's been very good and in other cases it hasn't been very good. No need to name names, but just as a general principle MP8.

I think one of the challenges is being able to work closely and at the same rate with all the supervisors. MS1

And you know supervisors, we are actually, this is like a voluntary service. It's not like you are paid to do it, nothing like this so at the end of the day what do you have to show? Is there anything you can show to anybody, you see? MP1

Other minor weakness highlighted included; the design of the programme allowed too much of the resources to be retained in the North; the Indigo policy that students must follow the structure and requirements of Indigo but also those of the Trinity schools where they are registered, creating a burden for the student; a felt (sense of) divide between the bursary and non bursary students; welfare of the students while away including student's health, health insurance, isolation from colleagues and isolation from family at home and feelings of being overwhelmed and insecurity due to constant travel.

3.3.3 Multilateral Programme Opportunities

In relation to opportunities, four primary categories were identified. The first category focuses on the emphasis on PhD training in the South and the need to raise research leaders in the South. Partners and students indicated that there is support and recognition of the importance of creating opportunities to train PhD students who will manage academics in the African region and build their skills to become seasoned researchers.

So what you are doing, what this project's doing, fits in quite well with the aspirations of Makerere University to increase its capacity in PhD training and create researchers for the future. What we're looking at now, at the next generation of African academics, and the people who are training at PhD are the people who are going to be the next generation of African academics. MP3

but of course I must say this is only one person. One person, you know, can only contribute so much to the existing capacity so if there is opportunity in the future to train more people under the same programme that'd be great. Then you would see a much bigger impact on the college than when there is only one student who is being trained. MP12

The second category relates to the presence of political will in the South and support from the North to support postgraduate training.

I think there is good political will in the South especially and also in the North there is real support, the political environment, the institutional support is all there. People are willing; whenever they talk about it they say it should continue so there is support in the South for this project to continue MP5.

The third category focuses on the need to build a strong global health network within the Southern region and beyond.

A South - South collaboration should be promoted. I believe the South should be given a chance to do and to build and foster collaborations. It would be great to learn from Indigo how a South - South experience will be. MP11

I remember saying that from my previous experience, myself being a student and on a funding project, the networking part is one of the most important parts, only because I think it's something that the student should also initiate in a sense, but it's something that's a feature that can really mean a lot to a student. Networking just in terms of who you work with and also for future, you know, you never know when you might meet some of them again. MS3

The fourth category is the plan to transfer the administrative leadership of the programme from TCD to Makerere University in Uganda. This has been discussed and agreed between Indigo partners but is dependent on various factors.

There are tremendous opportunities within the college environment to increase human resource capacity to be able to service all these partnerships and be an active partner contributing meaningfully” and to also look at the institutional level and if there are adequate leadership and management mechanisms to be able to coordinate these partnerships. MP12

3.3.4 Multilateral Programme Threats

Four primary threats to the model were identified. The first category focuses on securing additional funding for the sustainability of the programme in the current economic climate. Many agencies are not currently funding PhD training and the plan to transfer administrative leadership to Uganda might not be actualized if funding is not secured.

I think its probably been tricky to attract funding. I know in your early days Irish Aid was you know, helped get it off the ground but you know doing this kind of work is challenging for institutions, I mean it takes investments of time and stuff so I would imagine, although I’m certainly not responsible for the finances, I would imagine that attracting sustainable funding is probably a major challenge. MP7

...and that was always a little concern about Indigo, was would it be sustainable without Irish Aid? MP13

The second is on the continuous participation of both the Southern and the Northern partners. The administrative transfer of the programme to the South may mean that the Northern partners will no longer be willing to participate. Many discussions around global health are on issues which are very common and prevalent in the developing world and this may lead to lack of interest from the developed world and this paradigm may change in the future. Some of the Southern partners are also involved in several other partnerships and proper maintenance and active contribution to these partnerships is vital.

I think what we’ve had is a good start-up, but the real test of the model will be when it’s African-led, will places like TCD and Harvard and Columbia and all the rest of it still want to be on board when Makerere is driving it? MP8

Well, I think partially there’s ensuring real participation by the partners, particularly the Southern partners. I think that’s something that a lot of these kind of partnerships struggle with, it’s quite – you know, a lot of things can end up being, sort of, more run by the Northern partner. EA3

The third category focuses on the governance structure of the participating universities and the challenge of building equitable partnerships under such structures.

