From Dar Es Salaam To Dartmouth: A Case Study Of The Experiences Of Fogarty Aids International Training And Research Program Fellows At Dartmouth College

Lisa Anne Purvis
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FROM DAR ES SALAAM TO DARTMOUTH: A CASE STUDY OF THE
EXPERIENCES OF FOGARTY AIDS INTERNATIONAL TRAINING AND
RESEARCH PROGRAM FELLOWS AT DARTMOUTH COLLEGE

A Dissertation Presented

by

Lisa A. Purvis

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The Faculty of the Graduate College

of

The University of Vermont

In Partial Fulfillment of the Requirements
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Specializing in Educational Leadership and Policy Studies

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ABSTRACT

Background
The United States (US) is a major host nation to international college students and scholars who study a variety of disciplines (Farrugia & Bhandari, 2014). Beginning in the last decade, the demand for global health training has risen (Kanter, 2008; Kerry, Ndung’u, Walensky, Lees, Kayanjas, & Bangsberg, 2011).

Since 2000, Geisel School of Medicine at Dartmouth has been one of 26 US universities participating in a global health training program, funded by the National Institutes of Health, Fogarty International Center’s AIDS International Training and Research Program (AITRP). The Fogarty AITRP annually trains scholars (Fogarty Fellows) and focuses on building HIV/AIDS research and medical capacity in low- and middle-income countries through advanced training. Along with the economic, social, and cultural assets that international students bring, are key challenges in students’ transition, assimilation, and acculturation. It has been observed that many of the Dartmouth Fogarty Fellows have experienced issues in matriculating at Dartmouth.

Purpose of Research
Little data exists on the experiences of international students studying global health in the US. Using a case study of the Fogarty Fellows at Dartmouth, this qualitative research project sought to examine their unique transition and assimilation experiences as international graduate students. A secondary purpose of the case study was to identify ways to improve students’ experiences. Berry’s theory of acculturation provided the theoretical framework for the project (Berry, 1997).

Research Approach
A qualitative approach was used, guided by Action Research methodology. Action Research focuses on problem-solving and it is typically defined as a reflective process of progressive problem-solving led by an individual(s), who is part of the community of practice, to address issues and solve problems (Bargal, 2008).

Research Methods
To gain a fuller understanding of the issues and to identify solutions to problems of acculturation that may already exist, in-depth interviews took place with 22 participants: 1) 10 alumni of the Fogarty Program at Dartmouth College; 2) 5 MPH faculty at Dartmouth; 3) 2 MPH administrators; 4) 4 Dartmouth Fogarty Program administrators; and 5) the Fogarty International Fellows Program Officer at NIH. Field research also took place in Tanzania, the home country of the Fogarty Fellows at Dartmouth, to understand the Tanzanian context.

Findings
Recommendations for program improvement included formalizing the program at several milestones; providing comprehensive pre-matriculation information; using technology to orient Fellows to their new environment; formal mentoring and networking; cross-cultural training with students; and orienting the faculty to the program and the needs of international students. Colleges and universities need to understand the unique experiences and the student support needs of the international student. Future research at the 25 Fogarty AITRP US-based sites is recommended before implementing any of the Dartmouth-based recommendations.
DEDICATION

This dissertation is dedicated to Jonathan Mann, MD, MPH, a leader in the field of HIV/AIDS, who founded the Global AIDS Program at the World Health Organization and was one of the first to recognize the severity of the HIV/AIDS crisis.

Dr. Mann was a key figure in championing the need for a global response to the crisis and one of the earliest to frame HIV/AIDS in the context of a human rights issue.

Dr. Mann lost his life in the Swiss Air crash in 1988 while he and his wife, Dr. Mary Lou Clements-Mann, an HIV vaccine specialist, were traveling to a United Nations AIDS vaccine conference at the World Health Organization.

I was fortunate to work for Dr. Mann at Harvard School of Public Health. Dr. Mann’s intelligence, humanity, and kindness have influenced me forevermore.
ACKNOWLEDGMENTS

“If you want to go fast, go alone; if you want to go far, go together.”
~ African Proverb

First, I wish to acknowledge the support and guidance of my mentors and colleagues at Dartmouth College: Dr. Ford von Reyn, Dr. Richard Waddell, Sue Tvaroha, Lisa Gray, Dr. Karen Tombs, Dr. Madeline Dalton, Dr. Meghan Longacre, Dr. Kristy Hendricks, Gail Langeoh, and Stephanie Miller and the marvelously supportive library staff at Baker-Berry Library and Matthews-Fuller Library at Dartmouth. A number of Dartmouth faculty generously agreed to participate in research interviews.

This project would not have been possible without the participation of the Fogarty Fellows and Fogarty Program administrators. The Fogarty Fellows, nameless, for confidentiality reasons, were the inspiration for this project. I stand in awe of the challenges they have overcome and their willingness to make many sacrifices; all have made a significant impact through their wisdom, graciousness, and inspiring code of conduct and dedication. The program staff at the National Institutes of Health have been particularly helpful and my thanks to Dr. Jeanne McDermott and Kasima Brown.

During the course of this dissertation, I completed 10 trips to Dar es Salaam, Tanzania and Muhimbili University of Health and Allied Sciences (MUHAS). While in-country, I was welcomed by many people at MUHAS and I particularly wish to thank Dr. Gideon Kwesigabo, Dr. David Urassa, and the staff of the Dean’s office at the School of Public Health and Social Sciences (SPHSS). Many professors allowed me to sit in on their classes and I would like to thank Dr. Ave Maria Semakafu, Dr. Mughwira Mwangu, and Dr. Japhet Killewo; I appreciate the faculty’s and students’ warm welcome. I was also able
to complete several faculty exchanges with MUHAS and to see, firsthand, what the classroom teaching environment is like and I would like to thank: Dr. Switbert Kamazima, Dr. Mangi Ezekiel, Idda Massi, Yohana Anon, Johannes Charles, and Robert Hizza. While I was a visitor, a number of people welcomed me to their homes and cities and showed me the beauty and complexity of their country and culture; I am very grateful to their hospitality.

At the University of Vermont, I have been supported by a number of people and I wish to thank Dr. Herman (Bud) Meyers, Dr. Debra Hunter, Dr. Betty Rambur, Dr. Katharine Shepherd, Dr. Jill Tarule, Dr. Judith Aiken, and Roman Vogel. Thank you to Cohort 2009; the discussions enriched my experience. Special thanks to classmates Beth Brodie, Adrienne Capone, Juliette Longchamp, Monica McEnery, and Jennifer Parent.

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Finally, my grandfather always said, “Get an education.” As a young man in the 1920s and 1930s, he drove along rudimentary roads to Tufts University to study engineering, using a kerosene lamp for warmth. This enduring image of perseverance and sacrifice has influenced me throughout my life and, particularly, during this experience.
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<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>AITRP</td>
<td>AIDS International Training and Research Program</td>
</tr>
<tr>
<td>BU</td>
<td>Boston University</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
</tr>
<tr>
<td>CIA</td>
<td>US Central Intelligence Agency</td>
</tr>
<tr>
<td>DHHS</td>
<td>US Department of Health and Human Services</td>
</tr>
<tr>
<td>FIC</td>
<td>Fogarty International Center</td>
</tr>
<tr>
<td>GSM</td>
<td>Geisel School of Medicine at Dartmouth</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>ID</td>
<td>Infectious Disease</td>
</tr>
<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
</tr>
<tr>
<td>LMIC</td>
<td>Low- and middle-income countries</td>
</tr>
<tr>
<td>MBA</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MHCDS</td>
<td>Master of Health Care Delivery Science at Dartmouth</td>
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<tr>
<td>MPH</td>
<td>Master of Public Health</td>
</tr>
<tr>
<td>MUHAS</td>
<td>Muhimbili University of Allied Health and Sciences</td>
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<tr>
<td>NAFSA</td>
<td>National Association of Foreign Student Advisers: Association of International Educators</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institutes of Health</td>
</tr>
<tr>
<td>PEPFAR</td>
<td>[US] President’s Emergency Plan for AIDS Relief</td>
</tr>
<tr>
<td>SEVIS</td>
<td>Student and Exchange Visitor Information System</td>
</tr>
<tr>
<td>SPHSS</td>
<td>School of Public Health and Social Sciences at MUHAS</td>
</tr>
<tr>
<td>TDI</td>
<td>The Dartmouth Institute for Health Policy and Clinical Practice (The acronym commonly used to indicate Dartmouth’s MPH Program)</td>
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### LIST OF ACONYMS/GLOSSARY

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>Tuck</td>
<td>Tuck School of Business at Dartmouth (Home of the MBA Program)</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>United Nations Global AIDS Program</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific, and Cultural Organization</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>Ujamaa</td>
<td>Socialist movement founded by Julius Nyerere, the first president of Tanzania</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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CHAPTER 1: INTRODUCTION

1.1 Genesis for Dissertation Research

This project grew out of my interest in first generation college students, those students whose family does not have a tradition of enrolling in or completing a college degree (Saenz, Hurtado, Barrera, Wolf & Yeung, 2007). First generation college students, having little experience with college environments or norms, often struggle to adapt to a college environment and have been found to be at-risk of lower retention and graduation rates (Ishitani, 2006; Pike & Kuh, 2005; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). At Dartmouth, I have taught graduate students at the Master of Public Health (MPH) program at the Geisel School of Medicine since 2004. While teaching, I noticed students struggling to assimilate into graduate school and the culture of Dartmouth and I came to learn that many were first generation college students.

Observing the challenges experienced by this group of students led me to consider ways we could help them overcome some common challenges. The more I thought about who had the most difficulties, my mind turned to a small subset of students in our MPH program, namely, international scholars who are Fogarty Fellows, funded by the Fogarty International Center (FIC) at the National Institutes of Health (NIH). The issues that the Fogarty Fellows experienced included: difficulty becoming immersed in the culture and learning environment, language issues, academic issues, and, for some, feelings of isolation. These experiences seemed similar to those of first generation college students, but more pronounced.
The Fogarty Fellows at Dartmouth were physicians from Tanzania, a low-income country in East Africa, and they came to Dartmouth to enroll in an intensive one-year MPH Program. Since 2002, Dartmouth has hosted 18 physicians from Tanzania who have participated in advanced health care trainings with a special focus on HIV/AIDS. The trainings have included short-term trainings and master and doctoral programs.

In my role as a faculty advisor, I worked closely with the Fogarty Fellows enrolled in the MPH Program. Through meetings with the Fogarty Program leadership at Dartmouth, the MPH administrators, MPH faculty, and with Fogarty Fellows, I became more sensitive to the struggles of the Fogarty Fellows and I started to look at how our Fogarty Program and MPH Program at Dartmouth are structured and how we might better assist the students. The issues were wide-ranging and important to resolve in order to better support the Fogarty Fellows and improve their assimilation and educational experiences. The Fogarty Fellows are expected to return to their home countries and become leaders in tackling significant health crises that exist there. The more deeply they acquire knowledge, skills, and tools in their US-based training programs, the more effective they will be as change agents in their home country.

From this point, I turned my attention away from first generation college students to the issues and challenges faced by international graduate students and how colleges can best support them. I decided to adopt a case study approach to delve into these issues, using the setting of Dartmouth and the perspectives of the Fogarty Fellows to better understand these issues.
This introductory chapter provides an overview of the research subject and how the research is linked to a larger, global context of health and educational issues. The chapter also provides an overview of the research inquiry addressed by this study, specifically, examining acculturation and assimilation issues encountered by international students from a low-income country as they matriculate in a top-tier, competitive, private American university.

1.2 Purpose of the Research

This qualitative research project was somewhat complex since it involved several topics: the globalization of societies, the internationalization of education, global health, HIV/AIDS, donor organizations’ responses to global health issues and HIV/AIDS, and, finally, Tanzania (Figure 1). These subjects are inter-connected and are important to consider when searching for solutions to improve the experiences and outcomes of the Fogarty Fellows. Since international study is a growth area, it is hoped that the issues experienced by the Fogarty Fellows and the recommended solutions that are discussed in this paper, may transcend the Dartmouth environment and may be useful to other colleges that host international students.
The purpose of this research study was to examine the unique transition and assimilation experiences of Fogarty Fellows as international graduate students at Dartmouth. A secondary purpose was to identify ways to improve students’ experience by making changes to the administration of the Fogarty Program at Dartmouth and the students’ learning experiences in the MPH Program at Dartmouth. Using a case study approach, multiple stakeholders – Fogarty Alumni, MPH faculty, MPH Program leadership and Fogarty Program leadership – participated to provide relevant insights related to the issues and to identify solutions to problems of acculturation.

1.3 Focus of the Research

The research questions focused on assimilation issues in and out of the classroom, appraisal of the experiences at Dartmouth by the Fogarty Fellows, and identifying ways to improve the teaching and learning environments. The research questions were developed based on an extensive literature search and contact with sister institutes that house a Fogarty AITRP. Specifically, the questions focused on the following issues:

1. How do Fogarty Fellows at Dartmouth describe their experience in the MPH Program and as a participant of the Fogarty Program at Dartmouth (the program that provides their scholarship)? In particular, how do they describe the personal and professional adjustments they are making as they encounter American and Dartmouth cultures?

2. What strategies do Fogarty Fellows report that they have used to make adjustments to the demands of the MPH Program and the requirements of the Fogarty Program at Dartmouth?
3. What outcomes do Fogarty Fellows report that they have obtained while enrolled in the MPH Program and supported by the Fogarty Program at Dartmouth?

4. What recommendations do Fogarty Fellows make that they report are suggested by their experience in the MPH Program and with the Fogarty Program at Dartmouth?

5. How do Dartmouth MPH faculty who teach Fogarty Fellows describe their experience teaching and interacting with Fogarty Fellows?

6. What attributes of the MPH Program and Fogarty Program do faculty and administrators perceive are working?

7. What challenges do faculty and administrators identify are present in the MPH Program and the Fogarty Program?

8. What recommendations for program improvements do faculty and administrators make that are grounded in their experience with the Fogarty Fellows?

1.4 Overview of Issues

International study in the United States (US), has increased steadily since the end of World War II (Andrade & Evans, 2009; Institute of International Education, 2014; Trice, 2003). The US Department of State’s Bureau of Education and Cultural Affairs and the Institute of International Education report that in 2013/2014, the US continued to attract the most international students of any country, with nearly one million international students studying in US colleges (Farrugia & Bhandari, 2014). Students studying in the
US come from diverse locations, with students originating from 226 countries (Farrugia & Bhandari, 2014).

International students enroll in a variety of programs at US universities with business and management, engineering, and mathematics and sciences being the most popular fields of study (Farrugia & Bhandari, 2014). Increasingly, global health is garnering attention and interest at the policy level and elsewhere, with President Obama and then Secretary of State Clinton identifying global health as a leading international issue (Clinton, 2010). During the last few decades, there has been a significant increase in the demand for global health training from students (Crump & Sugarman, 2010; MacFarlane, Jacobs & Kaaya, 2008). Academic institutions have responded to the demand by increasing the number of short-term trainings and formal programs being offered (Heimburger, Warner, Carothers, Blevins, Thomas, Gardner, Primack, & Vermund, 2014).

The FIC at NIH has been in the vanguard of global health training. Since its inception in 1968, FIC has offered training programs to combat infectious and chronic diseases to more than 6,000 health care practitioners from low- and middle-income countries (LMIC) (Kirby, 2014). The World Bank defines low-income countries “as those with a gross national income (GNI) per capita, calculated using the World Bank Atlas method, of $1,045 or less in 2013; middle-income economies are those with a GNI per capita of more than $1,045 but less than $12,746” (World Bank, 2015a). Recent reporting notes that FIC currently funds more than 540 research and training projects at 100 US and foreign universities (FIC, 2014a).
Beginning in 1988, as a result of the spread of the HIV/AIDS pandemic, FIC developed the AIDS International Training and Research Program (AITRP) aimed at HIV prevention and treatment training for Fellows from LMIC (Kristiansen, 2012). Since 1988, AITRP has trained more than 2,000 Fellows from more than 100 countries (Kristiansen, 2012). The Fogarty Fellows at Dartmouth come to study at Dartmouth through AITRP funding.

While research has been conducted on the experiences of international students matriculating in the US (Brown, 2008; Chen & Ullen, 2011; Curtin, Stewart, & Ostrove, 2013; Guidry Lacina, 2002; Heggies & Jackson, 2003; Hellstén, & Prescott, 2004; Kim, 2011; Ladd & Ruby, 1999; Peterson, Briggs, Dreasher, Horner, & Nelson, 1999; Roberts, 2012; Selvadurai, 1992; Trice, 2004; Wood & Kia, 2000; Yoon, Lee, & Goh, 2008; Wang, 2009), little is known about the educational experiences, benefits, and consequences of Fellows enrolled in the Fogarty AITRP in the US.

This qualitative project sought to expand upon the limited research that has been conducted recently regarding several of the other Fogarty training programs (Bearnot, Coria, Barnett, Clark, Gartland, Jaganath, Mendenhall, Seu, Worjoloh, Carothers, Vermund, & Heimburger, 2014; Bennett, Paina, Sengooba, Waswa, & M’Imunya, 2013; Benziger & Gilman, 2014; Carothers, Heimburger, Schlachter, Gardner, Primack, Warner, & Vermund, 2014; Heimburger, Carothers, Gardner, Primack, Warner & Vermund, 2011; Matar, Garner, Millum, Sina, & Silverman, 2014; Mayer & Caffrey, 2007). The focus of this research was the Fogarty AITRP Fellows enrolled in a MPH Program at Dartmouth College, with the goal of seeking ways to improve the experiences and outcomes for the
Fellows so that future Fellows will more fully assimilate into the learning environment and will have an improved educational experience. The results will be shared at the national level with FIC, sister institutes hosting Fogarty Programs, and at the local level, at Dartmouth College.

1.5 Summary

The purpose of this chapter was to introduce the reader to the context of the internationalization of education and global health training. As well, the chapter served to orient the reader to the purpose of the research and the specific areas of interest: examining assimilation issues and program improvement measures. Finally, the chapter provided an overview of a programmatic responses to addressing and controlling the HIV/AIDS pandemic, through the development of US federally-funded advanced training programs at FIC at NIH.

The next chapter reviews the literature on the growth and development of international education, challenges to international students studying in the US, and challenges US-based faculty encounter in teaching international students. The second chapter also details the structure of NIH and the nature of global health trainings provided by FIC and reports on recent publications regarding the FIC training programs. Finally, since the Fogarty Fellows at Dartmouth originate in Tanzania, the second chapter delves into the Tanzanian context and provides a background on the history and culture of the country, discusses the educational infrastructure and policies in existence in Tanzania, and presents significant health challenges in Tanzania, particularly the impact of HIV/AIDS.
In the third chapter, the research design and methodology utilized by this study is described. The fourth chapter provides the results of the research as well as recommendations and the next steps and considerations for implementation of the recommendations. A manuscript for submission to the *Journal of Studies in International Education* is presented in the fifth chapter followed by a comprehensive bibliography in the sixth and final chapter.
CHAPTER 2: COMPREHENSIVE LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of the trends in international education, the impact that international study can have on international students and faculty, and strategies that may help ease the assimilation process. Global health training, a burgeoning field, is also examined with a special focus on global health trainings sponsored by NIH. Lastly, as the Dartmouth Fogarty Fellows’ home country is Tanzania, this chapter delves into the history and culture of the country as well as the educational infrastructure in Tanzania and significant social and economic issues challenging the country are presented. Finally, important health issues of Tanzania are also examined, particularly the serious threat of HIV/AIDS, the effect HIV/AIDS has had on Tanzania, and the impact HIV/AIDS may have on the future stability of the country.

2.2 International Study in the United States

While international study has been in existence for many centuries, it became more prevalent in the 20th century (Bevis & Lucas, 2007). International study in the US has increased steadily since the end of World War II (Institute of International Education, 2014a). (See Figure 2.) In 1954, it was reported that 34,000 international students enrolled in universities...
in the US (Institute of International Education, 2014a). Today, the US Department of State and the Institute of International Education, a non-profit organization based in the US that sponsors and monitors international education, report that the US continues to attract the most international students, with 886,052 international students studying in the US in 2013/2014, both at the undergraduate and graduate level (Farrugia & Bhandari, 2014). This represents an increase of 8% from the previous year and a significant increase of 72% from 2000 (Farrugia & Bhandari, 2014).

In 2013/2014, 370,724 international students enrolled in undergraduate programs while 329,854 were graduate students, representing an increase in enrollment by 9% and 6%, respectively (Institute of International Education, 2014c). The remainder of international students at US institutions (185,474 students) were enrolled in non-degree programs (Institute for International Education, 2014c). International students now represent 4% of all students enrolled in universities in the US and they come from diverse areas, however, over 50% of the students originate in China, India, South Korea, and Saudi...
International students select US colleges based on a variety of reasons such as location, cost, size, and areas of study (Obst & Forster, 2006). As the number of international students has increased steadily, so has the number of colleges and universities across the US who enroll international students. In 1999, 135 institutions hosted 1,000 or more international students; by 2013, the number of host colleges had jumped to 231 (Institute for International Education, 2014d). California, New York, and Texas continue to attract the largest numbers of international students with nearly a third of international students choosing colleges in these states (Institute of International Education, 2014). (See Figure 4).

2.3 Reasons for International Study

Students choose to study internationally for a number of reasons including a lack of educational offerings in their home country, a perceived belief that more opportunities and experiences are available elsewhere, governments of and organizations within home countries providing funding opportunities in order to train potential leaders, and political instability in home countries (Chow, 2011). Bi-lateral agreements between countries and
promotion by US embassies also aid in the enrollment of international students by providing support for and showcasing US programs and opportunities (Obst & Forester, 2006).