The challenges we have are institutional because our universities don't change their characters overnight. So when you want to introduce a concept of joint degrees to go through senate, to go through council, to go through the boards can be a challenge. MP3

I think it's very important to ensure that there's really equal partnership, and that's quite difficult to do when you don't have, for example, equal budgets, when you don't have equal staffing capacity to – in each institution or where even the numbers of students are different or when it's sort of, you know, more based in one place than in another. So I think that's a challenge. EA3

The fourth category was the inadequate research infrastructure and non conducive research environment in the South.

Another challenge has been poor infrastructure, especially in the South, for example here we have poor connectivity of Internet and this hinders contact between members involved on the project, the staff members and also the interaction between the staff members and the students. MP5

It's on this return, which is a good thing, absolutely, it's on this return that we're ensuring that that's been a platform which the students can build, rather than they get tangled in the weaves of the demands of that institution. MP6.

I think the greatest challenge, or at least one of the biggest challenges of this programme, is that people will go through it and then they will leave the country they are currently living in. MST4

3.3.5 Multilateral Programme Recommendations and Implications

The Indigo programme is engaged in a collaborative effort that, over time, will build capacity for researcher training in Africa. This is approached from a number of directions, shaped by the priorities and needs identified by the African partners and based on the principle of parity of esteem. It is important that the model is positioned in a way that is attractive to external funders like the Gates Foundation etc. to ensure continuity of training students and make a better impact within the southern institutions and regions.

The programme should be simplified further because resources may not allow it to retain its present structure in full. The collaboration and network should be strengthened and nurtured through frequent interactions of partners, supervisors and staff, and by building trust. Simple interventions such as an annual or biannual newsletter describing the students, supervisors, partners and networks may be beneficial in strengthening the partnership and making everyone involved feel a part of the diverse and geographically spread community.

A multilateral initiative such as this brings together people from diverse backgrounds and cultures and things can be understood differently through the unique organizational cultures

and the various systems which can create strain for the partnerships. This highlights the need for partners to communicate expectations clearly and explicitly at the beginning of the project. This includes not just technical academic issues but administrative and financial ones as well. Assumptions, expectations and deliverables need to be made explicit in writing, so that the basic premises upon which the partnership is built are fully acknowledged by all and everyone is accountable. There is a need to understand and appreciate the particular needs and situations of each collaborating institution. Efforts should be made not to create feelings of superior and subordinate relationships. Decision making, regardless of sponsorship source, must largely be collective and, policy and programme content and direction must be flexible to permit local and environmental variations while retaining the larger programme goals and objectives.

It may be necessary for the programme to consolidate the research themes to make the output of the programme more coherent and to align with institutional and regional priorities for research. This will make the programme more attractive to policy makers.

The programme is student-centred and it is important that students devote enough time to their research. Partner institutes, especially those in Africa, should encourage staff within the programme by allowing them more time to focus on their research. An establishment of a network of current students and alumni is encouraged so students can come together and interact and share their experiences as their careers develop. The weekly Indigo seminar series should be structured to be more useful to the students including provision of informed feedback on their presentations.

Research governance structures within participating institutes, especially TCD, should be addressed to help ensure equitable partnerships. To encourage and build lasting partnerships the possibility of awarding a joint degree should further be explored by TCD. The university has a recent policy on joint degrees but this has yet to be tested. A joint degree would encourage students and give them recognition from two prominent universities.

To strengthen the programme in the future it may be necessary to build a community of supervisors so that they feel part of the programme as a collective whole. Instituting a supervisor training strategy could help enhance the process.