2.4 Marketing of International Education

Research indicates that many efforts are made to market universities and programs in an increasingly competitive global environment (Altbach & Knight, 2007; Altbach, Reisberg, & Rumbley, 2009; Andrade & Evans, 2009; Douglass & Edelstein, 2009; Hudzik & Briggs, 2012). In addition to the diversity that students bring, they also increase revenue. International students, typically, pay full out-of-state tuition and do not, generally, receive scholarships (Farrugia & Bhandari, 2014). The Brookings Institute reports that from 2001-2012, international students paid approximately $66 billion in tuition and living expenses (Ruiz, 2014).

Oftentimes, the same level of effort by universities, once students have arrived in the US, to “welcome, serve, retain, [educate, train,] and involve international students in mutual intercultural learning with Americans,” (Peterson, Briggs, Dreahser, Horner, and Nelson, 1999, pp. 67) does not take place (Guidry Lacina, 2002).

Host countries have much to offer and much to gain from the international diversity of these students. International students and scholars enrich academic institutions by challenging our beliefs, exposing our colleges and universities to world views, and by bridging the gaps in our understanding of the world and varied cultures. Along with these benefits, however, come issues and concerns as international students adjust to the host country and assimilate into the culture of the region and of the host university.
2.5 Assimilation Issues for International Students

While studying in other countries offers numerous benefits and positive experience for some students, studies have shown that there can be many assimilation issues for international students who consequently struggle. Andrade and Evans (2009) group these issues into three main risk categories: 1) academic; 2) social; and 3) personal (pp. 32). Researchers have noted specific issues that include: inadequate English language skills; academic learning anxiety; low self-efficacy; lack of appropriate study skills or strategies; lack of awareness of US-style teaching, learning, and assessment; unfamiliarity with US geographic and academic cultures; financial insecurity; social isolation, and separation from family and friends (Brown, 2008; Curtin et al., 2013; Glass & Westmont, 2014; Lee, 2010; Zhang & Goodson, 2011). Some studies have indicated that international students experience a period adjustment or “culture shock” as they begin to assimilate into their new environment. Winkelman (1994) defined culture shock as:

…a multifaceted experience resulting from numerous stressors occurring in contact with a different culture. Culture shock occurs for immigrant groups (e.g., foreign students and refugees). Cultural shock reactions may provoke psychological crises or social dysfunctions when reactions to cultural differences impede performance (pp. 121).

For some international students, significant issues may occur while assimilating into their new culture. Tseng and Newton (2002) identified four critical adjustment categories for international students, namely:
1) general living adjustment, such as adjusting to American food, living/housing environment and transportation, adaptation to a new climate (weather), dealing with financial problems and health care concerns; 2) academic adjustment, such as lack of proficiency in the English language, lack of understanding of the American educational system, and lack of effective learning skills for gaining academic success; 3) socio-cultural adjustment, for example, experiencing culture shock, cultural fatigue, or racial discrimination, having difficulties in adjusting to new social/cultural customs, norms and regulations, differences in intercultural contacts/social activities, and encountering conflicts between American host standards (or values, world views, life styles) and those of home country; and 4) personal psychological adjustment, such as experiencing homesickness, loneliness, depression, frustration, or feeling alienation, isolation, the loss of status or identity, and feelings of worthlessness (pp. 591).

Research has been conducted to determine how international students adapt to their new environment and become assimilated into their new living and learning environments. The literature review is best summarized as follows:

…the process of adaptation is influenced by a number of variables, including: general knowledge about a new culture; length of residence in the host culture; language or communication competence; quantity and quality of contact with host nationals; friendship networks; previous experience abroad; cultural distance; cultural identity; acculturation modes; temporary versus
permanent residence in a new country; and cross-cultural training (Zhou, Jindal-Snape, Topping & Todman, 2008, pp. 65).

2.6 Academic Issues for International Students

Differences in academic pedagogy and environments can be problematic for some international students. Some students may be used to teacher-centered learning provided by an authoritarian figure. These students may find the American format of learning challenging, especially the student-centered teaching and active learning pedagogies which seek to have the student actively participate and engage in the classroom while the professor guides learning rather than lectures (Brown, 2008; Heggins & Jackson, 2003; Hellstén, & Prescott, 2004). International students report that classroom participation was not an expectation in their home countries nor are they used to being graded on it; rather, assessments focused on performances on one of two major exams that required rote learning (Smithee, Greenblatt, & Eland, 2004; Rocca, 2010).

Difficulty with language or being at ease in conversing in English may cause students to be reluctant to engage in classes or in group projects and can also result in international students taking longer to process readings, assignments, and exams (Kanno & Varghese, 2010; Phakiti, Hirsh, & Woodrow, 2013). A consequence of this can be additional stress, inhibition in joining in-class discussions and group projects, and poorer grades (Trice, 2003). Isolation, due to a lack of fluency with English, may occur outside of the classroom, as well, with students not fully integrating into their new social environment (Gomez, Ursua, & Glass, 2014; Trice, 2004; Trice, 2007).
Another nagging and serious academic concern is plagiarism. Ladd and Ruby (1999) report, “Faculty members often report… an unusually high rate of plagiarism among international students. In some cultures, knowledge is considered to be in the public domain; other cultures believe it is disrespectful to alter an authority’s original work” (pp. 366). Further, in some cultures copyright laws for documents and ideas do not exist, making attribution to sources a context-driven requirement (Ladd & Ruby, 1999). Appreciating this issue, some university library services have begun to provide specialized trainings to international students on the American approach to documentation and attribution of resources (Chen & Ullen, 2011).

2.7 Faculty Perceptions of International Students

Limited research exists on faculty perception of international students (Trice, 2003). Summarizing the scant literature that is available, the most distinctive impressions are that there can be benefits and challenges to having international students enrolled. Benefits can include the opportunity for international students expanding the world views of faculty and students, providing insights into other cultures, and providing students with the reality of working in diverse groups (O’Reilly, Hickey, & Ryan, 2013; Trice, 2003). Further, some faculty view international students with raising the profile of their institution, adding prestige, and expanding connections to other parts of the world. (Trice, 2003).

The challenges mentioned include significant English as a Second Language (ESL) issues both in oral and written formats as well as with comprehension of materials presented and read (Kondakci, Van den Broeck, & Yildirim, 2008; O’Reilly et al., 2013; Poyrazli & Grahame, 2007; Robertson, Line, Jones, & Thomas, 2000). Other challenges
include the extra time required of faculty and others to work with international students, in terms of describing, explaining, and clarifying course content, classroom expectations, and performance issues as well as the extra time needed to assist the international students in integrating into the classroom. (Andrade & Evans, 2009; Sanderson, 2011). Faculty also express concerns over whether the course content is too US-centric and wonder as to how the students will adapt the knowledge and tools they learn in the US setting to their home country (Trice, 2003).

Faculty may be unaware of the different types of teaching styles international students may be used to, prior to arriving in the US. Some studies suggest that faculty are not adequately prepared to teach international students or do not value them (Andrade 2010; Trice, 2003). This may impact a faculty members interactions with international students and their perceptions and assessments of the international students’ academic performance and capabilities (Gopal, 2011; Sawir, 2011; Smith, 2009).

Lastly, faculty may have a perception of international students as having a “cultural deficiency,” meaning that the international student’s training and performance is dependent on their home county’s political, economic, and educational cultures and these may not match with those of a host country, putting the student at risk of being viewed in a negative light by faculty (Ninnes, Aitchison, & Kalos, 1999). Ninnes, Aitchison, and Kalos (1999) noted, “This perspective argue[s] that many international students bring with them learning experiences that are inadequate in [the host country]” (pp. 324).
2.8 Support Services for International Students Studying in the United States

International students support services have grown through the years, with the National Association of Foreign Student Advisers: Association of International Educators (NAFSA), serving as the leading professional organization for this student group (NAFSA, 2015; Wood & Kia, 2000). Founded in 1948, NAFSA focuses on advocating for the needs of international students. As well, NAFSA has helped to shape institutions’ development of student advisors and international student offices by providing professional development and trainings for college administrators because no formal graduate training programs in international student affairs exist in the US (NAFSA, 2015; Wood & Kia, 2000).

The main role of an international student office is “ensuring a smooth transition into a different educational system” (Wood & Kia, 2000). Typically, services provided by international student offices include “advising and ‘support’ to international students for everything from visa processing to cultural adjustment” (Roberts, 2012, pp. 4-5) and will often link students to the community and other offices within an institution such as academic services, housing, and student health services (Council for the Advancement of Standards in Higher Education, n.d.; NAFSA, 2015; Wood & Kia, 2000).

In the aftermath of 9/11/01 and the passing of the USA Patriot Act, which mandates the tracking of international students, international student offices have increasingly been required to focus human resources on immigration policies and compliance with the Student and Exchange Visitor Information System (SEVIS), a federal program overseen by the Department of Homeland Security (Danley, 2010; Wong, 2006). Visa documentation and SEVIS reporting requirements are costly, complex, and time-
consuming tasks, and have been associated with low morale and high turnover among staff (Rosser, Hermsen, Mamiseishivili, & Wood, 2007) and a shift away from the provision of other services traditionally provided by international affairs offices (Wood & Kia, 2000).

The research on international student offices at colleges and universities, their functioning and the roles that they play in supporting international students is limited in scope and coverage; very few studies about the provision of student services for international students exist (Wood & Kia, 2000). Pope and Muller (2005) found articles about international student services, on the whole, lacking in the literature. Hood, Hull and Mines (1979) examined articles published, between 1959 and 1974, pertaining to international students in the *Journal of College Student Personnel* and found only 21 articles which represented 2.5% of the articles published. A similar review of the publications of the *Journal of College Student Personnel* by Tyron (1981) conducted over a subsequent five-year period found over one hundred articles published but only one article published concerned international student issues.

### 2.9 Future Internationalization of Education

With the internationalization of education, experts expect a doubling of the number of students studying outside of their home country from 2.5 million in 2009 to upwards of 7 million by 2020 (Altbach, Reisberg, & Rumbley, 2009). Educating internationals is a burgeoning field, as is global health. However, the research has not kept pace with the growth. As such, academicians are calling for “…[college] practitioners to pay closer attention and listen more attentively to the needs of the international graduate students in
hopes of meeting their expectations and better preparing them to go out into the world…” (Roberts, 2012, pp. 6).

2.10 Global Health Education in the United States

As the world grows smaller, due to globalization, increased access to transportation, and the explosion of technology, making connections to other areas of the world easier and faster, the awareness of global health disparities has increased and the demand for global health training is rising (Kerry, Ndung’u, Walensky, Less, Kayanjas, & Bangsberg, 2011; Kanter, 2008). Spielberg and Adams (2011) described global health as:

[Global health] is concerned with health issues and the health of populations, without traditional regard for national boundaries. Sometimes the focus of concern is a disease that can spread from country to country. Sometimes the focus is on health issues that are of such magnitude that they can have global economic and political impact. The primary aims of global health are to improve population health, increase health education, reduce the existing disparities in health between population groups, and protect populations from health threats. A characteristic of global health is that its activities are best carried out in ways that are collaborative, culturally competent, and cooperative, and involve multiple interested parties and partners, often from a variety of disciplines (pp. 5).

The US-based Center for Strategic and International Studies theorizes that there are three root causes for the increase in the demand for global health training in the US: 1) a greater emphasis on internalization; 2) US foreign policy that includes a global health
agenda; and 3) funding to support the growth of global health studies (Merson & Chapman Page, 2009). For some, global health is seen as an outgrowth of human rights issues and ethical concerns (Skolnik, 2012).

In addition to the growing interest in global health, a serious shortage of the medical workforce has been identified by the World Health Organization’s (WHO) Commission on Social Determinants of Health as a significant issue worldwide, jeopardizing access to care and creating health inequities for millions (WHO, 2008). The shortage is particularly true for disenfranchised communities who carry the largest burden of disease and are generally LMIC (WHO, 2008). In these countries there is a pressing need for well-trained, competent health care providers.

In the US, the need for global health training has been championed by the Institute of Medicine (IOM), a leading authority on health and medicine in the US. The IOM “developed operational recommendations emphasizing global health training in American institutions, modeling respectful partnerships between the United States and lower income countries” (Peluso, Encandela, Hafler & Margolis, 2012, pp. 656). The IOM recommended $15 billion be spent on global health by the US including capacity building by 2012 (Peluso et al., 2012). Funding in 2012 was less than this figure, the US federal government allocated $8.9 billion for global health funding (Kaiser Family Foundation, 2014).

Pressure is also coming from student groups with the International Federation of Medical Students, which includes 1.2 million medical students from 91 countries, advocating for a comprehensive global health framework to be included in the curricula of medical schools (Kerry et al., 2011). In the US, the Center for Strategic and International
Studies reported that there were 46 global health programs or centers at US universities as of 2009 (Merson & Chapman Page, 2009). Since then, to meet the increasing demand from the global health community and medical and health students, the number has more than doubled to 102 global health degrees or tracks, as of 2013 (Consortium of Universities for Global Health, 2013).

Although there is a noticeable uptake in global health training, little research exists on international students seeking to study for a MPH program in the US. Broadening the scope, to include literature related to international students enrolled in US medical schools yielded a few articles that mainly dealt with application issues, demographic data, and barriers (American Association of Medical Colleges, 2010; Horvath, Coluccio, Foy, & Pellegrini, 2004; Miller & Huff, 2004; Mueller, McConahey, Orvidas, Lee, Bowen, Beckman, & Kasten, 2010; Terhune & Abumrad, 2009; Terhune, Zaydfudim, & Abumrad, 2010).

As Datta and Miller (2012) note, “matriculation of international students to US medical schools has not mirrored the remarkable influx of these students to other US institutions of higher education…[however] while these [medical] students’ numbers are on the rise, the visibility for their unique issues remains largely ignored in the medical literature” (Datta & Miller, 2012, pp.1).

The bulk of the literature focuses on the growing field of global health programs being established in the US for American students to enroll in prior to embarking on careers or trainings outside of the US, primarily in developing countries (Castillo, Castillo, &
Recently, however, some articles have been published focusing on building the infrastructure of global health programs in the US. Articles focus on guidelines and practices, developing appropriate curricula and training programs, and online learning approaches (Bollinger, McKenzie-White & Gupta, 2011; Crump & Sugarman, 2010; Evert, Bazemore, Hixon, & Withy, 2007; MacFarlane et al., 2008).

2.11 National Institutes of Health, Home of the Fogarty International Center

The NIH, is the federal agency that houses the Fogarty International Center, the center that funds the Fogarty International Fellows at Dartmouth. NIH was founded in 1930 to provide a centralized location for biomedical and health research in the US and is one of the 11 agencies of the US Department of Health and Human Services (DHHS), a branch of the federal government. Within the federal government, the Director of DHHS holds a cabinet position and reports directly to the US President. (See Appendix A for an organizational chart of the Federal government and Appendix B for a DHHS organizational chart.)

The mission of NIH is

To seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability. The goals of the agency are:

1. To foster fundamental creative discoveries, innovative research strategies, and their applications as a basis for ultimately protecting and improving health;
2. To develop, maintain, and renew scientific human and physical resources that will ensure the Nation's capability to prevent disease;

3. To expand the knowledge base in medical and associated sciences in order to enhance the Nation's economic well-being and ensure a continued high return on the public investment in research; and

4. To exemplify and promote the highest level of scientific integrity, public accountability, and social responsibility in the conduct of science. (NIH, 2015b).

Since its inception, the NIH has grown into a world-renowned entity and now consists of 27 institutes and centers, supporting the work of more than 300,000 researchers at more than 3,000 research universities and institutions in the US and globally (NIH, 2013a).

Within the NIH, more than 6,000 researchers conduct research at the NIH campuses in Maryland (NIH, 2015a). Funding support from the NIH is significant; it was reported that in 2014 that the NIH sponsored almost $30.1 billion in medical research (NIH, 2015a). Worldwide, NIH remains the largest source of biomedical and behavioral funding (DHHS, 2015). (Table 1 provides an overview of NIH and Appendix C contains NIH’s organizational chart.)

<table>
<thead>
<tr>
<th>Table 1: National Institutes of Health, At-a-Glance</th>
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<tbody>
<tr>
<td>Year founded</td>
</tr>
<tr>
<td>Number of Institutes and Centers</td>
</tr>
<tr>
<td>Number of researchers funded</td>
</tr>
<tr>
<td>Number of institutes/universities funded</td>
</tr>
<tr>
<td>Amount of research sponsored</td>
</tr>
</tbody>
</table>

Source: NIH, 2013b.

Functionally, NIH is a leader in conducting medical and health research, expanding the body of medical and health care knowledge, establishing standards of care, and providing training and technical expertise, nationally and internationally. NIH routinely
collaborates with academia, advocacy groups, the biotech industry, government agencies such as the Centers for Disease Control and Prevention, pharma, and other countries (NIH, 2014). NIH-funded researchers are prolific, with scholarly writing an expectation (Moses, Matheson, Cairns-Smith, George, Palisch, & Dorsey, 2015). NIH’s Fogarty International Center reports that its Scholars and Fellows published more than 750 articles in peer-reviewed journals in the 1990s through the early 2000s (Fogarty, 2003).

2.12 Fogarty International Center Fellows Training Programs at National Institutes of Health

FIC was founded in 1968, due to the efforts of Representative John E. Fogarty of Rhode Island, to establish a center that addressed the growing concerns about the health of the global community and the increasing health care disparities between LMIC (FIC, 2003). FIC seeks to follow Representative Fogarty’s vision of improving the suffering of millions, worldwide, and to be a vehicle for peace and prosperity (FIC, 2003). FIC is “dedicated to supporting and facilitating global health research conducted by US and international investigators, building partnerships between health research institutions in the US and abroad, and training the next generation of scientists to address global health needs” (FIC, 2014b).

Implicit in the founding of the FIC was the understanding that with the advancement of societies, travel, and globalization, diseases are being spread more quickly throughout the world, jeopardizing the well-being of millions (FIC, 2003). Since its founding in 1968, the scope of the work carried out by FIC has grown. Initially, FIC focused on communicable diseases and has since expanded to chronic diseases,
environmental issues, mental health issues, and technological interventions (Voekler, 2008).

Recognizing the changes in the world, FIC recently adopted five strategic goals to guide the work of grantees and partners outlined in Table 2:

<table>
<thead>
<tr>
<th>Table 2: Fogarty International Center Strategic Goals</th>
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<tbody>
<tr>
<td>1. Build research capacity through individuals, institutions, and networks to meet future and evolving global health challenges</td>
</tr>
<tr>
<td>2. Stimulate innovation in the development and implementation of technologies and other locally relevant solutions to address global health problems</td>
</tr>
<tr>
<td>3. Support research and research training in implementation science</td>
</tr>
<tr>
<td>4. Advance research on prevention and control of the dual burden of communicable and non-communicable diseases and disabilities</td>
</tr>
<tr>
<td>5. Build and strengthen partnerships to advance global health research and research capacity</td>
</tr>
</tbody>
</table>

Source: FIC, 2014c.

Along with expanding the scope of work conducted by the FIC, the budget for FIC’s operations has grown steadily. In 1968, its first year of operation, the FIC was funded for $500,000 and funding has increased throughout the years with $67,776,000 being requested for FIC for 2015 (DHHS, 2015). Through FIC, “more than 3,600 scientists globally have received long-term (6 months) research training and research awards through FIC programs…tens of thousands more have received shorter-term training” (Breman, Bridbord, Kupfer, & Glass, 2011, pp. 511). FIC supports work in over 100 countries. The locations of the programs are found in Figure 5.
2.13 Fogarty AIDS International Training and Research Program

With HIV/AIDS reaching epidemic proportions in the 1980s, an AIDS International Training and Research Program (AITRP) was established at the FIC in 1988 and has a special interest in enhancing in-country capacity by training medical and public health scientists from LMIC, in programs in the US, with the hope that the Fogarty Fellows return to their home countries and assume leadership positions in the delivery of health care and in conducting HIV/AIDS health care research (Fogarty AITRP, 2015). The main focus of the training “is to build multi-disciplinary biomedical, behavioral and social science research capacity for the prevention, care and treatment of HIV/AIDS and HIV-

"AITRP trainees are empowered with the knowledge, experience, and increased confidence to return home and become scientific and public health leaders in the struggle against HIV/AIDS."  
~Dr. Ken Bridbord, Director of the Division of International Training and Research and Founder of AITRP Program at the Fogarty International Center
related conditions for those adults and children affected by HIV/AIDS in the collaborating country” (Kristiansen, 2012).

Fogarty Fellows originate from outside the US and are selected to study in the US and elsewhere, enrolling in short-term or long-term training programs including masters and doctoral programs. At this time, 26 universities in the US participate in the Fogarty AITRP by inviting medical practitioners to enroll in advanced health and science master or doctoral degree programs. (See Appendix D for an overview of the Fogarty International Center.)

It can be argued that, in addition, to the goal of training HIV specialists and scaling up capacity within countries at a high-risk of HIV/AIDS, a significant outcome of the Fogarty Program is aiding in stabilizing a country. HIV/AIDS can take a tremendous toll on a country’s infrastructure and economy, which can lead to significant unrest and political upheaval (Feldbaum, Lee, Patel, 2006; United Nations Programme on HIV and AIDS, 2010). Recognizing the risk to the stability of a country that HIV/AIDS represents, then President George W. Bush enacted the President’s Emergency Program For AIDS Relief (PEPFAR) in 2004 to provide HIV prevention and resources as well as workforce development to those countries hardest hit by the epidemic (Goosby, Dybul, Fauci, Fu, Walsh, Needle, & Bouey, 2012).