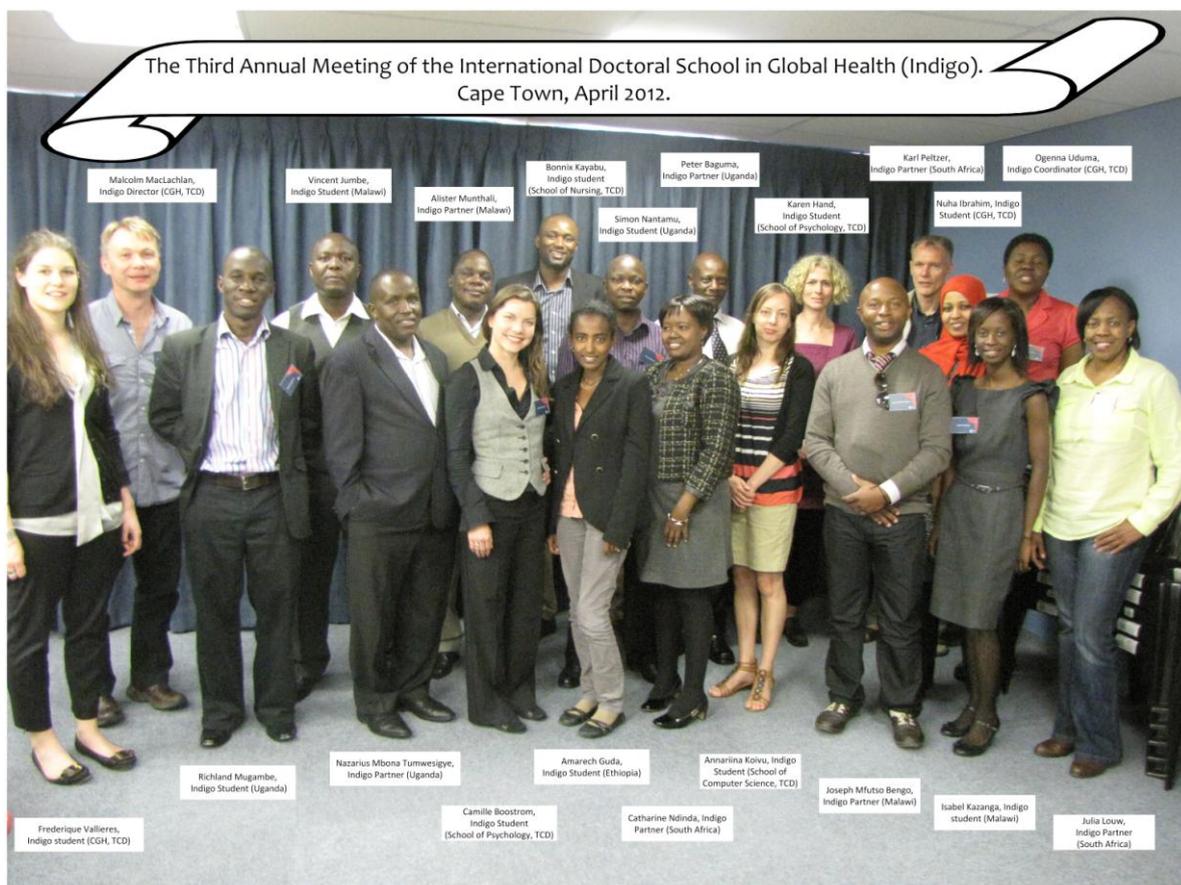
To make effective and lasting impact with Southern partners, the programme should consider running short courses within the region for other PhD students; this may be similar to the Indigo module (which offers modules on Systematic Reviews and Case Studies in Global Health Delivery) or other modules that will be of benefit to the South.

The next phase for this model is to transfer the administrative leadership to the South; this is an opportunity to develop South – South collaboration. Though institutions in the South have fewer resources and less capacity, South –South collaboration is fundamental to African participation in important discussions around global health.

Future projects should consider whether Southern leadership is feasible. Having the centre of gravity of collaborative projects reinforces the principle of parity of esteem. If the Southern institute in question is not capable of hosting this type of project, then barriers should be identified and addressed.

The level of cost in the Northern Universities is very high and it's certainly arguable that it may be more cost effective to have students based in the South and to have staff visiting them from the North to deliver particular modules. However there is also a real value in student mobility and giving students the opportunity to travel around to different parts of the world and to literally see global health from different perspectives. It is proposed to reduce the travel to one term and two locations. Despite the potential benefits of Southern-led programmes and South-South collaboration we will need to learn how to do this well. Many challenges to Southern leadership still exist, for example, students from the South want the kudos and status of a PhD from the North, and their university will tend to treat them with more respect and provide them with more opportunity if they have that.

Indigo Students and Supervisors pictured at Indigo Meeting, Cape Town, April 2012.



The programme may benefit from strengthening links with additional local departments within TCD e.g. the School of Public Health which runs complementary programmes that may be of benefit to both students and supervisors.