Recently, some articles have been published in the literature about FIC programs but they mainly focus on explaining FIC’s strategic plan for research and training (Breman, et al., 2011; Kirby, 2014; Voelker, 2008), describing specific university-based FIC program’s infrastructure and their work (Heimburger et al., 2014; Matar et al., 2006),
reporting on FIC programs in non-US settings (Bearnot et al., 2014; Bennett et al., 2013) or describing the impact of training programs (Benziger & Gilman, 2014; Heimburger et al., 2011).

None of the articles examined the experiences of the Fogarty Fellows in a US setting nor dealt with providing feedback to administrators on the functioning of the FIC program from multiple perspectives, including those of students and faculty. The FIC is central to this dissertation because this is the donor agency and training program that funds the Fogarty Fellows from Tanzania enrolled in the MPH program at Dartmouth. (See Appendix E for a listing of countries and universities receiving Fogarty AITRP funding and Appendix F-G for information about Dartmouth’s Fogarty AITRP.)

2.14 The Tanzanian Context

In order to begin to understand the Fogarty Fellows’ experiences at Dartmouth, an important consideration for this project is the context of Tanzania—the home country of the Fogarty Fellows matriculating at Dartmouth. (See Figure 6 and Figure 7 for the location of Tanzania.) Tanzania has a rich and turbulent history that has a profound impact on the society and culture of the country.

Figure 6: Map of African Continent
Figure 7: Map of Tanzania
Sources: worldatlas
An important shipping center located on the East Coast of Africa, Tanzania is a small country, roughly twice the size of California with a population of slightly more than 49 million (CIA, 2015). Tanzania shares borders with: Kenya and Uganda, to the north; Rwanda, Burundi, the Democratic Republic of the Congo, and Zambia to the west; Malawi and Mozambique to the south, and the Indian Ocean makes up its eastern boundary. The country has 26 regions and about 130 tribes and ethnic groups representing more than 95% of the population (CIA, 2015). The remainder of the population is a mixture of Asians, Europeans, and Indians (CIA, 2015). Tribal identification and culture remain important with Tanzanians; most speak one of the 120 or so tribal dialects as their first language, Swahili as their second language and, finally, English as their third language. In primary school Swahili is the official language of instruction; English becomes the language of instruction in secondary school and in colleges and universities (Petzell, 2012). This impacts international students studying in English-speaking countries and affects their ease with learning, studying, and communicating in English.

2.14.1 Tanzanian Political History; Colonial Period and Independence

Tanzanian history is one of conflict, oppression, colonialism, slavery, poverty, and tribalism; Table 3 highlights key milestones in the country’s history beginning in the 8th century with invasion of the Arab Oman nation (United Republic of Tanzania [URT], 2015). Tanzania has a long history of colonialism, having been dominated by others – Arabic, British, German, and Portuguese conquerors have all played a significant role in shaping the country and its culture (URT, 2015; Vilby, 2007).
In the nineteenth and twentieth centuries, Tanzania was a colony of Germany from 1897 to 1919; as a consequence of losing World War I, Germany relinquished control of Tanzania to Britain, under a mandate from the League of Nations (URT, 2015). As a result, Tanzania was a British colony from 1919 until 1961 (Vilby, 2007). The transfer to self-rule was, largely, peaceful (Brennan, Burton, & Lawi, 2007).

Until 1964, Tanzania was, in fact, two countries – Tanganyika, the mainland, and Zanzibar, a coastal island (Werrema, 2006). These two countries joined together, peacefully, in 1964 to form Tanzania and were led by Julius Nyerere, a Tanzanian who trained to be a teacher at the University of Edinburgh (URT, 2015). Nyerere directed the struggle for independence and, thereafter, became the country’s president, leading a one-party system, for 22 years (World Bank, 2012). It was not until 1995 that two-party elections were held and the country became a young democratic nation (World Bank, 2012).

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th Century</td>
<td>Arab Oman nation establishes domination in Tanganyika and Zanzibar; slavery and ivory trade flourish</td>
</tr>
<tr>
<td>1499</td>
<td>Portuguese explorers arrive</td>
</tr>
<tr>
<td>1699</td>
<td>Arab Oman nation expands presence; slavery and ivory trade expand</td>
</tr>
<tr>
<td>1844</td>
<td>German explorers arrive; missionaries arrive</td>
</tr>
<tr>
<td>1897</td>
<td>Germany colonizes Tanzania</td>
</tr>
<tr>
<td>1890</td>
<td>British explorers arrive in Zanzibar</td>
</tr>
<tr>
<td>1905-1907</td>
<td>Local Maji revolt suppressed by Germans</td>
</tr>
<tr>
<td>1919</td>
<td>Germany loses WWI, relinquishes power to Britain</td>
</tr>
<tr>
<td>1954</td>
<td>Tanganyika African National Union (TANU) forms (main political party seeking independence, led by Julius Nyerere)</td>
</tr>
<tr>
<td>1958-1960</td>
<td>Elections held</td>
</tr>
<tr>
<td>1961</td>
<td>Britain agrees to independence</td>
</tr>
<tr>
<td>1962</td>
<td>Republic established</td>
</tr>
<tr>
<td>1964</td>
<td>Tanganyika and Zanzibar unite to form Tanzania</td>
</tr>
</tbody>
</table>

Under Nyerere’s leadership, Tanzania adopted a socialist government, known locally as “Ujamaa” (Mkude, Cooksey & Levey, 2003; Nyerere, 1967; US State Department, 2012). Ujamaa emphasized cooperation, extended family connections, self-reliance, and welfare for all members of society (Frumence, 2011; Nyerere, 1967). Ujamaa led to the nationalization of major sources of commerce, political stability, and the unification of the country, but also led to severe economic decline (Mkude et al., 2003; Nyerere, 1964; US State Department, 2012). For decades after independence, the country faced significant poverty due to its economic policies. Tanzania continues to experience severe economic challenges and is considered to be a low-income country with 40% of Tanzanians living in poverty (USAID, 2012); the average per capita income, as of 2013, was $1,700 (CIA, 2015).

Politically, Tanzania has good relations with its neighboring countries and has been influential in brokering peaceful resolutions in regional disputes (US Department of State, 2012). In the 1990s and 2000s, Tanzania actively participated in the end to conflict in Burundi and the Democratic Republic of the Congo and opened its borders to refugees from war-torn Rwanda and Burundi (US Department of State, 2012; URT, 2015). Outside of East Africa, Tanzania has very good relations with the US and others, serving as a non-permanent member of the UN Security Council in mid-2000s (US Department of State, 2012; Werrema, 2006).

The US continues to provide foreign aid to Tanzania in the areas of agriculture, democracy, economic development, education, environmental issues, and health, with the US Agency for International Development (USAID) supporting $20 million worth of
programs each year (US Department of State, 2012). In the HIV sphere, in addition to foreign aid, Tanzania has received high-level recognition and support from George W. and Laura Bush, which has continued after the Bushes’ departure from the White House (White House, 2014).

2.14.2 Social and Economic Conditions in Tanzania

Like many sub-Saharan countries, Tanzania struggles with societal factors that impact health outcomes, as noted in Table 4. The country is chiefly agrarian with 77% of the population employed in the agricultural sector (USAID, 2014). Similarly, the population base is largely rural, with nearly more than 70% of the population living in rural areas with limited access to resources, education, water, and sanitation (CIA, 2015; National Bureau of Statistics, 2012; UNESCO, 2012). On the United Nations (UN) Human Development Index, a composite measure of length and quality of life and access to knowledge, Tanzania ranked 159 out of 187 countries, in 2013 (UN, 2014b). Many live in abject poverty with the UN estimating that 33% of the population survives on about $1.25 a day (UN, 2014b).

<table>
<thead>
<tr>
<th>Table 4: Socio-Economic Indicators in Tanzania, 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (in thousands)*</td>
</tr>
<tr>
<td>Annual population growth*</td>
</tr>
<tr>
<td>Population aged 14 years and younger (in thousands)*</td>
</tr>
<tr>
<td>Rural population (% of total population)*</td>
</tr>
<tr>
<td>Life expectancy at birth (years)*</td>
</tr>
<tr>
<td>% of households with access to electricity**</td>
</tr>
<tr>
<td>% of households with access to water**</td>
</tr>
<tr>
<td>% of households that must travel 30 minutes, round trip, to access water**</td>
</tr>
<tr>
<td>% of population with access to sanitation that is not shared**</td>
</tr>
<tr>
<td>Annual Gross Domestic Product (GDP) growth (%)*</td>
</tr>
</tbody>
</table>

The UN has also developed a Gender Inequality Index, an index that evaluates gender disparities by using reproductive health, empowerment, and economic well-being and employment measures, and Tanzania scores quite low on the Gender Inequality Index, ranking 124 of 187 countries (UN, 2014). Due to the gender imbalances, Tanzania has joined with the US to improve the welfare of women. These improvement efforts include access to quality health care, addressing harmful gender norms and gender-based violence, and gender inequalities (Global Health Initiative, 2011).

Since independence and the establishment of a socialist government, the country’s economic challenges have led to significant dependence on donor relief and investment. In recent years, Tanzania has been the recipient of funding from a number of countries and institutions including the US, China, the World Bank, the International Monetary Fund, and non-governmental organizations such as the Gates Foundation. (Gates Foundation, 2012; US State Department, 2012). Tanzania aims to become a middle-income country by 2025 and is working closely with donor agencies and countries to improve the conditions of the country; the US is Tanzania’s largest donor (USAID, 2014).

Despite its economic woes, Tanzania has consistently been a country that accepts refugees from surrounding countries, at one point sheltering 1.5 million refugees in the 1990s (Ongpin, 2008). The United Nations reports in 2015, Tanzania sheltered nearly 290,000 refugees (UN, 2015). This has placed an additional economic burden on the country and has led to a more diverse population, overuse of the lands, a straining of the educational system, an increase in demands for healthcare, and more poverty and food
insecurity, to name just a few of the challenges related to the influx of refugees (URT, 2015).

### 2.14.3 Health Care Issues in Tanzania

In 2000, in response to the alarming poverty and living conditions of millions around the world, the UN Millennium Development Goals (MDGs) were established and they are an ambitious and sweeping set of 8 goals and 21 targets with specific health indicators and economic objectives (UN, 2002). The MDGs were developed by the 189 UN member states and are outlined in Table 5 (UN, 2002). Focusing on reducing extreme poverty and improving the economic and health status of millions worldwide, the MDGs are mainly implemented in LMIC (UN, 2002). The MDGs are thought to be the most important, multi-lateral development effort, to date, and are to be achieved by 2015. However, it is improbable that all countries will achieve all of the MDGs by the deadline. Sub-Saharan Africa, which has been at the center of the crisis, has seen steady progress but it is particularly challenged by obstacles such as population growth, food insecurity, extreme poverty, poor maternal and child health outcomes, political and social conflict and declines in aid make reaching many MDG targets by 2015 unlikely, according to a recent UN report (UN, 2014a).

<table>
<thead>
<tr>
<th>Table 5: United Nations Millennium Development Goals, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 1</strong></td>
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<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td><strong>Goal 2</strong></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>
Table 5: United Nations Millennium Development Goals, 2015

<table>
<thead>
<tr>
<th>Goal</th>
<th>Promote gender equality and empower women.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3a. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.</td>
</tr>
<tr>
<td>Goal 4</td>
<td>Reduce child mortality.</td>
</tr>
<tr>
<td>4</td>
<td>4a. Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.</td>
</tr>
<tr>
<td>Goal 5</td>
<td>Improve maternal health.</td>
</tr>
<tr>
<td>5</td>
<td>5a. Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.</td>
</tr>
<tr>
<td>Goal 6</td>
<td>Combat HIV/AIDS, malaria and other diseases.</td>
</tr>
<tr>
<td>6</td>
<td>6a. Have halted by 2015 and begun to reverse the spread of HIV/AIDS.</td>
</tr>
<tr>
<td></td>
<td>6b. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.</td>
</tr>
<tr>
<td>Goal 7</td>
<td>Ensure environmental sustainability.</td>
</tr>
<tr>
<td>7</td>
<td>7a. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.</td>
</tr>
<tr>
<td></td>
<td>7b. Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.</td>
</tr>
<tr>
<td></td>
<td>7c. Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers.</td>
</tr>
<tr>
<td>Goal 8</td>
<td>Develop a global partnership for development.</td>
</tr>
<tr>
<td>8</td>
<td>8a. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system (includes a commitment to good governance, development, and poverty reduction both nationally and internationally.</td>
</tr>
<tr>
<td></td>
<td>8b. Address the special needs of Least Developed Countries (includes tariff- and quote-free access for Least Developed Countries’ exports, enhanced program of debt relief and cancellation of official bilateral debt, and more generous official development assistance for countries committed to poverty reduction).</td>
</tr>
<tr>
<td></td>
<td>8c. Address the special needs of landlocked developing countries and small island developing states (through the Program of Action for the Sustainable Development of Small Island Developing States and 22nd General Assembly provisions).</td>
</tr>
<tr>
<td></td>
<td>8d. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.</td>
</tr>
<tr>
<td></td>
<td>8e. In cooperation with developing countries, develop and implement strategies for decent and productive work for youth.</td>
</tr>
<tr>
<td></td>
<td>8f. In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.</td>
</tr>
<tr>
<td></td>
<td>8f. In cooperation with the private sector, make available benefits of new technologies, especially information and communications.</td>
</tr>
</tbody>
</table>


Due to the development of the MDGs, Tanzania has received $698 million from the UN to implement and achieve the MDGs for Tanzania (CIA, 2015; UN, 2014b). The advent of the MDGs has focused economic and health improvement efforts in Tanzania.
and the country has seen some improvements in conditions in the country, particularly in the areas of education, child health, and gender equality (Bandara, 2013; The Commonwealth Report, 2013) however, many challenges remain for Tanzania. (See Appendix H for a progress report on Tanzanian’s efforts in achieving the MDGs.)

2.14.4 HIV/AIDS Epidemic, Global Perspective

HIV was first acknowledged in 1981 and is transmitted through unprotected sex, mother-to-child transmission during birth and breastfeeding, blood including needle sticks, transfusions, and sharing of needles used for intravenous drug use (CDC, 2015). The risk of acquiring HIV by these routes vary by country and location within a country. Table 6 notes worldwide trends. No other disease has altered the world or impacted as many levels of society as HIV. Since its early days in the 1980s, HIV has been controversial, created widespread fear, and has been associated with societal, economic, political, and medical issues (Garrett, 1995). At the outset, HIV was associated with marginalized populations, namely, men who have sex with

<table>
<thead>
<tr>
<th>Table 6: HIV/AIDS Global Perspective, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of deaths*</td>
</tr>
<tr>
<td>Number of people living with HIV/AIDS*</td>
</tr>
<tr>
<td>Number of new infections*</td>
</tr>
<tr>
<td>Number of AIDS orphans*</td>
</tr>
<tr>
<td>Prevalence of HIV/AIDS among adults*</td>
</tr>
<tr>
<td>Number of HIV+ people living in sub-Saharan Africa*</td>
</tr>
<tr>
<td>% of HIV+ people living in sub-Saharan Africa*</td>
</tr>
<tr>
<td>Number of women HIV+*</td>
</tr>
<tr>
<td>Number of children under 15 with HIV*</td>
</tr>
<tr>
<td>Number of HIV+ people being treated with antiretroviral therapy*</td>
</tr>
</tbody>
</table>

men, injecting drug users, and commercial sex workers (Mann & Tarantola, 1996). HIV incidence rates among these key risk populations vary by country.

Due to its link to behaviors that have not been widely accepted by mainstream societies, a great deal of stigma has been associated with HIV. Stigma has caused the disease, those infected, and those treating HIV+ populations to be pushed to the fringes of society. In extreme instances, being HIV+ has been associated with violence, ostracism, banishment, and human rights violations (Garrett, 1995; Mann & Tarantola, 1996). Michel Sidibé, the current Executive Director of UNAIDS, the UN’s agency coordinating global efforts related to HIV/AIDS, recently noted, “Stigma and discrimination remain rife in many parts of the world, and punitive laws continue to deter those most at risk from seeking essential HIV services” (UNAIDS, 2013a, pp. 3).

While there has been a curbing of HIV infections due to the scaling up of the medical infrastructure, increased treatment, and aggressive prevention efforts, HIV continues to be one of the most significant issues in modern society, resulting in more than 39 million deaths worldwide since the disease was first identified in 1981, infecting 35 million, and leaving 17 million orphaned and at risk (WHO, 2015; Kaiser Family Foundation, 2013). HIV has also been found to be associated with the risk of acquiring hepatitis C, malaria, and tuberculosis since HIV weakens the immune system, further putting millions of people at risk of illness and death (Global Network, 2015).

Across the world, HIV prevalence ranges from a low of .01% in East Asia to nearly 5% in sub-Saharan Africa (WHO, 2015). Sub-Saharan Africa accounts for approximately 71% of the cases; an estimated 22.5 million people are living with HIV in sub-Saharan...
Africa, a region woefully unprepared to deal with the complexities of the disease and its social impact (WHO, 2015). The burden of the disease, globally, is outlined in Figure 8.

![Figure 8: Cases of HIV in World, 2013](source: World Health Organization, 2015)

The MDGs include a special focus on HIV/AIDS reduction as a stand-alone goal; however, HIV/AIDS is also inextricably linked to goals for improving gender status (Goal 3), and maternal and child health (Goals 4 and 5.) An underlying theme of the MDGs is the development of the medical workforce (UN, 2014a).

### 2.14.5 HIV/AIDS in Tanzania

For Tanzania, HIV has been a critical issue for decades. Currently, HIV/AIDS is the sixth leading cause of death and the impact to the country has been significant (CDC, 2013). The Tanzanian National Bureau of Statistics (2012) describes the impact of HIV/AIDS in Tanzania, as follows:
It has affected all spheres of life. The demographic consequences of the epidemic are reflected in the country’s quality-of-life indicators, include infant mortality rate and life expectancy. HIV infection has resulted in a surge of opportunistic infections, such as tuberculosis and some forms of cancer. HIV/AIDS morbidity and mortality of women and men in their prime years of productivity has had a serious social and economic impact on all sectors and at community and individual levels...The economy has been adversely affected by the loss of the most productive segments of society. Loss of human capital also affects the development of institutional capacity (pp. 1).

The impact of HIV/AIDS to Tanzania is noted in Table 7. While more women are impacted by HIV/AIDS, with 55% of the infections found in females, certain populations are at high risk (National Bureau of Statistics, 2012). Not surprisingly, those that are marginalized are more susceptible to acquiring HIV, with a recent report noting that “HIV prevalence is much higher in urban areas than in rural areas. Sub populations include: fishing communities, females affected by sexual and domestic violence, military, truck drivers, and sex workers” (In-depth Training and Research Centres of Excellence, 2012, pp. 31).

The epidemic has caused an acute shortage in the health and medical workforce that specializes in HIV (Dominck & Kurowski, 2004; Kwegisabo, Mwangu, Kakoko & Killewo, 2012; Leo & Kolstad, 2010). HIV is a labor and resource-intensive condition
with hospitals reporting that HIV-related illnesses accounted for over 50% of hospital beds being occupied in Tanzania (National AIDS Control Programme, 2009).

Due to the severity of HIV and impact to the country, Tanzania has received donor support through the MDG efforts. Significant funding has been provided through the Global Fund to Fight AIDS, Tuberculosis, and Malaria, and through the US’s PEPFAR funds to address and halt the spread of HIV and to bolster the fragile medical infrastructure (US PEPFAR, 2014).

<table>
<thead>
<tr>
<th>Table 7: HIV/AIDS in Tanzania, 2012 - 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult prevalence</td>
</tr>
<tr>
<td>Estimated HIV+ adults and children</td>
</tr>
<tr>
<td>(0-49 years old)</td>
</tr>
<tr>
<td>New infections, per year*</td>
</tr>
<tr>
<td>HIV-related deaths</td>
</tr>
<tr>
<td>Orphans due to AIDS</td>
</tr>
<tr>
<td>Estimated number of patients</td>
</tr>
<tr>
<td>awaiting treatment</td>
</tr>
<tr>
<td>Estimated percent of HIV+ women</td>
</tr>
<tr>
<td>receiving anti-retrovirals for</td>
</tr>
<tr>
<td>preventing mother-to-child</td>
</tr>
<tr>
<td>transmission</td>
</tr>
<tr>
<td>Male/female ratio**</td>
</tr>
</tbody>
</table>


Through the years, PEPFAR funding has been significant, outlined in Table 8, with $1,900 million provided to Tanzania from 2004 to 2014 (US PEPFAR, 2014). PEPFAR has funded efforts for scaling up the medical and public health infrastructure through workforce training, supported the efforts to improve the delivery of pharmaceuticals, provided care to HIV+ patients, supported orphans, and implemented prevention efforts directed at counseling and testing for the general public (US PEPFAR, 2014). Importantly, PEPFAR-funded programs that provided services to pregnant women, significantly averting the HIV infection of more than 17,000 newborns (US PEPFAR, 2014).
2.14.6 Tanzania’s Mortality Indicators

The leading causes of death in Tanzania are noted in Table 9 and US indicators are listed for comparison. US deaths are primarily a result of chronic diseases. Like many low-income countries, infectious diseases have been a leading cause of morbidity and mortality in Tanzania. However, with globalization, changes in diet and lifestyle, and concerted efforts to address infectious diseases, Tanzania is now experiencing an epidemiologic transition where it is seeing chronic illnesses that typically plague the developed world, impacting the health of its population, with chronic diseases accounting for the top four causes of death (CDC, 2013; Kwesigabo et al., 2012; Skolnik, 2012).

<table>
<thead>
<tr>
<th>Table 9: 10 Leading Causes of Death, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tanzania, 2010</strong>*</td>
</tr>
<tr>
<td>1 Cancer</td>
</tr>
<tr>
<td>2 Heart disease</td>
</tr>
<tr>
<td>3 Stroke</td>
</tr>
<tr>
<td>4 Chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>5 Lower respiratory diseases</td>
</tr>
<tr>
<td>6 HIV</td>
</tr>
<tr>
<td>7 Diarrheal diseases</td>
</tr>
<tr>
<td>8 Road injuries</td>
</tr>
<tr>
<td>9 Tuberculosis</td>
</tr>
<tr>
<td>10 Malaria</td>
</tr>
</tbody>
</table>

Sources: *CDC, 2013; **CDC, 2010
To address the underlying causes of mortality, the Tanzanian government is cooperating with the WHO (2009) to implement the following key plans:

- **Strategic Priority 1**: Strengthening capacity of health systems and services
- **Strategic Priority 2**: Scaling-up health service delivery
- **Strategic Priority 3**: Community-based health service and health promotion
- **Strategic Priority 4**: Supporting the reduction of maternal, newborn, and child mortality
- **Strategic Priority 5**: Supporting the country to battle communicable and noncommunicable diseases (pp. 22-26).

These steps will help to address the pressing underlying issues related to HIV/AIDS.

### 2.14.7 Access to Medical Care in Tanzania

In Tanzania, the provision of training to the medical community is challenged by a limited supply of medical workforce and limited training opportunities within the country. In addition to the lack of infrastructure to train the medical community, dramatic cuts and a hiring freeze by the Ministry of Health in the 1990s, led to a shortage of health care workers (Kwesigabo et al., 2012).

Tanzania has approximately 148 health care workers per 100,000 people (Leon & Kolstad, 2010). In 2006, as noted in Table 10, in Tanzania, the shortage of physicians’ workforce was particularly acute; physicians accounted for only 1% of the healthcare workforce with a physician-per-population ratio of 2.3 per 100,000, one of the lowest ratios in the world (WHO, 2006).
In contrast, the US physician-per-population ratio was 230 per 100,000 (WHO, 2006). It should be noted, that to accomplish the MDGs “a minimum level of health workforce of 2.5 health workers per 1000 people is required” (Leon & Kolstad, 2010). This data indicates that Tanzania is woefully understaffed to achieve the MDGs. Figures 9 and 10 show the impact to patients, due to the shortage of health care workers.

The acute shortage of health care practitioners has sweeping implications to the stability and the future of the country. Due to these concerns, the US and other countries have been providing financial support to improve and expand the supply of health care providers (USAID, 2014). Since Tanzania hopes to become a middle-income country by 2025, one of the key factors

<table>
<thead>
<tr>
<th>Table 10: Health Care Personnel Coverage in Tanzania and US</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The human resources crisis: health care personnel (doctors and nurses) per 100,000 population</strong></td>
</tr>
<tr>
<td>Cadre</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Doctors</td>
</tr>
<tr>
<td>Nurses</td>
</tr>
</tbody>
</table>

in accomplishing this will be improving the healthcare infrastructure and health conditions of the country (USAID, 2014).

2.14.8 Educational Issues and Intellectual Development in Tanzania

Under colonial rule, the educational system, largely, focused on providing a minimal education – primary and secondary school levels – and no colleges existed (Mushi, 2009). Educational disparities existed, with one system for Europeans, while the other was for the indigenous population (Kitta, 2004).

At the time of independence in 1961, the vast majority of Tanzanians could not read, only 15% of the population was literate (Mushi, 2009). During the British rule, training opportunities were extremely limited, “in 1961, there was only one Tanganyikan civil engineer, 16 physicians, and two lawyers” (Vavrus & Bartlett, 2013, pp. 11). After independence, there was an emphasis on expanding the educational infrastructure. However, the expansion slowed during the economic decline of the country in the 1980s when the country’s economy was in turmoil (Kitta, 2004). Through the years, Tanzania received foreign aid for educational programs and most donors focused on supporting primary and secondary education, holding the belief that these educational levels provided a better return on investment and were key to reducing poverty (Msolla, 2007).

While attendance at school for children aged 7 to 15 is required by government mandate, a national survey recently conducted by the National Bureau of Statistics (2012) found that the median years of schooling for females is 4.2 years and 4.9 years for males.
The same survey found that 19% of males had never attended school while 26% of females had never attended school (National Bureau of Statistics, 2012). These statistics contradict the findings of UNICEF which found higher rates of attendance in primary school (78.9% for males; 81.9% for females) but with attendance declining sharply for secondary education (UNICEF, 2013). While the reasons for the discrepancy in reporting are unknown, the differences in reporting might be due to the fact that UNICEF is more heavily funded and able to conduct widespread data collection through the country. Educational statistics are noted in Table 11.

Through the years, education has not been free, it was tuition-based. Requiring tuition was the result of agreements made with donors for debt relief, in an effort to stabilize the economy (Vavrus, Thomas, & Bartlett, 2011). It is only recently, in the 21st century, that the government removed a tuition-based system with the aim of increasing enrollment (Vavrus et al., 2011). In addition to removing the financial barriers to education, in the last

<table>
<thead>
<tr>
<th>Table 11: Education in Tanzania</th>
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<tbody>
<tr>
<td>Net Attendance at Primary School, 2012 (Male)*</td>
</tr>
<tr>
<td>Net Attendance at Primary School, 2012 (Female)*</td>
</tr>
<tr>
<td>Net Attendance at Secondary School, 2012 (Male)*</td>
</tr>
<tr>
<td>Net Attendance at Secondary School, 2012 (Female)*</td>
</tr>
<tr>
<td>Enrollment in Tertiary, 2007 Level^</td>
</tr>
<tr>
<td>Ratio of Students: Teachers, Primary School, 2012+</td>
</tr>
<tr>
<td>Ratio of Students: Teachers, Secondary School, 2012++</td>
</tr>
<tr>
<td>Adult Literacy, 2012*</td>
</tr>
</tbody>
</table>

Sources: *UNICEF, 2013; ^Msolla, 2007; +World Bank, 2015b; ++World Bank, 2015c
few decades public funding for education has increased from 2.2% of the government budget in 1999 to 6.8% in 2008 (Vavrus et al., 2011).

In the last decade, donors have recognized the importance of investing in higher education systems (Bloom, 2006; Msolla, 2007). While enrollment in college is unusual, more students are enrolling. Approximately 2% of the population completed a college degree in 2010 (Mawoyo & Wilson-Strydom, 2012). In contrast, the US Census Bureau reported that approximately 40% of 18 to 24 year olds are enrolled in college in 2013 (US Census Bureau, 2013).

2.14.9 Higher Education Institutions in Tanzania

The University of Dar es Salaam was the first university established in the country, in 1961, and it was not an independent entity; rather, it was an affiliate of the University of London (Mkude et al., 2003). In 1963, the University of Dar es Salaam severed ties to the University of London and became part of the University of East Africa, since the infrastructure of Tanzania could not fully support the university (Mkude, et al., 2003). Before the University of Dar es Salaam was established, academic training took place out-of-country in neighboring countries and the home countries of donors, especially for health care workers.

Since 1964, 41 private and public colleges and universities have been established (Tanzania Commission for Universities, 2015b). More are underway, since the government recognizes a strong educational system and highly-trained workforce will be key to moving into the middle-income country category (Bloom, 2006; Mawoyo & Wilson-Strydom, 2012; URT, 2015). The government is focused on improving access to higher
education, increasing the presence of females, as faculty and students, and changing the
educational philosophy from teacher-centered to student-centered and competency-based
learning (Bloom 2006; Vavrus, 2009; MUHAS, 2014).

The common challenges faced by higher education institutions in Tanzania include:
impoverished students, economic issues, lack of resources (often textbooks are decades old
and only a few copies available), stable access to the internet, well-functioning
infrastructure and governance, gender inequalities, and political will to support educational
efforts and policies (Aitchison, & Alidou, 2009; Benjamin & Dunrong, 2010; Ishengoma,
2004). Tanzania, like other African countries, is realizing that despite issues with stable
access to the internet, that distance learning can overcome many of the barriers and may
be the key to increasing enrollment in higher education (Frehywot, Vovides, Talib,
Mikhail, Ross, Wohltjen, Bedada, Korhumel, Koumare, & Scott, 2013; MUHAS, 2013;
Nartker, Shumays, Stevens, Potter, Kalowela, Kisimbo, Kinemo, & Egan 2009).

Recognizing the threat of HIV/AIDS to Tanzania and the importance of training an
effective health care workforce, one of the strategic objectives for the Tanzania
Commission for Universities, the regulatory body that oversees higher education in
Tanzania, is for higher education to focus on “enhanced mitigation against the HIV/AIDS
pandemic” (Tanzania Commission for Universities, 2015a).

2.14.10 Health and Medical Training in Tanzania

To meet the needs of health and medical training, the Muhimbili University of
Health and Allied Sciences (MUHAS) was eventually established, in the 1990s, in Dar es Salaam, the largest city and commercial capital in the country, and, initially, MUHAS was
part of the University of Dar es Salaam (Mkude et al., 2003). Prior to this, medical and health students trained in East Africa and Europe. The University of Dar es Salaam has had a turbulent history with the government heavily involved in the running of the university, limiting its autonomy (Mkude et al., 2003). In more recent years, MUHAS has become a separate entity that is overseen by the government, with the Chancellor of MUHAS reporting to the President of Tanzania (MUHAS, 2014, a). Since most of the Fogarty Fellows at Dartmouth receive their medical training at MUHAS it deserves a special report.

MUHAS provides undergraduate and graduate training in 81 programs in medicine, dentistry, pharmacy, public health, laboratory and allied sciences (MUHAS, 2013). The latest report from 2010 noted that over 2,500 students enrolled at MUHAS (MUHAS, 2013). The university is adjacent to the largest hospital in the country, Muhimbili National Hospital, a teaching hospital, and while the two entities are autonomous, they have formal links: students complete rotations at the hospital and faculty work for both the university and hospital (MUHAS, 2013; Mkony, 2012). (See Appendix I for locations and campuses of MUHAS and Muhimbili National Hospital.)

Overall, at universities including MUHAS, the prevailing academic tone is formal and it is influenced by the British system with faculty members referred to as Dons and with similar traditions and pedagogies being utilized (G. Kwasigabo, personal communication, November 14, 2011). Similar to the British system, the teaching has been very formal and a faculty-centric approach has been pervasive (Kitta, 2004; Stambach, 1994; Vavrus, 2009).
Acknowledging the need to change educational approaches led to educational laws being established to improve the quality of teaching and learning (Mushi, 2009). While reforms to improve both teaching and learning, by moving from a teacher-centered pedagogy toward a learner-centered approach have been in existence since 1982, they been slow to be implemented (Vavrus, 2009; Vavrus et al., 2011).

Only in the last several years, has the Ministry of Education and Culture established a reform policy focusing on competency-based, student-centered learning (Vavrus et al., 2011). MUHAS has issued directives to all departments to undertake sweeping educational reforms to accomplish these new initiatives (MUHAS 2014a; Ngassapa, Kaaya, Fyfe, Lyamuya, Kakoko, Kayomboe, Kisenge, Loeser, Mwakigonja, Outwater, Martin-Holland, Mwambete, Kida & Macfarlane, 2012) and MUHAS is undergoing these significant changes (G. Kwesigabo, personal communication, May 5, 2014).

2.14.11 Challenges for Tanzania’s Academic Institutions

Common challenges faced by universities are insufficient funding, limited resources, limited access to the internet, lack of gender-equity, under-funded faculty and staff and a growing dissatisfaction among students, staff, and faculty (Bailey, Cloete, & Pillay, 2011; Lihamba, Mwaipopo, & Shule, 2006; MUHAS, 2014a). At universities, it has not been unusual for strikes to occur, resulting in students and faculty being fired (Mkude et al., 2003). In the last five years, students went on strike over university policies, funding, and the quality of training, with the strikes escalating into violence (Kagashe, 2011; Sylivester, 2011).
With Tanzania being a low-income country, it is unusual for families to be able to afford to send their children to secondary school and it is especially challenging to send children to college. On average, about 2% of the population or 51,080 citizens, enroll in higher education, according to United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UNESCO, 2007). There are no available data on the number of students who enroll in post-graduate training either in-country or abroad.

As mentioned earlier, Tanzania scores quite low on the UN Gender Inequality Index, ranking 124 of 187 countries (UN, 2014). Therefore, it is not surprising that at universities in Tanzania, a gender inequality exists with more male students enrolling than female students. MUHAS reports that only 36% of the students are female while 27% of faculty and staff are female (MUHAS, 2014a; UNESCO, 2007). Several policy initiatives are being implemented to increase the number of female students, staff, and faculty at universities, including MUHAS (Lihamba et al., 2006; MUHAS, 2013; MUHAS, 2014a; MUHAS, 2014b).

2.14.12 Tanzanian Students Enrolled in Higher Education Outside of Tanzania

Given the limited educational infrastructure within the country as noted above, those seeking advanced degrees often must matriculate at universities outside of Tanzania. However, due to the limited number of such students, little research has taken place on their student experiences in other countries. To the author’s knowledge only one research project has been completed, a published masters’ thesis examining academic advising for graduate agriculturalist from Tanzania and Malawi who were studying in the US (Aagard,
The project found that Tanzanian students, had not been used to formal advising at their home institution, and perceived academic advising and support to be important, especially in a foreign environment (Aagard, 1991).

2.14.13 Progress in Tanzania: What is Working?

Since gaining its freedom from colonial rule, the country has undertaken steps to improve economically, developed good working relations with major donor organizations and Tanzanian-friendly countries, expanded its democratic structure, improved its educational system, developed a higher education system in-country, and improved health outcomes, for example, life expectancy rates, adult and child mortality rates, and the health gap between urban and rural dwellers have all improved (World Bank, 2014). Due to its peaceful nature, stable government and civil society, Tanzania continues to attract investors and parts of the country are undergoing massive development and the tourist industry continues to flourish (Vilby 2007; Werrema, 2006). As noted earlier, the country has plans to move from a low-income country to a middle-income country by 2025 which will be predicated on improving the economic base of the country; developing and expanding its infrastructure, particularly its transportation system; expanding its commercial and manufacturing bases; improving the health status and quality of life and educational system; curbing a moderate level of corruption; and, finally, instituting effective debt management by the government (Robinson, Gaertner, & Papageorgiou, 2011; Temu, 2011; USAID, 2014).
2.15 Summary

The purpose of this chapter was to introduce the reader to the complex issues of international education as well as trends in global health issues and training needs. Globally, there is a significant shortage of trained medical personnel and there is an urgent need to expand the human resource capacity to contain and control diseases that plague the world.

Finally, this chapter served to expose the reader to the complicated history of Tanzania, the home country of the Dartmouth Fogarty Fellows, and to highlight the social, economic, and medical forces that challenge and drive the country forward. It is against a backdrop of a rich and varied culture, indigenous and colonial beliefs, turbulence, instability, and economic unease, that learning for the Tanzanian student takes place. These cultural and educational experiences may impact the transition for the Fogarty Fellows to a US educational system, and some of these issues were explored in this chapter as well as during interviews conducted for this qualitative research project, the results of which are discussed in Chapter 4: Summary of Findings and Recommendations.

The next chapter articulates the theoretical frameworks used to guide the research design, the qualitative process, and the content of the topic guides. A theory of acculturation is presented, that informed the research conducted, as well as qualitative theoretical approaches that were utilized to undertake the research.
CHAPTER 3: METHODOLOGY

3.1 Introduction

The previous chapters discussed the background of the study and important considerations related to the focus of inquiry. These have influenced the design of the study which is outlined below. This chapter provides the theoretical foundations of the research design and approach, the rationale for the research design, and the research processes undertaken.

3.2 Theoretical Underpinning

Anecdotally and through year-end, exit interviews, it has been noted by the Fogarty Program leadership, MPH leadership, and MPH faculty that all of the Fogarty Fellows struggled in adapting, in large and small ways. Collectively, the Fellows struggled with assimilation, language issues, academic requirements, and in-class participation, to name several of the issues (R. Waddell, personal communications, November 12, 2012). Therefore, the focus of this qualitative inquiry was on examining the Fogarty Fellows experiences at Dartmouth, evaluating the Fogarty Program and the MPH Program at Dartmouth, and considering ways to improve both, if warranted.

To guide the development of the study design and research questions, materials from the 25 Fogarty AITRP in the US were reviewed and a literature search was conducted to understand more fully the research that has been conducted with international students. Research studies, research questions, topic guides, and surveys were reviewed to inform the study design and the content of the research questions (Abdrahim, 2010; Berry, 1997; Daley, 2004; Guidry Lacina, 2002; Heggies & Jackson, 2003; Hellstén & Prescott, 2004;
Lee, 2010; Tseng & Newton, 2002; Väfors Fritz, Chin & DeMarinas, 2008; Vanderbilt AITRP, 2010; Winkelman, 1994; and Zhou et al., 2008). The literature review is best summarized as:

the process of adaptation is influenced by a number of variables, including: general knowledge about a new culture; length of residence in the host culture; language or communication competence; quantity and quality of contact with host nationals; friendship networks; previous experience abroad; cultural distance; cultural identity; acculturation modes; temporary versus permanent residence in a new country; and cross-cultural training (Zhou et al., 2008, pp. 65).

Berry’s (1997) theory of acculturation guided the development of the research questions. Berry posits that many factors are involved in the entry, adaptation, and assimilation into another culture. For the purposes of this research, the five main constructs of Berry’s framework were used: 1) experiences occur as the individual’s culture comes into contact with a different culture; 2) meaning takes shape as the individual assesses the experiences; 3) depending on the experiences, different coping strategies will be utilized; 4) during the fourth stage, complex interactions take place and stressors occur, and reactions may be either negative or positive; and 5) finally, long-term adaptation to the new culture may take place (Berry, 1997). These stages are influenced by the person’s native culture and adopted culture, and include many complex social, behavioral, environmental, and personal issues (Berry, 1997).

(See Appendix J for Berry’s Conceptual Model of Acculturation.)
Informed by the Berry model, a review of the literature, and through discussions with the Fogarty Program and MPH Program leadership, the specific questions were:

1) What are the academic similarities and differences in the Fogarty Fellows’ previous academic training and the Dartmouth training?

2) What are the academic, social, and cultural experiences encountered during the adjustment and transition process?

3) Do the students express experiences of culture shock and, if so, what are the causes? What strategies were used for managing cultural shock and adaptation?

4) What supports were provided? Were they assessed as being adequate? If not, why not? How can Dartmouth provide more support?

5) Are there ways that Dartmouth can make changes to the Fogarty Program or the MPH Program to address or help students transition to the new culture or program?

(See Appendix K for topic guides.)

3.3 Rationale for Qualitative Design

Since this research project sought to understand participants’ experiences, perspectives, and opinions, in detail, qualitative research methods which are used “to understand some social phenomena from the perspectives of those involved, to contextualize issues in their particular socio-cultural-political milieu, and sometimes to transform or change social conditions” (Glesne, 2006, pp. 1) provided a natural fit. Using qualitative research methods “illuminate(s) the people behind the numbers and puts faces
on statistics” (Patton, 2002, pp. 10). In comparison, as Glesne (2006) notes, quantitative approaches “are designed with the intention of …creating predictions concerning those phenomena, and providing causal explanations” (pp. 1). Thus, quantitative methods limit the ability of researchers to probe for deeper meanings behind responses. In contrast, this project focused on being able to probe for deeper meanings.

3.4 Qualitative Approach

Action Research developed by Lewin, is typically defined as a reflective process of progressive problem solving led by an individual(s) who is part of the community of practice, in order to address issues and solve problems (as cited in Bargal, 2008). Since the Fogarty Program sought to resolve issues and improve the program, Action Research guided the research project because it was a natural fit for this project. It should be noted that the author is a part of the Fogarty Program team at Dartmouth, a faculty member of Dartmouth’s MPH program, and is a member of the community of interest.

In keeping with Action Research, involvement of participants was not limited solely to being interviewed; active involvement from the targeted communities was sought throughout the course of the project (Efron & Ravid, 2013; Koshy, 2010). Specifically, preliminary planning discussions took place with Fogarty Program and MPH Program leadership at Dartmouth and preliminary drafts of the research plan and topic guides were sent to the Fogarty Program leadership for input and guidance. Transcripts of all interviews were provided to each participant for review, editing, and to provide an opportunity for further comment. Preliminary results of the findings and recommendations were shared with the Fogarty Program leadership and MPH Program leadership to consider the
feasibility and suitability of recommended actions. Minor adjustments were made, based upon the feedback from the participants.

3.5 Study Design

Two qualitative approaches were used: 1) qualitative interviews and 2) in-country field research in Tanzania and at Dartmouth. Initially, it was proposed to conduct a review of syllabi, course materials, and educational reports at Dartmouth and MUHAS; however, after completing five trips to MUHAS and after several meeting with the Dean of the School of Public Health and Social Sciences at MUHAS, it became apparent that such materials at MUHAS either don’t exist or are not for dissemination to the general public.

3.5.1 Data Collection: In-depth Interviews

To capture the perspectives of the many factions involved in the Fogarty Program at Dartmouth, 22 participants from four groups were interviewed: 1) ten alumni of the Fogarty Program at Dartmouth College; 2) five MPH faculty at Dartmouth; 3) two MPH Program administrators; and 4) Fogarty Program leadership including four Dartmouth Fogarty Program administrators and the Fogarty AITRP Program Officer at NIH. To avoid coercion, only Fogarty Fellows who graduated from the program were interviewed.