Table 3: Categories of strengths, weaknesses, opportunities and threats expressed by respondents on Indigo

<p style="text-align: center;">Multilateral Model Strengths</p> <ul style="list-style-type: none"> • Collaborative nature of the model with partners from diverse backgrounds • Sandwich programme Mobility which encourages research within the researcher’s context and discourages brain drain. The traineeship at the HSRC which offers practical field experience • The unique partnership structure which is very inclusive • Its ability to attract and recruit non Irish Aid/HEA funded students and the capability of such students to attract funds from civil society organisations • Institutional buy in from partners • Good co-supervision arrangement • Professional development of supervisors through attendance at Indigo modules • The interdisciplinary nature of the programme • The programme focus on the South while also training students that are exposed to international global health systems and contexts • Good and relevant course content and flexible nature of the programme for non Irish Aid/HEA funded students • The inter-institutional element of the model which broadens the student’s academic focus and networks • The multidisciplinary focus and vast exposure to different learning environments • Student participation in the Indigo Modules and internship with the Human Science Research Council in South Africa • High quality of students in the programme 	<p style="text-align: center;">Multilateral Model Weaknesses</p> <ul style="list-style-type: none"> • Lack of appropriate governance arrangement in TCD which has arisen in part because the programme is nested within a larger institutional funded programme • Administrative challenges that have characterized the relationship between TCD and some of its partners • Logistics of managing the different partners and establishing good communication and effective working relationships between supervisors in different part of the world • The very expensive nature of the model and the huge cost involved in administration • Non-availability of funds to achieve some earlier stated objectives • TCD’s inability to institute a joint degree with the four southern partners • Difficulty for students of retaining focus on individual research proposals during a sometimes hectic first year spread across three continents where they undertake taught modules without any academic credit • Co- supervision arrangement which allows a student a maximum of 4 supervisors both from the North and the South • Design of the programme which allows retention of the majority of resources to be in the North • Double burden on Indigo students to follow the structure and requirements of both Indigo and the respective schools where they are registered • Perceived divide between the bursary and non bursary students • Welfare of the students while away • Communication is often reliant on emails, which are often unreliable for partners in South
<p style="text-align: center;">Multilateral Model Opportunities</p> <ul style="list-style-type: none"> • Current value on PhD training in the South • Good political will in the South and support from the North-North for postgraduate training. • Need to build global health network within the southern region and beyond • Transfer the administrative leadership of the programme from TCD to Makerere University in Uganda • Opportunities for joint research partnership 	<p style="text-align: center;">Multilateral Model Threats</p> <ul style="list-style-type: none"> • Challenge of building equitable partnerships • Lack of continuous participation of both the southern and the Northern partners • Governance structure of the participating universities • Inadequate research infrastructure and non-conducive research environment in the south • Securing additional funding

4. Overall Summary

The three doctoral training models assessed differ on a range of variables including; their scale in terms of the numbers of students and supervisors involved; the student experience including structure, expected outputs, time spent abroad or interacting with international researchers; the administration in terms of the workload, the degree awarding institution and the degree of interaction. The experiences of the participants in these three models have provided us with a wealth of information to inform future programmes. In addition to the SWOT analysis and recommendations generated for each model we can draw some overall conclusions and recommendations, as follows.

- The needs, motivations, and expectations of each of the groups involved in this type of programme should be articulated and attended to from the start. This includes students, supervisors and project managers/administrators. The systems within which the programmes are being established should also be understood and articulated including constraints and resources available. Common barriers to Southern participation have been identified in previous research and some were reiterated here including; lack of incentive to participate at both supervisor and institutional level, for example lack of overheads to the Southern partner. Other barriers include infrastructure constraints, lack of access to journals, and administrative burden. Many of these barriers can be overcome through a networked model such as Indigo and the strength of partnership between colleagues in this type of model. The added value of participating in a network, particularly an international network, beyond the individual student and supervisor was emphasised by participants across all models.
- The selection of students, supervisors and research topics are crucial stages in the formulation of a successful model and should be considered carefully. The selection of junior staff members who have existing positions in Southern universities to participate in PhD programmes is aligned with core objectives of research capacity building. This provides a supportive environment for the student to complete the programme and develop their career. The selection of research topics was influenced to different degrees by external factors (e.g. policy) in the case of our three models above. The objectives of the programme should help determine the degree of input individual supervisors, students and a wider advisory group should have to the topic. Research topics should match the particular objectives of the programme.
- Good project planning and communication is crucial to the success of the programme throughout. All partners should be involved in the earliest stages of planning to build the foundation for equal partnership. This is especially important in terms of ensuring a positive student experience including retention in the programme.