In order to understand the viewpoint of not just the Fogarty Fellows, four faculty members who taught in one of the four semesters of the MPH program at Dartmouth, were randomly selected to participate in the study. As well, a faculty member who taught in each semester also participated to provide the perspective of possible changes over time. As it happens, one of the faculty members was a graduate of the Dartmouth MPH program and had experienced being a peer of a Fogarty Fellow and, thus, provided both the
perspective of a peer as well as that of a faculty member. Semi-structured interviews took place and lasted from 45 minutes to 60 minutes; detailed notes were taken during the interviews. All interviews were conducted in English and recorded, when practical, except for several interviews which occurred in public locations in Tanzania. Interviews occurred from 2013 through 2014.

3.5.2 Data Collection: Field Research

To complement the qualitative interviews, detailed field observations were conducted. Because the majority of the Dartmouth Fogarty Fellows train at MUHAS, field research took place at MUHAS to gain a better understanding of the teaching and learning environments experienced by the Fogarty Fellows prior to enrolling at Dartmouth. The field research included: 1) in-class observations at MUHAS; 2) observations at Muhimbili National Hospital in clinics, wards, and during Grand Rounds; and 3) observations at the Muhimbili National Hospital HIV/AIDS research clinics where the Fogarty Fellows train. Outside of formal field research at the academic and training locations, other in-country observations occurred including travel in the country; attending sporting, religious, and cultural events; and visits to private homes. Lastly, to aid with field research, I took private Swahili lessons, the dominant language of Tanzania.

Similarly, field research occurred at Dartmouth’s MPH Program. Glesne (2011) notes that by engaging in participant observation, the researcher learns directly how the participants relate to their worlds. Field notes were written and were referred to. In-country field research took place for several weeks from 2012-2014. In total, I spent six months in Tanzania.
3.6 Site Selection, Description, and Rationale

As noted above, academic and transition issues by Fogarty Fellows at Dartmouth have been documented, but not systematically studied, and were a concern for leadership at Dartmouth (R. Waddell, personal communication, November 12, 2012); thus, Dartmouth was the target for site selection. A purposeful sampling was utilized because “they [the individuals and sites] can purposefully inform an understanding of the research problem and central phenomenon in the study” (Creswell, 2007, pp. 125). Data was collected at Dartmouth and MUHAS, where the majority of the Fogarty Fellows completed their medical education and training.

3.7 Participant Selection, Description, and Rationale

All ten Fogarty Fellows who graduated from the MPH program at Dartmouth were recruited through an invitation letter sent by email since the Fogarty Fellows have returned to Tanzania. Similarly, the Fogarty Program leadership and MPH faculty and leadership were recruited through an invitation letter sent via email. The emails also included a one-page project abstract and project fact sheet; the University of Vermont’s Institutional Review Board deemed the study a low risk and did not require a consent form; rather, the fact sheet served as a consent form. Participants were provided a one-week period to consider participating in the project. There was a 100% participation rate.

3.8 Data Analysis

All interviews were transcribed and responses were manually coded, initially. A pre-determined code framework was not used, due to the exploratory nature of the study; rather, a code framework was developed during a second stage of review, this approach
was used to avoid bias (Miles & Huberman, 1994). After reviewing the data manually, all interview transcripts were entered into NVivo, a qualitative analysis software package, and coded and analyzed. Line-by-line coding took place, using an iterative approach in keeping with commonly used qualitative approaches (Barbour & Barbour, 2003).

Thematic analysis was used, with coding based on the research questions. Data was coded by participant category, at first, to learn of any group-to-group variations (Creswell, 1994; Glesne, 2011). During the analysis, tapes and notes were referred to for a richer understanding. The results of the coding were examined and a hierarchical framework was developed (Glesne, 2011). Initially, 251 broad categories emerged which were then clustered around six main themes: student perspective, faculty perspective, institutional perspective, acculturation issues, elements that were working well, and recommendations. (See Appendix L and M for the initial and final coding schemas.) Finally, the data was segmented by Berry’s constructs of assimilation, which guided the overall development of the research project. (See Appendix J).

3.9 Data Review by Participants

Member checking by the participants was completed; drafts of transcripts and findings were sent to the participants for their review and input in order to ensure that the findings accurately captured what the participants intended to convey. Minor adjustments to comments, observations, and recommendations were made, based on input from the participants. The programmatic recommendations, detailed in Chapter 4, were reviewed by Dartmouth Fogarty Program and MPH Program leadership for relevance and
practicality, with minor adjustments made. These steps may also have helped to mitigate bias on the researcher’s part, since objectivity in any research project is challenging.

3.10 The Researcher’s Subjective Perspective

Some of the challenges I brought to this project were that I am an American and have limited in-country experience of six months in Tanzania over the course of two years, and I may not be able to assess – or even notice – the cultural nuances experienced by the Fogarty Fellows. However, I have a long-standing interest in international experiences, starting with my adolescent years when my family hosted three international students, and continuing after college. My interest in international experiences continued more actively after graduate school when I lived overseas in two countries, for a five-year period, and experienced acculturation. More recently, my family hosted a Tanzanian family for one month which allowed for cross-cultural exchange.

Professionally, I have worked closely with the Fogarty Program at Dartmouth for eleven years, and, previously, served as a preceptor for Fogarty Fellows, for two years, while I was Research Associate at Johns Hopkins Bloomberg School of Public Health. Additionally, I currently work on another NIH-funded project based at MUHAS in Tanzania, serving as an Educational Specialist, and this allowed for greater access to MUHAS’s classrooms and faculty, for me to participate in ten faculty exchanges, and for field research to take place with ease.

Being funded on related Fogarty grants brings familiarity with the study population and this might be viewed as a detraction in that familiarity might introduce bias but it can also be viewed as a positive in that I have knowledge of the Fogarty Program, and, thus,
may have insights that I might not have otherwise been exposed to. Several steps, discussed above, were taken to reduce coercion, while recruiting and interviewing participants, especially the Fogarty Alumni.

3.11 Study Approval

This research project protocol received approval from The University of Vermont’s Institutional Review Board. Dartmouth College’s Office of Institutional Research and the School of Public Health and Social Science Dean’s Office at MUHAS also reviewed and approved the protocol. No incentives were offered.

3.12 Study Limitations

The Fogarty Fellows program at Dartmouth is small, in nature, thus, the potential sample size is small and can be seen as a limitation. However, qualitative research may be conducted with a limited number of interviews since qualitative research focuses on capturing a rich, thick description of “things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Creswell, 2007, pp. 36).

In this study, in contrast to quantitative research that focuses on capturing a large data set, the concern was on capturing information about a process and perceptions. Typically, qualitative research is not concerned with findings that may be generalizable to a specific population. As such, the findings from this case study are not generalizable; however, the results may provide insights to the twenty-five sister programs and institutions that host Fogarty Fellows since the following similarities exist with the make-up of the Fogarty Fellows: 1) generally, the Fogarty Fellows originate from low-income
countries); 2) the Fogarty Fellows have completed medical programs; and 3) the Fogarty Fellows specialize in HIV/AIDS. Lastly, the findings may be of interest to US institutions hosting international students.

3.13 Summary

This chapter explained the theoretical foundations for the research study, the research protocol, and the data analysis methodology. The instruments used in this study can be found in Appendix K and the coding schemas are located in Appendix L and Appendix M. The research results are detailed in Chapter 4 Summary of Findings and Recommendations and are also discussed in the manuscript found in Chapter 5.
CHAPTER 4: FINDINGS AND IMPLICATIONS

4.1 Introduction

This chapter discusses, in detail, the results of the interviews with the four distinct groups of participants: Fogarty Fellows, MPH faculty, MPH Program administrative leadership, and Fogarty Program leadership. Each participant group is discussed in a separate subsection below. Since this case study focused on understanding the acculturation experienced by the Fogarty Fellows, the findings for the Fellows’ are linked to Berry’s theory of acculturation. The recommendations for program improvements, based on insights from the Fellows, faculty, and MPH and Fogarty leadership, are examined from the perspective of Swail’s theory of the academic pillars that are critical to student persistence and achievement. The chapter concludes with a discussion of the programmatic recommendations and considerations for implementing changes at Dartmouth and implications of the findings, at the macro-level.

4.2 Overview of Findings

In order to understand multiple perspectives regarding the experiences of being an international Fogarty Fellow enrolled in the MPH Program at Dartmouth, several groups of key stakeholders were interviewed. All of the Fogarty Fellows who graduated from the MPH Program before 2014 participated as did all of the Dartmouth Fogarty Program team as well as key Fogarty leadership at NIH. The Dartmouth MPH Program leadership participated and four faculty, each teaching in one of the semesters were randomly selected and participated as did an additional faculty member who teaches in all four semesters. One faculty member received an MPH degree from Dartmouth and had been a peer of a
Fogarty Fellow and was able to offer additional insights. In total, 22 stakeholders were interviewed, 43% were female and 57% were male.

4.1.a. What is Working?

A key finding from the interviews was that many aspects of the Fogarty Program and the MPH Program are meeting expectations. The interviews revealed that the Fogarty Program is highly regarded and valued by the Fellows and the MPH Program. Table 12 below reflects aspects that are working well. An X denotes that at least one member from the key participant group noted the particular aspect as working well.

<table>
<thead>
<tr>
<th>Table 12: What is Working Well</th>
<th>Participant Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fogarty Program</td>
<td>Fellows</td>
</tr>
<tr>
<td>• Administrative Support – Fogarty Team</td>
<td>x x x x</td>
</tr>
<tr>
<td>• Arriving Before Orientation to Adjust to US Culture and Living Environment</td>
<td>x x x x</td>
</tr>
<tr>
<td>• Advising (Academic and Career)</td>
<td>x x</td>
</tr>
<tr>
<td>• Applying Learning from MPH Program with ID Projects</td>
<td>x x x x</td>
</tr>
<tr>
<td>• Being Met on Arrival and Escorted to Housing</td>
<td>x x</td>
</tr>
<tr>
<td>• Care Package on Arrival with Food, Basics of the Area, and Listing of Key Contacts</td>
<td>x x x</td>
</tr>
<tr>
<td>• Connecting with the Dartmouth-Dar es Salaam Research Team</td>
<td>x x x</td>
</tr>
<tr>
<td>Fogarty Program</td>
<td>Participant Group</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>• Connecting with Fogarty Alumni</td>
<td>Fellows</td>
</tr>
<tr>
<td>• Dartmouth’s Continued Presence in Tanzania and Understanding of the Country and Culture</td>
<td>x</td>
</tr>
<tr>
<td>• Fogarty ID Team Availability</td>
<td>x</td>
</tr>
<tr>
<td>• Fogarty Program Administrators’ Support from Pre-Post Milestones</td>
<td>x</td>
</tr>
<tr>
<td>• Having Two Fogarty Fellows Enrolled, Simultaneously, in the MPH Program or in Other Dartmouth Programs</td>
<td>x</td>
</tr>
<tr>
<td>• Monthly Meetings with ID Team</td>
<td>x</td>
</tr>
<tr>
<td>• Personal Service and Support (i.e., At Arrival Met with a Basket of Strawberries)</td>
<td>x</td>
</tr>
<tr>
<td>• Pre-arrival Communication</td>
<td>x</td>
</tr>
<tr>
<td>• Pre-arrival Information: Travel, Housing, Dartmouth Requirements, SEVIS Requirements</td>
<td>x</td>
</tr>
<tr>
<td>• Time and Items Donated – Indication that People Cared</td>
<td>x</td>
</tr>
<tr>
<td>Participant Group</td>
<td>Fogarty Program</td>
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<tr>
<td>-------------------</td>
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<tr>
<td><strong>Tours Before Orientation</strong></td>
<td>x</td>
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<tr>
<td><strong>MPH Program</strong></td>
<td></td>
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<tr>
<td><strong>Academic Advising</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Administration – Well Functioning</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Administrative Support</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Capstone – Practical Allows for Application of Theory</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Course Content – Applicable to Tanzania (i.e., Efficiency Practices, Financing)</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Course Materials – Detailed Syllabi and Key Summary Points</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>ESL Services</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>MPH Program – Education, Training, Tools, and Skills</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Orientation – Helpful Introduction; Ropes Course Effective Ice-Breaker</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Pre-arrival Readings and Materials</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Skills Learned Applied in Home Country</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Teaching Assistant Teams</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Tutoring Services</strong></td>
<td>x</td>
</tr>
<tr>
<td><strong>Value of International Students – Ability to Contribute and Impact Learning of Peers</strong></td>
<td>x</td>
</tr>
</tbody>
</table>
Broadly speaking, the results of the interviews indicate that the administrative and academic support provided by both the Fogarty Program and MPH Program teams were notable for their excellent quality, high level of effort, and personalized attention. The personal attention and support are some of the key factors contributing to the success of the Fellows, all of whom have completed the MPH Program on time. As with many things, attention to detail and small gestures matter. As one Fellow noted, “How can you compare being met at the Dartmouth Coach by the Principal Investigator with a basket of fresh strawberries?” (Fellow 3)

The Fogarty Program at Dartmouth is perceived by all of the participants who are aware of the Fogarty Program, as having a strong commitment to the educational goals of the national Fogarty Program, the MPH Program, and to Dartmouth. This is evident to the Fellows, some faculty, and MPH administrators, with the Fogarty Program being lauded for its dedication to recruiting, enrolling, and supporting highly committed and talented Fogarty Fellows who are emerging as leaders in their country. From the perspective of the Fellows, the Fogarty Program’s support and efforts are evident in all phases: from the initial recruiting meetings, through communicating about and arranging travel to the US, arranging for logistical matters, providing academic support and involvement in the research work of the Infectious Disease (ID) team at Dartmouth-Hitchcock Medical Center – the academic teaching hospital affiliated with Dartmouth College – and the Fogarty Program team’s substantial work in Tanzania. The Fogarty Program is thought to be supportive by the Fellows and most faculty through providing mentoring throughout matriculation and career support once the Fellows return to Tanzania

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Equally, the MPH Program was viewed by the Fellows and Fogarty Program team as being dedicated to attaining the educational goals of the MPH Program and to upholding the standards of Dartmouth. The MPH Program was viewed by Fellows as being well-run and responsive to the needs of students. The Fellows felt that matriculating in the MPH Program was invaluable to their career development and they felt supported through the efforts of leadership and administrators on their behalf. This belief is best summarized by this comment, “My time at TDI was life changing; I use what I learned at TDI with my work in Tanzania.” (Fellow 3)

What emerged from the research is that Fellows have assimilation issues that are, unsurprisingly, unique to being an international student operating in an environment that is quite different in terms of culture, language, teaching and learning styles, and resources. Some of these issues regarding academic preparedness, the campus climate, and academic integration are universal and mirrored those that are found in the educational literature and discussed above, and these issues were understood by all the participants. While other issues that the Fellows experienced were not known to either faculty, the MPH Program administrative leadership or the Fogarty Program leadership and these will be discussed in further detail below.

Another key finding was the faculty’s somewhat limited understanding of the Fogarty Program and understanding or awareness of the differences in international students’ prior educational learning environments. In recognition of this, some faculty expressed interest in undertaking training in strategies to work with international students.
Some faculty held the belief that some international students require more time for faculty to support their learning.

Since Berry’s theory of acculturation was used as the theoretical framework for this research project, the findings from the Fellow’s perspectives will be discussed following the constructs Berry identified as influencing an individual’s ability to adapt, namely: acculturation, appraisal of experience used for assimilation, coping strategies used, immediate effects, and outcomes of the acculturation experience (Berry, 1997). While there are many definitions of acculturation, for the purposes of this research, Berry’s (1997) definition will be used: “Acculturation [refers to] the general processes and outcomes…of intercultural contact” (pp. 8).

4.1.b. Assimilation Issues for Fogarty Fellows

An overview of assimilation issues and the stakeholder groups that identified the issue is found in Table 13. An X denotes that at least one member from the key stakeholder group commented on the issue or challenge. The findings will be discussed below, from each stakeholders’ perspective: Fogarty Fellows, MPH faculty, MPH administrative leadership, and, finally, the Fogarty Program leadership.

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<tr>
<th>Issues</th>
<th>Fellows</th>
<th>MPH Faculty</th>
<th>MPH Administrators</th>
<th>Fogarty Program Leadership</th>
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<tr>
<td>American Culture</td>
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<td>Attribution of Sources,</td>
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<td>American Standards</td>
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<td>Automation and Technology</td>
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<td>In and Out of the Classroom</td>
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<td>Classroom Dynamics</td>
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Table 13: Assimilation Issues for Fogarty Fellows
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<tr>
<th>Issues</th>
<th>Fellows</th>
<th>MPH Faculty</th>
<th>MPH Administrators</th>
<th>Fogarty Program Leadership</th>
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<tr>
<td>Classroom Environment</td>
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<td>Cross-cultural Understanding</td>
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<td>Etiquette</td>
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<td>Faculty-Student Interaction</td>
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<tr>
<td>Language – Comprehension</td>
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<td>Language – Speaking</td>
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<td>Language – Written</td>
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<tr>
<td>Learning Assessments</td>
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<tr>
<td>Reading Load</td>
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<tr>
<td>Resources (Disparities)</td>
<td>x</td>
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<tr>
<td>Teaching Pedagogies – Student-centered, Active Learning</td>
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<td>Technology for Learning</td>
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#### 4.3 Fogarty Fellows’ Perspectives

As discussed in Chapter 3, Berry notes that the acculturation process is a highly complex experience and that “individuals engage in strategies to attempt to deal with the experiences” (Berry, pp.19). According to Berry, coping strategies emerge to deal with the new environment which can lead to, initially, some level of stress followed by adaptation to the new culture (Berry, pp. 19). A primary area of interest for this research project was learning how the Fellows acclimated to their new environment and what were their particular challenges during this process, therefore, this section reports on Berry’s key constructs of assimilation: acculturation experiences, appraisal of experiences, strategies used to cope, immediate effects of transitioning to a new environment, and the long-term
outcomes of adaptation from the Fellows’ perspectives (Berry, pp. 15). (See Appendix J for a conceptual model of Berry’s theory of acculturation.)

Acculturation from the Fogarty Fellows’ Perspective

Unsurprisingly, the Fellows needed a period to adjust to the US culture, the culture of Dartmouth, the MPH Program and its teaching pedagogies. The fast-paced and technologically-oriented US society and the wide array of consumer choices were particularly daunting. For most Fellows, the new living and studying environments were overwhelming and they navigated through with the assistance of the Fogarty Program team, the MPH Program, host families (Friendship Families), and peers. For those Fellows who were acquainted with the US, the adjustment was less pronounced.

Acculturation – Fogarty Fellows’ Perspective of the US Culture

Several Fellows described their issues with the US culture as being overwhelming on many levels:

*It was a dramatic shift. E-learning, electronicized [sic] everything...you had to pay with coins or cards for everything including a printer, a soda! Everything! I know you cannot image how overwhelming this is – but you learn even at the airport, with e-tickets. You go to a supermarket and use a card. We do not do this. So these whole cultural issues were very, very overwhelming but I appreciate the differences.[It was] a dramatic shift of cultural experiences, academic experiences, and system challenges – electronic-printer, e-learning, supermarkets, food, airports, washing machines, simple day-to-day routines compounded with a limited social network were among issues of cultural shock that I went through. (Fellow 8)*

*After I arrived a Fogarty Program member helped me with grocery shopping. The grocery shopping was very challenging in the sense there was so much choice. Twenty choices of orange juice and ten choices of milk. So, okay, what is the difference? But I think that is to be expected when you go a new place, you need to adapt and try to fit into the prevailing circumstances, it was good to try new things. (Fellow 10)*
It takes time to acclimatize. You are definitely going into a new culture and it takes time to adjust. If there is a way to see if Fellows can spend time transitioning into the new system that would be good. (Fellow 7)

“It gets really dark during the winter. I was not expecting this. I had read about this, but until you see it, you cannot believe it or know what it is like.” (Fellow 1)

Universally, participants believed that a period of adjustment was needed to address the major cultural and educational shifts. Arriving at least one-week before the start of orientation would provide time to adjust. Equally, while some information is provided about the program and Dartmouth, more information about the culture and academic expectations would help. Specifically, many suggested: using videos to show the typical living arrangements and classroom dynamics, providing US cultural “Survival 101” guides, and providing a comprehensive package about the educational expectations.

Acculturation – Fellows’ Perspective of the Dartmouth Culture

For the most part, the Fellows enjoyed their time at Dartmouth and tried new things, such as skiing, snowshoeing, and kayaking and attended many local and school-based events. “I had the most fun! There were places to go. I made friends and I spent a lot of time socializing.” (Fellow 6) was a typical response.

For some, the lack of diversity was noticeable as were some peers’ views of multiculturalism and diversity.

The culture – it is always there. It is very broad from food to, well, everything. It is unavoidable. For me, it was huge. The area is predominantly white and you always felt that. You need to behave differently. It takes something of adjusting to. (Fellow 7)
In terms of racism, Dartmouth is the least mixed Ivy League – you know this because you receive memos from administration about harassment. I did not feel any except that I had a roommate that made some my comments about having experience using or knowing what a microwave was and made a comment when I used a face mask because I was ill (he thought I might have TB) and did not want to pass it to others. (Fellow 4)

It would be helpful to have more information in advance; a recognition that these two institutions (MUHAS and Dartmouth) are worlds apart; they are very different. (Fellow 6)

Training for students and faculty regarding multiculturalism was mentioned by the Fellows and some faculty as a pro-active approach to broaden the understanding and acceptance of cultural diversity.

Acculturation – Fogarty Fellows’ Perspective of the MPH Teaching and Learning Environment and Faculty-Student Interactions

This section details the reporting of the Fellows’ perceptions of the teaching and learning environment at Dartmouth which is quite dissimilar to that of the education system in Tanzania. Tanzania is, culturally, a very rich country that has a very layered society; it is a tribally-based culture and inherited, and still has, some vestiges of colonial cultures, particularly, British and German cultures. Group identity, respect for elders, and a reverence for tradition are common features of society in Tanzania, as noted by the following comment: “In the Tanzanian setting...group [structure] support is key in many social settings. It is a cultural difference.” (Fellow 8). In Tanzania, interactions can be quite formal with a common greeting that conveys great respect to an elder and is a holdover from colonial days, being:

- Student: “Shikamoo, Profesa.” Origin servant’s greeting, literal translation: “I show my respect; I bow at your feet.”
In contrast, the casual nature of Dartmouth surprised many Fellows and they needed time to learn the in-class and out-of-class etiquette. When asked to describe the similarities and differences, the following is indicative of the perceived role of faculty in the US versus Tanzania, from the Fellows’ perspectives:

*In Tanzania, the professor is the master. In the US the professor can have a relationship with the student. This would never happen in Tanzania. Students are trained to fear the professor in one way or the other. There is a huge wall between the student and the professor. Students do not ask many questions. If I interrupt in class, I will be chased out of class. Interruption is a sign of disrespect. This made me very hesitant to talk in class at Dartmouth. (Fellow 2)*

*The students and faculty speak with one another in a friendly tone. Faculty and students socialize at Dartmouth. This would never happen in Tanzania. (Fellow 6)*

*[In Tanzania], you should respect the faculty, you believe what they tell you because they are knowledgeable – but sometimes they are not always right. But you would never challenge them – you would ask for them to clarify – you have to have a way of asking. Even now, if I am in a social gathering, anyone who has taught me, even though all of us are faculty, I would still have this respect for them. There is a barrier even though I am at the same level as the other faculty. (Fellow 10)*

*The dress is different – I was surprised by the short dresses and tight clothing. Students presented, in class, wearing short shorts which is not okay. For Muslims it must be difficult. Also, I was surprised by students eating in class – we are not trained to do this. (Fellow 5)*

*Tanzanians have been brought up in more of the British system – you go to class or a ward, you must be dressed appropriately. There is a dress code which you cannot risk. White coats, tie...you must be smartly dressed. In America, you can dress any way...you have the freedom to dress any way. (Fellow 10)*
Acculturation – Fogarty Fellows’ Perspective of the MPH Teaching and Learning Environment and Participatory Pedagogies

Dartmouth has adopted student-centered, active learning teaching approaches which require students to actively engage and participate in class and in group projects and prepare written assignments (Dartmouth MPH Curriculum Reports, 2014.) In contrast, most of the learning in Tanzania is faculty-centered, with faculty lecturing at a fixed podium in large lecture halls filled with students which makes participation for Fellows challenging. The following illustrates the Fellows’ perceptions of the teaching and learning environment:

In the US, you are, first, commended for asking the question and you do not feel intimidated. In the US, the teaching requires interactive learning, students read materials before class [in Tanzania, students read materials after class], and [are] expected to actively participate. The relations between instructors and students is very different – instructors are called by their first names. Student can become friends with the teachers and can discuss education and life stuff. This was very hard for me to adjust to. It took me 4-5 months to open up and raise my hand and ask a question. (Fellow 2)

Another difference is the participatory learning. Coming from this culture, for the student it is not easy to jump into and ask questions, for me, coming from this culture whereby the student-teacher interaction is sort of respect for elders, respect for teachers…it [participatory learning] does not happen here. You may be rather approach the teacher outside of class rather than in-class. (Fellow 8)

Active learning was very hard. It was new to me. At TDI, you must be vocal – this was very different for me. Our characters are different, we don’t talk in class. The language was super-fast. (Fellow 3)

If you ask a question in class in Tanzania, it means that you are not prepared or do not know. (Fellow 9)
Acculturation – Fogarty Fellows’ Perspective of the MPH Teaching and Learning Environment and the US-centric Content

The MPH Program at Dartmouth focuses primarily on improving the US healthcare system (Dartmouth MPH Curriculum Reports, 2014). In the interviews, Fellows reported that the US-centric program content was overwhelming and confusing to them. As well, some Fellows and faculty questioned the relevance of learning about the US system and how this knowledge might be applied in their home country.

*It was a bit challenging in the sense that it was hard to understand the US healthcare system – there is so much terminology. When spoken in class [the US system], it was challenging...the main challenge...because I did not understand it. The US healthcare system is very different from Tanzania. But, after understanding it, it was not difficult. (Fellow 10)*

*The program is very US-based. For example, critical issues in US healthcare, the utilization of US health services. This did not apply to me and I wondered....where do we fit? It was not useful. Having more than information about the US system would improve the program...it would be beneficial to have a component on global health. (Fellow 5)*

Acculturation – Fogarty Fellows’ Perspective of the MPH Teaching and Learning Environment and the Use of Technology

E-learning is uncommon in Tanzania, due to the instability of electricity and frequent power failures, and the cost of owning computers. While e-learning is beginning to be introduced into the classroom in Tanzania, it is not common to have widespread access to computers; instead, cell phones are more commonly used and communication is often through text messaging. For the Fellows, the widespread use of technology at Dartmouth was challenging:
While the use of technology is expected, [it is] not used as often in Tanzania. In developing countries, we do not have the same resources for technology. You use slides and a projector – you wash off the slides and write on them again. (Fellow 10)

The program at Dartmouth is very technology driven – Blackboard, email, access to online materials. For the e-learning, for us [it is challenging] because we are not as advanced in computers and technology-based learning. Computers are not as prevalent in Tanzania and in developing countries, it is easy to get left behind. It is a very short time to learn [during orientation], if you take at the same level [orientation session] as students from advanced countries, then you are left behind. (Fellow 7)

I was anxious because of the technology and reading materials – there were many readings. We do not use technology for teaching in Tanzania. (Fellow 3)

Technology outside of the classroom was also new to the Fellows and, at times, was used in unexpected ways. The automated aspects of US society are not found in Tanzania and some Fellows, who had not been to the US beforehand, found it be surprising and challenging.

Using technology was different – using a washing machine was new to me. I had never seen a coin-operated washing machine. Swipe cards to access my apartment and school were new, too. I did not know these. I expected to receive a key, but was given a card. I did not realize that doors locked automatically. Ordering online – I had never done this [because] the postal system in Tanzania is not reliable. My Friendship Family and roommate helped me to understand how things worked. (Fellow 2)

Acculturation – Fogarty Fellows’ Perspective of the MPH Teaching and Learning Environment and English as a Second Language (ESL)

Unsurprisingly, English proved to be a challenge for most Fellows and required a great deal of effort for them to keep up with the readings, to process in-class lectures, discussions, and conversations, and to prepare written work. In Tanzania, as noted earlier, the official language is Kiswahili and most Tanzanians also speak a tribal language or
dialect, with English being their third language. In addition, Tanzanian students do not begin to be taught in English until they reach the third grade. The Fellows report:

*There is a language barrier – while English is not my first language, even an American speaker will agree with me that the accents are different in America. I spent a good three months struggling with understanding the NH dialect. It is not that you don’t know the American language it was just struggling to understand the accents, struggling to understand what was being said. That was really difficult. I shared this experience with other Fogarty scholars...it is real. It was overwhelming, I am telling you it was overwhelming.* (Fellow 8)

*There was a lot of writing at TDI, whereas, at MUHAS, it is MCQ [multiple choice questions] based. I needed English writing sessions and used ESL services.* (Fellow 2)

**Acculturation – Fogarty Fellows’ Perspective of the MPH Teaching and Learning Environment and Assessments**

Learning assessments in Tanzania focus mainly on an individual-level and students are assessed usually at two milestones – mid-year and end-of-term with multiple choice question (MCQs) exams used. MCQs require rote memorization rather than critical thinking skills that are required at Dartmouth. Dartmouth assignments are a mixture of individual assignments and group assignments and more writing assessments are used rather than exams. It is rare for an exam to be an MCQ-based assessment; instead, open ended questions, mini-cases, quantitative data sets, and problem-solving questions are utilized. Another difference in assessments is that, historically, in Tanzania, students have not been judged on in-class participation or incremental projects and rarely speak in class. Coming from Tanzania-style training, adjusting to Dartmouth’s approach was jarring for most of the Fellows. Interviews revealed that initially, some of the Fellows floundered
with the different approaches used by Dartmouth for assessments, according to the Fellows’ self-reporting.

Acculturation – Fogarty Fellows’ Perspectives of the MPH Teaching and Learning Environment and Attribution of Sources

Some students struggled with the requirements for attributing sources in the US format. When these issues arose, they found it was helpful to have advisors, who were not a faculty member of the course, to talk with and be guided by. ESL tutoring also helped with these issues.

Appraisal of Acculturation Experiences by Fogarty Fellows

Despite the adjustment issues and differences in culture and educational approaches, the Fellows were extremely enthusiastic about their time at Dartmouth and their time as students in the MPH Program. The Fellows repeatedly expressed their satisfaction with both, and noted how much support they received from both the Fogarty and MPH Programs.

At TDI, there was more interaction between professors and students. An added advantage at Dartmouth was that they helped you to learn what they are teaching you. [Professors] paid close attention to you. Having Teaching Assistants was very different. It was very helpful – you could stop into their office. There were more lines of communication [at Dartmouth] which is an advantage. At TDI, they [faculty, staff] look for ways to assist. (Fellow 4)

The Fogarty Program was very helpful...Collaborating with the Dartmouth-Dar es Salaam team at DHMC was very helpful. It gave me confidence. It was very helpful to have a close mentor [at the Fogarty Program] to help when you go through this difficult time, so formalizing that would be beneficial. So [I] will advise to formalize one-to-one mentoring. (Fellow 8)
The issues about the cultural issues are big. But the good thing is that the Fogarty Program is used to the Tanzanian way of life. Dartmouth [Fogarty Program] is in Tanzania and there are Dartmouth people coming here. They know the Tanzanian students. (Fellow 7)

At Dartmouth, the faculty are approachable and work closely with the students; there is not much fear factor. At MUHAS, there is a distance between faculty and students. (Fellow 3)

Assimilation Strategies Used by Fogarty Fellows

According to the interviews, the Fellows adopted a variety of strategies to proceed through the program. These ranged from working with an informal advisor; meeting and working with Fogarty Program mentors; connecting socially with peers, other international students, host families, and with friends and family in Tanzania; and utilizing academic support via the Teaching Assistant system, a system which is not used in Tanzania, and through tutors for epidemiology, biostatistics, and ESL. The Fellows were careful to plan their time since the reading load is quite overwhelming, in part due to English comprehension issues, getting through the reading assignments could be very time consuming. The Fellows also adopted strategies to try new things and see different parts of the country. For some, connecting with a host family offered the opportunity to do both as well as provided assistance with navigating the American culture and provided a much needed “home away from home.”

At Dartmouth, mentoring relationships are built. It is ideal to have a mentor – a senior person sharing experiences and difficulties is very helpful. (Fellow 7)

Weekly meetings with the Fogarty team were very helpful. Discussions were friendly. They quickly problem solved – identified problems and solved issues. They would ask, ‘Are there any problems? Do you need any help?’ It was very good in the sense that things were quickly solved. (Fellow 10)
Having a social network is really important. Linking to a network of Fogarty Alumni, physicians, and international students is very helpful. It helps because you have shared experiences. (Fellow 9)

I tried to make friends and network. The Fogarty team was very, very supportive. (Fellow 8)

Immediate Effects of Assimilating from the Fogarty Fellows’ Perspectives

Collectively, the Fellows commented that they felt supported in and out of the classroom, during their time at Dartmouth, by both the Fogarty Program and the MPH Program with the following indicative of the experiences of the Fellows:

The interaction with the Fogarty team was excellent. [The Fogarty Program team] tried as much as possible so that we were not lonely. The mechanism set up to meet weekly was very good. We would talk about how everything was going—social, academic...Mentoring was excellent—[the Fogarty Program team] immediately helped with any problem, there was no waiting around. The teaching methods were excellent. TAs were real assistants. We are now using that model in Tanzania...I think the support was always there—if I did not understand something, you knew who to call. (Fellow 10)

The ID team frequently communicated with me, this was very helpful. It allowed me to relate what I was learning to real work. I applied my education through working with the ID team. But I was racing to catch up. (Fellow 9)

Outcomes of Assimilating to Dartmouth from the Fogarty Fellows’ Perspective

For the Fellows, the experiences at Dartmouth and the education provided by the MPH Program were very positive. Due to matriculating in the MPH Program, the Fellows are using the knowledge, skills, and tools learned at Dartmouth in their home country:

My current work is shaped a lot by TDI—research, monitoring, and evaluation, case follow-up, and mass treatment. I work with the poorest of
the poor and what I learned at TDI I use with them. My time at TDI was life changing. (Fellow 3)

I enjoyed my time at TDI and I apply what I learned in my work in Tanzania. I would think of how I can take the tools I am learning at TDI and use them in my home country where every penny counts. (Fellow 9)

Support from the Fogarty Program at Dartmouth was always there! There are good connections between the US and Tanzanian counterparts. We keep in touch and discuss research opportunities. It [frequent business trips to Tanzania by the Fogarty Program] provides an opportunity to connect and collaborate on research. (Fellow 10)

Many Fellows commented on continuing their relationships with the Fogarty Program after graduation, and they noted that while they do receive some career guidance, they wish to have more career support especially around pursuing doctoral programs, developing research careers, and establishing professional connections to Fogarty Alumni in the East Africa region.

Nearly all Fellows have either enrolled in doctoral programs or expressed an interest in locating a doctoral program that will meet their professional interests and provide some flexibility in delivery. It should be noted that the availability of doctoral programs in East Africa is rather limited and many scholars travel to European or the US to enroll in doctoral programs, which is very difficult to accommodate while maintaining a Tanzanian-based career or family life. On a related note, while Dartmouth has no influence regarding the use of GRE scores for admission to doctoral programs, the Fellows commented on how challenging the GREs are for a non-US student, specifically, understanding the nuances of the GRE questions is very challenging because the questions can be quite US-specific in context.
The Fellows are very career-focused and wish to be more involved in research and are quite interested in career advancement. Ties to the Fogarty International Center are very important to the Fellows and they wish to keep connected to the Fogarty International Center in order to become more knowledgeable about Fogarty initiatives in Tanzania, to become aware of and to participate in additional Fogarty training programs, either in the US or in-country, and to collaborate with other Fogarty Alumni in the East African area. Several Fellows suggested that a formal East African Fogarty Alumni association be developed. To broaden their networks, the Fellows envision a Fogarty Alumni partnership for professional development, research endeavors, and scholarship and publications.

Several Fellows and Fogarty leadership identified the Ugandan Society for Health Scientists, founded by Fogarty Alumni in 1999, as an exemplar. The Ugandan Society for Health is notable in that it has become a formal entity, it is registered as a non-governmental organization, it focuses on conducting scientific and public health research, and it hosts training conferences.

Summary of Fellows’ Perspective of Matriculating at Dartmouth

In summary, the findings of the interviews with the Fogarty Fellows noted that while enrolling in the MPH Program at Dartmouth had its rewards as well as its challenges, the basic underlying infrastructure of both the Fogarty Program and the MPH Program adequately supported the Fogarty Fellows. The Fellows continue to be accomplished public health professionals; they reported in the interviews that they have returned to their home country to assume leadership positions in Tanzania, enroll in doctoral programs, participate in research efforts, and become faculty members.
What emerged from the results of the interviews with the Fellows, is that the experiences of the Fellows at Dartmouth could be fine-tuned. To help with the myriad adjustment issues a multi-pronged approach was suggested to provide more information: 1) use videos to show classroom and group dynamics; 2) arrange for a pre-departure workshop in Tanzania facilitated by Fogarty Alumni to introduce and guide in-coming Fellows regarding the teaching environment and the lessons that the Fogarty Alumni learned while enrolled at Dartmouth; 3) match incoming Fellows with Fogarty Alumni to stay connected via texting and social media; 4) provide packaged materials/prospectus about the MPH program and expectations, including plagiarism, as well as a primer on the US health care system; and 5) provide “Survival 101” guides to introduce cultural aspects of the US, New England, and Dartmouth. Lastly, while the Fellows did not suggest this, several faculty members thought that a more inclusive approach to testing, such as untimed essay periods on exams, might be beneficial to international students.

Recommendations for improvements, provided by the Fellows, to the Fogarty Program and MPH Program are detailed below in Section 4.5 Recommendations and Table 15: Action Plan for Enhancement/Improvements.

4.4 Faculty’s Perspectives

The Dartmouth MPH Program enrolls a small but growing number of international students. This growth has been organic as the MPH Program does not recruit overseas nor does it contract with overseas recruiting agencies. As the Dartmouth MPH Program has grown and become more well-known in the last five years, it has experienced an influx of international students, with international students representing approximately 20% of the
students enrolled in the MPH Program in 2014. Some faculty realize the implications that enrolling international students may have:

*Our program, in its current incarnation, is not so forgiving on that [working with transnational educational issues]. It rarely focuses on transnational elements sometimes and I think that affects many students. So I think it will be important to recognize from our own part that these are individuals and from another culture.* (Faculty 1)

Since transnational education has not been a mission of the MPH Program, faculty have a somewhat limited knowledge of academic issues related to transnational teaching and no formal training has been introduced yet. While the faculty recognize that there are likely to be issues with including international students in the classroom environment and are interested in learning about them and teaching strategies, they are not conversant in many of the issues. The following passage speaks to this:

*Should I have an appreciation for the differences [in educational systems in the US versus a non-US settings]? Are the differences, as you mentioned, we not only have Fogarty Fellows but we have others [international students], so are there differences that I should be aware of that would be helpful or not?* (Faculty 4)

When asked about issues that have arisen with teaching in a mixed classroom, faculty observed a number of issues. Since this research took place when 20% of the students were internationals, faculty’s comments were not always confined to the Fogarty Fellows. For this project, five faculty were interviewed and noted the following issues:

**Adjustment Issues** – some faculty had some understanding of issues with adjusting to the US culture and academic environment.

*Transition of culture is one thing, the transition to the work load and the academic environment is another thing and it would be great if they could*
take those in pieces and not have to do them simultaneously. They have done, again, some excellent work academically and they show that they are not crumbling, but it has always been clear that the other stuff has been a headache. Just trying to find ways to be transported around. Just getting places with the way we have very little public transportation just to get to where you need to go. Understanding how laundry gets done, understanding all of those little pieces of feeling comfortable here in the environment before they have to...that’s the biggest thing - it was always clear that this was a struggle for them. (Faculty 1)

Connecting Fellows – several faculty thought matching Fellows with peers would help with acculturation while another felt that connecting Fellows with physicians at Dartmouth-Hitchcock Medical Center (DHMC) in their areas of interest would benefit both the Fellows and the DHMC physicians. One faculty noted:

>You know it would have been great to have [one of the Fogarty Fellows] come to a OB/GYN grand rounds, that would have been great – I mean pediatric residents would love to have a pediatrician from Tanzania come and meet with them. I think really thinking about what their clinical disciplines are and how we can connect them. Again, without making them [the Fellows] feel like it’s all about them serving everyone else, but just kind of helping with those connections. (Faculty 2)

Coordinated Efforts/Point Person – some faculty noted that it was difficult to know the student profile of the incoming class in order to prepare to teach a mixed group of students. Several faculty felt that it would be helpful to have information about the enrollment of students before the academic year began and suggested it would be efficient to have a point person coordinate information and monitor the students, since for some faculty, there was an additional amount of time spent working with some international students:

“...because if there was someone, and maybe there is someone who is kind of managing and aware of international students and their needs. If I
received an e-mail before classes started that said: ‘here are your people, we’ve met with all of them and we’ve identified that these ones seem like they are going to be ok, this one needs whatever.’

I feel like this is to prepare me I think, no, them, too, but to prepare the faculty to know who they are, be reminded of here are the things that are common that they struggle with.” Faculty 5

Dartmouth Fogarty Program – for the most part, faculty had a hazy awareness of the Dartmouth Fogarty Program as noted by this comment:

I know so little about the Fogarty Scholars. I didn’t even know that you were involved. I didn’t even know who I would talk to about my worries. I thought they were here by themselves. Just like somebody says go to Dartmouth and they are here and they are on their own and I’ve been worried all this time about these people. (Faculty 4)

Others acknowledged that they felt that some entity was supporting the students.

I’ve always loved the Tanzanians but I’ve always seen them as people who do have support and are succeeding and they add so obviously to the classroom. (Faculty 5)

One faculty member had more familiarity with the Fogarty Program and had a personal experience with being a peer of a Fellow.

I appreciate the Fogarty Program. I think that it is important that all of you who work on it know that the experiences that I have had since I was a student and educating with the 3 Fogarty Scholars that I have met have just been fantastic. (Faculty 1)

Ease with Technology – a few faculty are aware of the disparities in educational resources and that international students may not have been taught using computers or learning management systems. That said, faculty noted that adjusting to technology-based learning can be a struggle.
**English Comprehension** – some faculty wondered about the time it took for international students to understand presentations and discussions in class and noticed that some international students used in-class dictionaries. Faculty expressed concern about international students keeping up in-class, during exams, and outside of class. The faculty also realized the extra burden on the international students to navigate in a second language.

*One other thing I have noticed about the learning and this is probably not strictly with the Tanzanian students, but there are words they don’t know and they come and ask for help with some vocabulary. Some of our other international students also need to ask. It’s not a problem, I’m not complaining, but you asked for any differences. So there is something that makes me feel when I answer their questions, usually on a test, it is the only time I think they feel strongly enough to get it straight, but I wonder how much else have I said that you don’t understand. I worry. I’m thrilled to help them understand that but then I wonder were there 10 things that I said in last week’s class you didn’t know what it was and if they know the word. (Faculty 3)*

**Extra Time** – some faculty noted that while the students needed extra time to learn, the faculty also had to provide additional time to help international students.

*We have someone from India, we have all these places [8 international students] with different cultural norms, I can’t keep track of it and I can’t meet with everyone for two hours every week.