- Each of the models of partnership builds capacity and is a worthwhile investment in the development of African education systems. Continued investment is recommended. There is no one ‘ideal’ model of doctoral training partnership; rather this will be determined by context, existing relationships, demand for research and other outputs, and other factors. The lessons contained in this report can be applied at the outset of any programme seeking to build capacity in higher education and research in Africa.

5. Limitations of this Research

This research aims to compare three models or approaches to doctoral training partnerships between Northern institutions (specifically TCD) and Southern institutions. Because of the small sample size and unequal size of groups assigned to each of the three models, the research is qualitative in nature and grounded in the personal experiences of participants. This gave a very rich insight into the experiences of students, supervisors, administrators and project advisors participating in the programme. The research output is likely to be most relevant to those directly involved in the project and other similar projects. The general nature of the findings needs to be tested in other contexts and therefore would be interesting to extend the research both in time and to carry out comparative studies with programmes of a similar nature involving Irish and African institutions but also other institutions internationally which perhaps have had longer-term experience of this type of partnership.

The evaluation was done during the third year of the project and none of the evaluated programmes has graduated any of its PhD students, therefore this is more like a mid-term evaluation of the various models. Further evaluation will be needed as students and supervisors progress through the programme to assess its true impact.

The three researchers who conducted the interviews may have been seen as ‘donors’ by some of the African partners participating in the project due to the fundamental power imbalance/hierarchy that inevitably exists to some degree since TCD is the lead partner and administrator and this may have influenced participants’ responses. In addition, the participants interviewed had varying degrees of closeness in their existing relationships with the researchers. Potential bias due to these factors should be kept in mind.

6. Lessons Learnt During the Research

As staff of the overall project “Doctoral Training for Development in Africa” the researchers learned a lot about the various models and intricacies of setting up research partnerships. We have become more aware of the needs from various stakeholders and the importance of having and meeting expectations. The research reflects a genuine interest in the programme and programme improvement. We have established and worked within three models, each of which has strengths, weaknesses, opportunities and threats associated with it. This has been an extremely valuable experience which has built the capacity of TCD administrators and researchers in development to manage large inter-institutional, international projects. A large number of people have participated in this project and shared their views. We hope that the lessons summarised here will be useful to and applied by others as a reflection of the investment of funding and human resources involved. We hope this work will contribute to the broader literature, and especially policy relating to North-South education partnerships, development of doctoral training programmes and systems and development of higher education systems more broadly both in the North and South.

This research was carried out following extensive and comprehensive interviews with all stakeholders involved in the “Doctoral Training for Development in Africa” project. This research shows that there is incremental evidence to support the positive impact that doctoral training of African students has on African economies, poverty reduction and development vis-a-vis the three primary disciplines of economic, health and the environment.

In order to yield any results that reflect the major principles on which these partnerships are based – respect, equality and trust – it was important to engage with all partners equally throughout this research. There was always a genuine interest on the part of the research team to learn more about what this partnership meant to them.

The establishment of these partnerships came about from personal connections between the relevant PI’s in Trinity College and African Universities, and were as a result founded on the above principles of respect, equality and trust. An important lesson that has resulted from this research is the value placed on communication and how this can add value to these principles and partnerships but also damage the principles and partnerships if neglected.

This research has proved incredibly fruitful as it provided the research team with an opportunity to identify the strengths, weaknesses, opportunities, threats and also recommendations and lessons learned from all partners. This feedback has been put together in such a way that others will be able to learn from our experiences on how to build meaningful and sustainable North South partnerships for Doctoral training for development in Africa.

7. Conclusions

Analysis of the strengths, weaknesses, opportunities and threats relating to a programme provides a frame work to review and improve strategies for further programme development. Some of the identified features were anticipated and intuitive, others provided new insights. Each of the models was seen to build individual and institutional capacity to conduct research that is focused on the needs of Southern partner institutes and communities. The current status regarding continuation of these partnerships was also presented. The weaknesses in these models also vary. In general each of the models is considered sustainable but each is under threat because of the current economic environment.

The importance of defining clear expectations between partners from the onset cannot be overstated. Equally there is good learning for TCD and for all partners in terms of governance and management of institutional projects. Opportunities for future collaborations exist despite the challenges inherent in building lasting and equitable partnerships.

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