It’s just so unfair. It’s unfair to me as a teacher to be totally unprepared for the extra amount of work that is required, but it feels unfair to the student that they are going to come and pay for this tuition and then not even be able to get anything out of it. It’s just not right for them if they can’t understand it or they don’t have the adequate support. (Faculty 5)*

**Faculty-Student Interactions** – at times, the interactions have been quite stilted, leaving the faculty bewildered as to whether information was conveyed appropriately. One faculty
commented on the interaction with a student when meeting with them about an academic issue:

[I was met with silence] but silence without any expression. Silence, no body movement, no facial movement and not even really anything with the eyes. We [the teaching team] huddled, sort of afterwards... ‘Do you think they got it?’

So that seems to be...it’s a little off putting but now that I’ve worked with a number of them I feel like...I worry that’s because of the cultural difference that they don’t get the same attention. Actually, I am pretty sure they don’t get the same. It can’t be the same. We have to adjust something to give them what they need. I’m not sure how to do it. (Faculty 3)

Informed Faculty – for the most part, faculty were generally unaware of the myriad of issues that international students face in the US. The information that they have gleaned has been during informal teaching collaborative meetings and they would welcome additional information; brief in-services prior to the start of an academic year were suggested.

“I think because everything I know about the [Fogarty Fellows]...I think everything is an exaggeration, but I feel like most of what I know about the struggles or the things that might be hard or the explanations or reasons that Fogarty Fellows have issues all are learned from the teaching collaborative. There is no other source of information that I, as a faculty member, receives. (Faculty 5)

Plagiarism – there have been instances of plagiarism and most faculty feel that more training is necessary. As one faculty member noted:

I feel like I’ve come across...along the years, again, through the [teaching] collaborative mostly this idea that plagiarism has a different cultural...I don’t know if definition is the right word but just a perception of what is right and wrong. The way we think about it here is different and the difference is that we are much stricter on what you should be citing and attributing notations for. I don’t know much more than that. (Faculty 5)
**Program-Student Fit** – since the MPH Program at Dartmouth is very US-centric, some faculty questioned the relevance of the course content to the work that the Fellows will be undertaking in their home country.

This program [Dartmouth’s MPH] is very US oriented and at least once maybe twice I did an orientation for the US healthcare system and my sense is that they [international students] come in without a lot of understanding of the US healthcare system and could use an orientation. One recommendation is – ask honestly... ‘Is this a good fit? Does it make sense? Is Dartmouth the best place for Tanzanians? Would they benefit elsewhere? Do the tools we have really serve them?’ (Faculty 4)

**Student Participation** – generally, faculty noted a reluctance of the Fellows to participate freely which left the faculty wondering whether information had been transmitted or wondering how far to push a student to participate in the classroom. Some felt that their cultural background emphasized politeness and this had an impact on their willingness to engage in classroom discussions.

They seemed less vocal than we would expect someone. It may be the general culture of how people are expected to be polite to each other, but it seems to interfere in what we would think would be the normal engagement pattern. Somehow they are holding back, from our point of view. They probably think they are doing exactly what they should be doing so I’m not blaming at all, but when we are in the classroom this creates a challenging dynamic for them and for the fellow students and for the teachers. Because as teachers we don’t want to make someone uncomfortable yet here in our educational system having people talk is beneficial to their learning so we feel some pressure, a little bit strong, but some push to make sure that they engage. They don’t necessarily seem comfortable with that when called on by name and asked to speak. (Faculty 3)

**Training** – faculty have not been trained in transnational or inclusive teaching and some seem receptive to learning other teaching strategies. As noted by one of the faculty, a shift
in teaching approaches would be something that would be a consideration for the leadership of the MPH Program and others.

*I think trying to have a discussion perhaps starting at the curricular level, administrative curricular level but bleeding down to the faculty level….of what our expectations should be on that level of support? What are our additional resources? Or is it taking the resources we have and bending them a little bit? If it’s an issue of timing on an exam, maybe some individuals need more time on an exam. Or maybe you shouldn’t have a timed exam. Something like that. Try to get sense of what our priorities are and why. Right now some of our timed exams are really for expediency because of the pace that we moving at. We do an exam so we can have more time to do something else. Ok, do we need to do that something else? Or do we need to have the exam? What are we trying to get to? So I think some goal setting at the larger level and try to figure out again recognizing that has different consequences for different students. (Faculty 1)*

*For me, I guess in some ways we aren’t going to cater the teaching methods to visitors but having someone who assures that whatever teaching methods we are using if they are so off base from what the students are used to that they are getting extra support for that I guess would be what I think of when I see that. (Faculty 5)*

Value of Fogarty Fellows – while the Fellows are not extremely visible in the classroom, faculty have appreciated the diversity that Fellows bring to the classroom and have found them to be excellent students.

*It was just a great experience to have him in the classroom so regardless of the effect that the Fogarty program is having on the healthcare and public health infrastructure back in Tanzania having the Fogarty Scholars here is an extremely valuable resource for our program and our students to have an opportunity to engage with the Fogarty Scholars. So we are giving to them, but we are getting back from it, too.*

*I think it’s important not just to look at this as a one-way stream of paternalistic knowledge going back to East Africa, but that they really are bringing a perspective to us that is extremely valuable in what, otherwise, could be, in many ways, a very insular program focused on the United States health care system and clinical medicine sometimes is a little too much and to just broaden that prospective is, I think, a very valuable tool to have in our toolbox. (Faculty 1)*
Visibility of the Fogarty Program – one of the key findings is that the faculty have extremely limited knowledge or understanding of the Fogarty Program.

I don’t think the Fogarty [Program] has any visibility. I know there are Fogarty Fellows, I know who they are but I don’t think there is any visibility, at all, about the program, what the goals of the program are. You know with one [or two] students [per year] it does not seem like a program...I don’t think of it as a program. ...If you asked me what the goal of it is or whatever, I wouldn’t have any idea other than people from Tanzania come over here...The program, itself, is sort of invisible. (Faculty 4)

Several faculty felt it would be helpful to receive more information about the Fogarty Program and about the Fellows to gain a better sense of the purpose of the training. It is also important to some of the faculty to know how the Fellows apply their MPH skills in their home country.

It is really helpful to learn more about the Fogarty Program and I think...and, again, I think where does this Fogarty Program belong on kind of the TDI educational program’s visibility? TDI is unique because we are only one of 26 MPH programs in the US that have Fogarty Fellows who come here. [We need] to kind of get people [at Dartmouth] aware. I think kind of preparation of faculty so we know a little more about them before are sort of embroiled in the hand-to-hand combat of class. (Faculty 2)

It would be great to see that [their leadership roles once in home country] and it would be great to make that more visible to the Dartmouth community so that you kind of get what happens [after they graduate] and also this is really what people are bringing into the MPH Program. It may be hard to find out and it may take a little bit more work to kind of ferret out and understand [their roles in Tanzania.] (Faculty 2)

I feel like helping the faculty here who are teaching to Fogarty Scholars if we would know about what they are coming here for and what they do when they get back. I just think it would give so much credibility and it would bias people toward the fact that these kids are awesome and they are doing great things and we are part of their education; what an honor. (Faculty 5)

Summary of MPH Faculty’s Perspectives
A key finding is that faculty, while they appreciate the value of the Fellows in the MPH Program, have little knowledge of the Fogarty Program and would welcome information about the purpose of the program and its role in global health. Equally, the faculty are very interested in knowing the impact that the MPH Program has on the Fellows’ careers and would welcome an update on their work, post-graduation. Faculty recommended a number of ways to convey information about the Fellows career developments. Details are found in Section 4.6 Recommendations.

While faculty welcome a diversity of students, the faculty note that they have limited knowledge of the complexities of being an international students as well as the complexities of teaching in a transnational setting and teaching strategies commonly used in a mixed classroom setting. Training for transnational teaching would be helpful as would providing more information about incoming international students and the learning environments they have been accustomed to. An exemplar for faculty training is found in Appendix T.

Faculty appreciated the diversity of international students, but there was an acknowledgement that, at times, more time is required of the faculty to teach effectively an international student population. Faculty felt that having a central office or a point person to coordinate the international students would help to lessen some of the confusion about the teaching needs of the international students, limit the unease that some faculty experienced in working with international students, and reduce the extra time required on the faculty’s part to provide additional support and tutoring to the international students.
In the future, as the number of international students enrolled in the MPH Program increases, the issues of training faculty to teach in a transnational setting will become more acute as will supporting and managing international students.

4.5 MPH Program Administrative Leadership’s Perspectives

The research study sought to examine the MPH Program leadership’s views on and experiences with the Fogarty Program and Fogarty Fellows matriculating in the MPH Program in order to understand the administrative perspectives. As noted earlier, the MPH Program is small and has an administrator that oversees the MPH Program and is assisted by a faculty member who has a dual role of teaching and administering the program. The findings from interviews with both individuals are presented below.

Through interviews, it emerged that similar to the Fogarty Program leadership, the MPH Program leadership recognizes the value of a diverse student body and the struggles that students have adjusting to rural New England and to the MPH Program at Dartmouth. In particular, the MPH Program leadership is aware of the challenges the Fellows undergo to move to the US and enroll in the MPH Program at Dartmouth. One of the MPH administrators is especially cognizant of the differences in educational approaches, cultural structure, and disparities in economic and social issues in Tanzania, due to working on a university-based project in Tanzania for several years. This viewpoint is noted by this passage:

I’m always amazed that the Tanzanians are willing to what I would call sacrifice a lot to come here for a year. Whether it is leaving families for a year or going to someplace they have never been to before or other than hearing from others that have gone before them, not having a sense of what
they are getting into socially, culturally, academically, but they choose to come here, I think it’s fascinating to me.

Maybe my viewpoint is a little bit biased because of my work there [in Tanzania] and except for the Executive MPH program all of the students coming through are MD’s in their school of public health programs. So the fact that many are choosing to seek another degree after their MD. But then we have physicians in our program here, but I think there is something to be said for the value they have. I think there may be difference in the value they place on higher education. (Administrator 1)

Due to its small size, typically with a student body of 70 students, the MPH Program administration is able to monitor students’ progress. The MPH Program team provides academic, career, and tutoring support to students. Faculty frequently hold open office hours and some courses have weekly lab sessions. The administration holds regularly scheduled meetings to ascertain students’ progress and address any student issues. Monthly faculty collaborative meetings are held, which members of the administration participate in. The MPH Program staff is a small, cohesive group that has been in place for many years and is highly regarded by faculty and students, alike.

The MPH Program is invested in supporting the Fogarty Program, having worked with the Fogarty Program for more than 10 years, and is keenly focused on learning of ways to “make them [Fogarty Fellows] feel like they belong” by examining the teaching approaches used and potentially modifying them, as noted by this comment

That is a tricky subject with a lot folks in education, but there is a recognition that there are new ways. The students we are getting are prepared in different ways for different methods of teaching and that we should try to find ways of bridging that gap, as opposed to making them [international students] have to do all the work. (Administrator 2)
Part of the commitment to having an inclusive campus has been to implement a diversity committee in the MPH Program to address recruitment and retention issues in an effort to provide a welcoming environment that is culturally sensitive. To foster a welcoming environment, plans are underway to have more connections to other entities at Dartmouth that deal with matters related to international students, including the Geisel School of Medicine which has more international students, as well as learning of the best practices from other groups at Dartmouth such as Dartmouth-Hitchcock Medical Center that hosts international medical students, and working more closely with the Fogarty Program. As with many large institutions, there appears to be several groups that are dealing with similar student issues and providing similar student support services, and it is a matter of linking to and working with these siloed groups. Reaching out and connecting with other Dartmouth entities is part of the MPH Program’s plan for developing a more inclusive environment.

In addition to making changes to the systems and services within the MPH Program, including working with the faculty by providing more information regarding teaching in transnational settings and by providing student services and academic support such as tutoring, the MPH Program is supportive of developing a strong Fogarty Alumni network based in Tanzania. To date, the MPH Program has co-sponsored two Fogarty Alumni events in Dar es Salaam and looks forward to doing more. Dartmouth has a strong institutional commitment to alumni affairs and could provide some insights and technical support for developing the Fogarty Alumni network. Details related to recommended improvements are noted in Section 4.6 Recommendations.
Summary of the MPH Administrative Leadership’s Perspectives

The MPH Program is committed to achieving the goals of Dartmouth College and supporting an excellent learning experience for all. These measures, outlined above, will help to support the changing demographics of the student population enrolled in the MPH Program, by creating an environment that is inclusive of diversity. If the trend of enrolling more international students continues, additional discussions will need to occur to examine the structure of the MPH Program and consider additional resources that will likely be required to accommodate and support international students, such as additional staff trained in international student support services.

Recommendations to strengthen the MPH Program and its services were provided by the participants and are found in Section 4.6 Recommendations.

4.6 Fogarty Program Leadership’s Perspectives

The administrative team that oversees the Fogarty Program is small and long-serving. Members of the Fogarty Program have a strong commitment to the program with more than 15 years of experience administering the program and extensive in-country experience; collectively the team has travelled to Tanzania more than 75 times. These experiences provide the Fogarty Program team with a deep knowledge of the functioning of the Fogarty Program, Tanzania, and transnational educational needs. The Fogarty Program team at Dartmouth has a long association with the leadership at FIC at the NIH and the FIC leadership was interviewed as part of this research project to provide the macro view of the goals of the Fogarty Program and to share lessons learned and best practices from the other 25 institutions that house a Fogarty Program.
In practical terms, the Fogarty Program team at Dartmouth begins outreach and assimilation with the Fellows during the interview process which usually takes place in Dar es Salaam. Often times, colleagues at MUHAS recommend to the Fogarty Program team a particularly promising graduate or young investigator for consideration. During the initial meetings, the Fogarty Program team spends considerable time discussing the MPH content and approaches to learning in order to be transparent. After a Fellow is selected, the Fogarty Program team is in frequent contact to create a seamless bridge between Tanzania and Dartmouth by arranging logistics, support, monitoring, advising, and career development. Due to Dartmouth’s isolated location and the small size of the program, the Fogarty Program team has a personalized approach that has been appreciated by the Fellows. From the Fogarty Program team’s perspective the most critical issues that are linked to the Fellows’ academic success and for which guide much of their programmatic efforts are:

- Assimilation to the US culture and teaching environment
- Support, mentoring, and monitoring throughout matriculation and post-graduation
- Research training in the MPH Program, especially during the Fellows’ internship and culminating master’s thesis, and post-graduation
- Career development after returning to their home country

The following passage best characterizes the Fogarty Program team’s understanding of the cultural differences and challenges that impact the Fellow’s experience at Dartmouth:

*The system in Tanzania is extremely hierarchal and there has not been much experience over the early part of our Fogarty Program of Fogarty Fellows experiencing lectures as we do them - participatory learning, asking*
questions, raising ideas that may differ from what the professor says, that sort of thing.

They are more used to the British system which is a professor comes in, goes to the lectern and he or she will lecture for one hour or whatever and then leaves. And then they [the students] are supposed to take back and learn anything from that lecture. That is one of the big differences. There has not been a tradition of asking questions in class or working in small groups to solve problems.

The other differences particularly in public health training, for sure, is that some of the issues that could be raised from a Tanzanian perspective or from any other non-U.S. perspective, when they train here they in the U.S., at least at Dartmouth, they are presented with issues and problems that are important from a public health perspective but they are not applicable and they are not transferrable in many ways to what the health needs are in their country. They don’t take into perspective the cross-cultural differences.

Oh and the technology, which is vastly different [in Tanzania] with less technology. And so I am sure they start off with some of the technology issues here when they come. Probably not a good grasp of understanding of citing references and plagiarism type of things. They don’t understand... [attribution].

And, too, just the dramatic differences in the standard of living and the amount of money that people have here versus the amount of money there to provide services that we take for granted. And most of the US students in our programs I don’t think they could even grasp what poverty is and what people have to live on.

It is a difficult transition.... they are a long way from home and they are isolated and they miss their families. (Administrator 1)

Summary of Fogarty Program Leadership’s Perspectives

The Fogarty Program team is very interested in improving the program and is supportive of making changes, when practical. An important consideration for the Fogarty Program team is to make the process more formal without impacting the small nature of
the program and personal service provided. Many of the recommendations found in the Section 4.6 Recommendations originated with the Fogarty Program team and focused on:

- Fine-tuning the operations by developing standard operating procedures
- Learning from other Fogarty Programs at the 25 sister institutes
- Working more closely with the MPH Program to be aware of the MPH operations and to avoid overlap and duplication
- Providing more comprehensive and unified information to the Fellows about the US culture and learning environment and the MPH Program including “Survival 101” guides that provide information about the cultural nuances
- Leveraging the use of technology to develop videos that help to highlight the living environment and teaching environment; using social media to connect and for communications
- Linking to key groups, local hosts, peers, and mentors
- Establishing a roster of tutors for academic support
- Providing support for re-entry and transitioning to home country including career support
- Supporting the development of the Fogarty Alumni Association

(See Section 4.6 Recommendations for further details.)

4.7 Recommendations

Since this research project followed the concept of Action Research which looks for solutions within the community of interest, an emphasis of the research was on identifying strategies to overcome challenges and for program improvements and interventions. Drafts of the recommendations were reviewed by the Fogarty Program leadership and the MPH Program leadership and meeting were held to discuss the relevance
and practicality of the recommendations. No significant changes were requested by the leadership.

From interviews with participants, key milestones emerged as being crucial to either the Fellows’ success or points in time when interventions would be beneficial. These milestones are noted below in Figure 11.

![Figure 11 Key Points in Time for Interventions](image)

Specific recommendations for interventions at these milestones are discussed more fully below and are focused around Swail, Redd, and Perna’s work regarding minority student retention (Swail, Redd, & Perna, 2003). Swail and colleagues (2003) summarized the literature regarding student persistence and achievement as being dependent upon five key factors: “academic preparation, campus climate, [the student’s] commitment to [their educational goals] and the institution, social and academic integration, and financial aid” (Swail et al., pp. 51-82).

A framework for institutions to strengthen student retention was developed by Swail and colleagues (2003), consisting of five academic components: “recruitment and admissions, academic services, curriculum and instructions, student services and financial
aid” (pp. 91). Borrowing from this literature, the recommendations for this project are clustered around six main academic components, as seen in Figure 12.

Financial aid is not a consideration for this project, since the Fogarty Program provides full scholarships for tuition and academic supplies and stipends for housing and living expenses. Student monitoring was added, since it is an essential activity at Dartmouth. For the purposes of this research project, Institutional Commitment includes both the Fogarty Program and the MPH Program as representing the institutional commitment of Dartmouth. The recommendations are presented below in the narrative and in an Action Plan in Table 15.

4.7.a. Institutional Commitment

The commitment of both the Fogarty Program and the MPH Program to supporting students’ academic success was praised by participants. Both Programs upheld the standards of Dartmouth for educating students. The level of effort by both is unquestioned: what emerged were suggestions for improvement and fine-tuning the processes and information provided. Broadly speaking, the recommendations cluster around: 1) orientation to the US and Dartmouth; 2) orientation to the MPH Program and the teaching and learning environment and preparation for both; 3) social and academic integration; and 4) post-graduation support.

Figure 12: Issues Related to Student Persistence and Achievement
Source: Based on Swail et al., 2003, pp. 91
The Fellows felt that while great effort was made on their behalf, improvements could be made for academic preparation during pre-matriculation by making the processes less fragmented and by providing more comprehensive information about the US culture and the style of learning in several packaged formats, such as a guide to Dartmouth and “Survival 101” guides before arrival (See Appendix P and Q), and by providing more information about the MPH Program.

In addition, while the Fellows now arrive before orientation, it was universally felt that arriving at least a week before the start of the formal orientation schedule aids in overcoming jet lag, adjusting to the local environment, learning more about their living arrangements and the Dartmouth campuses, and adjusting to the American culture. A more formal schedule during this transition week would make the week more useful and less fragmented. (See Appendix R). Since the use of mobile phones in Tanzania is widespread with mobile phones used by more than 55% of the population, developing a Mobile App for the first week is a consideration (CIA, 2015). (See Appendix S for a mobile app exemplar.)

Finally, evaluating the Fogarty Program at different points in time will help to uphold Dartmouth’s educational standards and commitment to excellence. Establishing an advisory committee, which includes Fogarty Alumni, to provide input into the Fogarty Program’s operations and evaluation efforts is recommended. It is recommended that evaluations be completed by Fogarty Alumni and sister institutions to provide multiple perspectives. Specific program evaluation activities are noted below in Table 15, Program Evaluation.
4.7.b. Campus Climate

Since some participants noted that their peers held unusual racial beliefs, while others commented that the area where Dartmouth is located is predominantly white and some of their peers had not experienced working with an African national, a cross-cultural session during orientation is recommended. Faculty also expressed an interest in learning more about the cultures of international students. Cross-cultural trainings will help with supporting diversity and multiculturalism at Dartmouth and help with integration. Searching for training programs at US universities that enroll large numbers of international students, yielded an exemplar for training faculty is found in Appendix T Faculty Orientation. Appendix U has a Multi-cultural Training to use for MPH Student Orientation.

4.7.c. Recruitment and Orientation

The Fellows, universally, lauded Fogarty Program’s recruiting efforts and work undertaken to make arrangements for the Fellows arrival in the US. Recommendations focused on providing a smoother transition in the following ways:

Recruitment

- Recruiting Transparency – more information about the program, especially around the differences between the Fogarty Program and MPH Program applications would help to clarify each entity’s roles and responsibilities. On a related note, having more information on the selection criteria used would be beneficial.

- Recruiting Information – using an interactive website, Facebook, and/or a series of videos showing Dartmouth, the MPH Program, and the living and learning
environments would help to make the transition smoother. Testimonials by the Alumni would add value to the recruiting efforts. (See Appendix N for Orientation Videos).

- **Linking with Fogarty Alumni** – was suggested by all Alumni as something that they would have benefited from or did so, informally. All Fellows expressed their willingness to be matched with an incoming Fellow.

*Orientation*

- **In-country Workshop** – holding a dinner and workshop facilitated by Fogarty Alumni was recommended by many. This would allow for the incoming Fellows to learn about the US culture, living in Hanover, participating in the MPH Program, and hearing lessons learned from the Fogarty Alumni. It is recommended that a mini-case on the US health care system be part of the workshop. Selected members of the Fogarty Program team and MPH faculty could join the workshop via a videoconferencing link. If members of the Fogarty Program team happen to be in Tanzania at the time of the workshop, it would be worthwhile for them to participate in-person. (See Appendix O Pre-departure Workshop.)

- **Pre-orientation Materials (Academic and Cultural)** – nearly every participant recommends both types of materials. Providing pre-readings especially readings about the US health care system, an overview of MPH Program with a schedule and syllabi and key summary points for each course, and information about the classroom teaching and learning style is highly recommended. Regarding cultural information, as noted earlier providing a comprehensive guide to Dartmouth with
FAQs and comments from Fogarty Alumni is recommended along with primers, or “Survival 101” guides, on American society and the educational system. (See Appendix P for a suggested guide to Dartmouth and Appendix Q for survival guides.) The Fellows recommend that the materials be packaged into comprehensive documents and be sent at least three months in advance in order to have suitable time to read and digest the materials.

4.7.d. Academic Preparation and Support

In addition to the measures recommended above, information about plagiarism should be part of the pre-departure workshop, the Dartmouth materials, and survival guides. Since training international students regarding plagiarism is a growing field, workshop and training materials are readily available. Linking to interactive sites online that discuss plagiarism and provide examples may be an effective measure. A useful example of an interactive training site for plagiarism is Indiana University’s What is Plagiarism? (link: https://www.indiana.edu/~tedfrick/plagiarism/item1.html.)

Since students struggle with different academic areas, continue to support tutoring efforts for ESL issues and epidemiology and biostatistics course materials will help achievement. Students have appreciated the one-on-one interactions with a trusted tutor. Ensuring that lists of tutors are available at the outset of the academic year will eliminate last minute efforts to identify appropriate resources.

It was felt the Fogarty Program could aid in enhancing social and academic integration through matching with a number of key figures and at various time points. Matching and mentoring emerged as a recommendation from most participants, with
matching being recommended as occurring throughout the continuum of the Fellows’ experience with the Fogarty Program, noted in Table 14.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Matched To</th>
<th>Purpose</th>
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| Application | Fogarty Alumni | ✓ To learn about the program  
✓ Serve as a resource during program  
✓ Linkages after graduation |
| First Week in Hanover through Matriculation | MPH Alumni (locally based) | ✓ To be a Welcome Ambassador  
✓ Serve as a resource during program and for academic integration |
| First Week in Hanover through Matriculation | Host Families (locally based) | ✓ Help adjust to living in Hanover  
✓ Provide insights into American culture  
✓ Provide a “home away from home”  
✓ Provide cross-cultural exchanges |
| Orientation through Matriculation | MPH Peer | ✓ Peer-to-peer support, academic, and social integration |
| Matriculation | International Graduate Student | ✓ Social integration |
| Matriculation | ID Mentor | ✓ Provide advising  
✓ Include Fellows in activities of ID Department  
✓ Provide Fellows with opportunity to present, informally |
| Matriculation | DHMC Specialists | ✓ Provide Fellows with opportunity to connect with colleagues specializing in same fields  
✓ Provide cross-cultural exchanges |
| Post-matriculation | Fogarty Program In-country Mentors | ✓ Provide career and research support |

As Fogarty Fellows move through the MPH Program and return to their home country, a re-entry meeting would help them to ease back into society. Fellows and
administrators have commented that adjusting to the pace and opportunities in Tanzania has required some effort. A sample Re-entry Session is outlined in Appendix V.

Continued career mentoring and support was universally requested by Fellows. Specific areas include: career counseling, research development support, counseling for doctoral programs, training opportunities, and assistance with developing scholarly writing. One aspect of supporting their career interests is to support the development of the nascent Fogarty Fellow Alumni network and to expand into other East African countries that have Fogarty Alumni. The development of an East African Fogarty Alumni network aligns with the Fogarty International Center’s strategic goal of building research capacity through partnerships (See Table 2). The Fellows envision a network whereby the members could lead training workshops, work in partnership on research efforts, and collaborate on scholarly writing. Since Dartmouth has close ties with Muhimbili University one suggestion is to hold an Alumni Meeting in concert with MUHAS’s annual Scientific Conference as either a breakout session (for training workshops) or as a scheduled meeting.

4.7.e. Curriculum and Instruction

Faculty have had little exposure to the Fogarty Program and were unsure of its purpose and most faculty also had little training in teaching in transnational environments and noted that they would welcome training in this area. Since the Fogarty Program has low-visibility providing a short overview of the Fogarty Program, during faculty meetings, along with a précis of the incoming international student body was requested by several faculty members. Faculty would also appreciate an update of the Fellows’ accomplishment
after graduation and suggested that testimonials from the Fogarty alumni housed on TDI’s website would be beneficial.

Providing workshops on transnational teaching will help to reduce the uncertainty of teaching in a mixed classroom and increase the inclusiveness of the teaching. As Dartmouth continues to increase the enrollment of international students, this will become more important to a wider group of students. A faculty training exemplar with issues and strategies associated with teaching international students is found in Appendix T. The information contained in the exemplar could be the foundation for a faculty training.

Lastly, the MPH content has, historically, been focused on the delivery of health care in the US but it is now beginning to expand its offerings. Continuing to expand the curriculum to include non-US issues and more skills-based offerings and online offerings would support the development of a more broadly-based curriculum.

4.7.f. Student Support and Monitoring

While students are monitored, informally, via the MPH administrative team and during regularly scheduled meetings with the Fogarty Program team, assigning a specific advisor could provide additional support and smoother communications between the relevant parties. Adopting a formal advising system has been debated by the MPH Program and is still under discussion. Even if a formal advising system is not instituted, the Fellows expressed their appreciation of having an informal advisor – the system that is currently used – but they would appreciate more transparency in the roles of the different members of the Fogarty Program. Including this information in a directory of Dartmouth would help (See Appendix P).
An Action Plan for recommended interventions and the specific groups who would be responsible for implementing the changes is noted below in Table 15.

<table>
<thead>
<tr>
<th>Table 15: Action Plan for Enhancements/Improvements</th>
<th>Change Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application Process</strong></td>
<td></td>
</tr>
<tr>
<td>• Additional Information about the Process (Course, Expectations, Learning Style, Criteria for Selection)</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• Additional Information about Difference/Roles of Fogarty Program Versus MPH Program</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• Introduction to Fogarty Alumni; ✓ Applicant and Alumni Meet in-Country ✓ Attend Pre-Departure Dinner and Workshop ✓ Fogarty Program and MPH Faculty Participate Virtually (See Appendix O)</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• MPH Recruiting Materials Provided in Tanzania</td>
<td>Fogarty/MPH Programs</td>
</tr>
<tr>
<td>• YouTube Videos/Testimonials – to Show American Culture/Campus/Classroom/Housing (See Appendix N for Videos)</td>
<td>Fogarty/MPH Programs</td>
</tr>
<tr>
<td><strong>Pre-Matriculation</strong></td>
<td></td>
</tr>
<tr>
<td>• Advanced Academic Information (MPH Course Content; Teaching and Learning Style)</td>
<td>Fogarty/MPH Programs</td>
</tr>
<tr>
<td>• Arrival Guide – Logistics, Living Arrangements, Stipend Arrangements (See Appendix P)</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• Face Book Site with Pre-Matriculation Information</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• Linkages/Matching with:</td>
<td></td>
</tr>
<tr>
<td>✓ Fogarty Alumni ✓ Linkages/Matching with MPH Alumni ✓ Linkages/Matching with MPH Peers ✓ Linkages/Matching with Local Host Families</td>
<td>Fogarty/MPH Programs</td>
</tr>
<tr>
<td>• Pre-Matriculation Online Survey Completed by Fellows to Outline Career Goals and Interests (Used for Advising and Matching at Dartmouth)</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• “Survival 101” Guide for Cultural and Day-to-Day Living Information (See Appendix Q)</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>Table 15: Action Plan for Enhancements/Improvements</td>
<td>Change Agents</td>
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<td>---------------------------------------------------</td>
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</tr>
<tr>
<td><strong>Pre-orientation Week</strong></td>
<td></td>
</tr>
<tr>
<td>• Pre-Orientations Guide for First Week – 10 Steps/Logistical Information and Key Contacts (See Appendix R)</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• Tour Schedule Includes Introductions to: Key Offices and Fogarty Program Team, ID Team, and MPH Program Team</td>
<td>Fogarty/MPH Programs</td>
</tr>
<tr>
<td>• Lunch with Matched Locally-based MPH Alumni (See Appendix R)</td>
<td></td>
</tr>
<tr>
<td><strong>NOTE:</strong> Consider developing Mobile App of Orientation and “Survival 101” Materials during Second Year of Revised Program (See Appendix S)</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td><strong>Orientation</strong></td>
<td></td>
</tr>
<tr>
<td>• Formal Orientation, Fellows with Additional Time for:</td>
<td>MPH Program/Fogarty Program</td>
</tr>
<tr>
<td>✓ American Culture</td>
<td></td>
</tr>
<tr>
<td>✓ Attribution Expectations</td>
<td></td>
</tr>
<tr>
<td>✓ Library Use/Plagiarism</td>
<td></td>
</tr>
<tr>
<td>✓ Teaching Pedagogies</td>
<td></td>
</tr>
<tr>
<td>✓ Technology – Learning Management System and other Technologies</td>
<td></td>
</tr>
<tr>
<td>• Formal Cross-Cultural Orientation, Faculty (See Appendix T) including Updates/Refresher Trainings</td>
<td>MPH Program/Dartmouth Office of Pluralism and Leadership/Dartmouth Center for the Advancement of Learning</td>
</tr>
<tr>
<td>• Formal Cross-Cultural Orientation, Students (See Appendix U) including Updates/Refresher Trainings</td>
<td>MPH Program/Dartmouth Office of Pluralism and Leadership</td>
</tr>
<tr>
<td><strong>Matriculation</strong></td>
<td></td>
</tr>
<tr>
<td>• ESL Support – Writing Assistance or Writing Course</td>
<td>MPH Program</td>
</tr>
<tr>
<td>• Assign Academic Advisor</td>
<td>MPH Program</td>
</tr>
<tr>
<td>• Attributions Expectations and Training – Lunch and Learn Sessions; Online Interactive Training Session</td>
<td>MPH Program with Library Staff</td>
</tr>
<tr>
<td>Table 15: Action Plan for Enhancements/Improvements</td>
<td>Change Agents</td>
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<tr>
<td>---------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>• Coordinate Administrative Efforts with Fogarty Program</td>
<td>MPH Program/Fogarty Program</td>
</tr>
<tr>
<td>• Expand Curriculum to:</td>
<td>MPH Program/Faculty</td>
</tr>
<tr>
<td>✓ Include Online Offerings</td>
<td></td>
</tr>
<tr>
<td>✓ Expand Focus to Include Non-US Information – Courses, Exercises, and Guest Speakers in Global Health</td>
<td></td>
</tr>
<tr>
<td>✓ Expand Type of Courses to Include Skills-based Learning – Grants Writing, Grants Management, Manuscript Writing</td>
<td></td>
</tr>
<tr>
<td>• Engender Class Participation Via:</td>
<td>MPH Program/Faculty</td>
</tr>
<tr>
<td>✓ Orientation Sessions on Classroom Dynamics, Group Case Study</td>
<td></td>
</tr>
<tr>
<td>✓ Faculty Training of International Students’ Learning Styles</td>
<td></td>
</tr>
<tr>
<td>✓ In-Class Materials – Have Index Cards at Tables for Questions/Collected During Class</td>
<td></td>
</tr>
<tr>
<td>✓ Fellows Present</td>
<td></td>
</tr>
<tr>
<td>✓ Cross-cultural Workshops</td>
<td></td>
</tr>
<tr>
<td>• Faculty Training/Exposure:</td>
<td>MPH Program/Dartmouth Center for the Advancement of Learning</td>
</tr>
<tr>
<td>✓ Avoid/Limit Use of US Acronyms, US-based Idioms, Slang</td>
<td></td>
</tr>
<tr>
<td>✓ Cross-cultural Training/Orientation (See Appendix T)</td>
<td></td>
</tr>
<tr>
<td>✓ Fogarty Program Orientation at Faculty Meetings</td>
<td></td>
</tr>
<tr>
<td>✓ Provide List of International Students Before Beginning of Year Along with Précis of Learning Issues/Teaching Strategies</td>
<td></td>
</tr>
<tr>
<td>✓ Provide Updates on Fellows’ Career Advancements</td>
<td></td>
</tr>
<tr>
<td>• Fellows Presenting – Opportunities to Present In-class, DHMC, Other</td>
<td>MPH Program/Faculty</td>
</tr>
<tr>
<td>• Linkages to: DHMC Specialists, Geisel School of Medicine, ID, Tuck MBA</td>
<td>MPH Program/Fogarty Program</td>
</tr>
<tr>
<td>• More Time on Exams (Addresses Comprehension Issues)</td>
<td>MPH Program</td>
</tr>
<tr>
<td>• Re-Entry to Home Country Counseling (See Appendix V)</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>Post-Graduation</td>
<td>Change Agents</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>• Career Advising – Employment</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• Career Advising – Mentoring (In-Country and From the US)</td>
<td>Fogarty Program/Linkages to Tanzanian Contacts</td>
</tr>
<tr>
<td>• Career Advising – PhD Programs</td>
<td>Fogarty/MPH Programs</td>
</tr>
<tr>
<td>• Career Advising – Research Interests/Efforts</td>
<td>Fogarty Program/NIH</td>
</tr>
<tr>
<td>• Enhance Development of Active Fogarty Alumni Association – Tanzania and Surrounding East African Countries</td>
<td>Fogarty Program/NIH</td>
</tr>
<tr>
<td>• Linkages to:</td>
<td>Fogarty Program/NIH</td>
</tr>
<tr>
<td>✓ Fogarty Graduates in Tanzania</td>
<td></td>
</tr>
<tr>
<td>✓ Fogarty Graduates in East Africa</td>
<td></td>
</tr>
<tr>
<td>✓ Mentors – In Country and US-based</td>
<td></td>
</tr>
<tr>
<td>• Provide Notifications of Fogarty Training Programs and Activities in Tanzania</td>
<td>Fogarty Program/NIH</td>
</tr>
<tr>
<td>• Research Opportunities:</td>
<td>Fogarty Program/NIH</td>
</tr>
<tr>
<td>✓ Provide Collaborative Opportunities</td>
<td>NIH</td>
</tr>
<tr>
<td>✓ Provide Notifications of Research Grants</td>
<td></td>
</tr>
<tr>
<td>• Sponsor Alumni Network Workshops</td>
<td>Fogarty Program/MPH Program Career Office/Dartmouth Office of Development</td>
</tr>
<tr>
<td>• Reporting to MPH Program of Career Activities; Dissemination to Faculty</td>
<td>Fogarty Program/MPH Programs</td>
</tr>
</tbody>
</table>

**Fogarty Program/MPH Program Collaboration/Interaction**

<table>
<thead>
<tr>
<th>Fogarty Program/MPH Program Collaboration/Interaction</th>
<th>Change Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assign Specific Advisors</td>
<td>MPH Program</td>
</tr>
<tr>
<td>• Coordinate and Communicate Efforts/Activities (Share Materials, Schedules, and Updates)</td>
<td>Fogarty Program/MPH Program</td>
</tr>
<tr>
<td>• Establish Key Administrators and Specific Roles</td>
<td>Fogarty Program</td>
</tr>
<tr>
<td>• Establish Alumni Infrastructure and Link to East African Fogarty Alumni and Support Alumni Activities (Noted Above)</td>
<td>Fogarty Program/Dartmouth Office of Development/NIH</td>
</tr>
</tbody>
</table>
**Table 15: Action Plan for Enhancements/Improvements**

<table>
<thead>
<tr>
<th>Change Agents</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enhance Career Advising, Post-Graduation (Noted Above)</strong></td>
<td>Fogarty Program/NIH</td>
</tr>
<tr>
<td><strong>Provide Overview of Fogarty Program and Profiles of Incoming Fellows to Faculty at Faculty Meetings</strong></td>
<td>Fogarty Program/MPH Program</td>
</tr>
<tr>
<td><strong>Testimonials/Video Updates of Fogarty Alumni for Website and Publicity</strong></td>
<td>Fogarty Program/MPH Program</td>
</tr>
</tbody>
</table>

**Other – Dartmouth Groups**

<table>
<thead>
<tr>
<th>Change Agents</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enhance Relationships/Opportunities with the Geisel School of Medicine at Dartmouth</strong></td>
<td>MPH Program</td>
</tr>
<tr>
<td><strong>Enhance Relationships/Opportunities with Master of Health Care Delivery Science Program at Dartmouth</strong></td>
<td>MPH Program</td>
</tr>
<tr>
<td><strong>Enhance Relationships with Tuck MBA Program at Dartmouth</strong></td>
<td>MPH Program</td>
</tr>
<tr>
<td><strong>Establish On-site, Informal Visits by Fellows to DHMC Departments (Based Upon Fellow’s Interests Noted in Pre-Arrival Online Survey Outlining Interests/Expectations)</strong></td>
<td>Fogarty Program</td>
</tr>
</tbody>
</table>

**Other – Program Evaluation**

<table>
<thead>
<tr>
<th>Change Agents</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Establish an Advisory Board, Including: Volunteers from Fogarty Program at Sister Institute; Volunteers Fogarty Alumni; Representatives from Dartmouth Entities: Geisel, MHCDS, MPH, and Tuck; and Tanzanian Stakeholders (i.e., MUHAS, Ministry of Health). Videoconferencing Used; 6 and 12 Month Meetings.</strong></td>
<td>Fogarty Program</td>
</tr>
<tr>
<td><strong>Incoming Students Complete Online Survey Outlining Interests/Expectations – Used for Advising and Evaluation (Share Results with MPH Academic Advisor). Reviewed at 3 and 6 months and at Graduation.</strong></td>
<td>Fogarty Program</td>
</tr>
<tr>
<td><strong>Participate in Fogarty-Fogarty Evaluation by Sister Institute</strong></td>
<td>Fogarty Programs in the US</td>
</tr>
<tr>
<td><strong>Post-Graduate Evaluation of Fogarty Program (6 months, 12 months; bi-annually)</strong></td>
<td>Fogarty Program</td>
</tr>
</tbody>
</table>

**Key:**
- DHMC: Dartmouth-Hitchcock Medical Center
- ESL: English as a Second Language
- ID: Infectious Disease
- MHCDS: Master in Health Care Delivery Science
- MUHAS: Muhimbili University of Health and Allied Sciences

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Table 15: Action Plan for Enhancements/Improvements

<table>
<thead>
<tr>
<th>Change Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuck: Tuck School of Business at Dartmouth</td>
</tr>
</tbody>
</table>

4.8 Implications, Dartmouth College

The research findings from this dissertation project will be incorporated into a separate report, outside of the purview of this dissertation, which will be submitted to Dartmouth leadership and Fogarty Fellows. The report to Dartmouth will include policy recommendations and next steps and will indicate the need for specific and formal student support, as outlined in Table 15. A cautionary note will be included in the report since some of the recommendations include Dartmouth’s presence in Tanzania, particularly around linking Fogarty Alumni with in-country mentors, which could be interpreted as being possibly intrusive or overbearing.

Should Dartmouth leadership support these actions through policy recommendations, it is envisioned that a program improvement plan will be developed, piloted, and evaluated. While this research project was a case study focused on Tanzanian students, the findings and recommendations may provide insights into the challenges that international students, in general, experience and may be of benefit to the growing international student body now enrolling in the MPH Program. Finally, the report will also be shared with the Fogarty International Center, at NIH, and Dartmouth’s local collaborator, Boston University.


Much has been written in the literature about organizational change. Burke notes that change generally happens for a number of reasons, including: 1) to create stability; 2)
to create sustainability; 3) to become competitive; and 4) to survive and/or thrive (Burke, 2008). Change may be proactive and planned or reactive and unplanned. Burke commented that while change happens all the time, it is more uncommon for change to be a planned event (Burke, 2008). In this case, however, the Fogarty Program at Dartmouth has supported the research of this dissertation with a view toward making some changes. Therefore, change is a planned event, as defined as “…a deliberate, conscious decision to improve the organization in some manner or perhaps change the system in a deeper, more fundamental way” (Burke, 2008, pp. 123).

For those involved in the Fogarty Program at Dartmouth, the intended changes are motivated by a desire to improve the quality of the educational experiences and to create sustainability. These sentiments echo one of the overriding principles of the greater Dartmouth College culture – the reverence for quality and quality improvement.

Hall and Hord developed an outline for implementing change in academic environments that aligns, closely, with the activities and interests of the Fogarty Program team at Dartmouth. Ten change principles have been articulated by Hall and Hord and mirror the values of the Fogarty Program team and the processes for the project (Hall & Hord, 2011, pp. 6-16):

1. Change is learning
2. Change is a process not an event
3. The school is the primary unit for change
4. An organization does not change until the individuals within it change
5. Interventions are the actions and events that are key to success of change process
6. Appropriate interventions reduce resistance to change
7. Leadership is essential to long-term success
8. Change involves a team effort
9. Mandates can work
10. The context of school influences the process of learning and change

Hall and Hord argue for the development of a core team, or Professional Learning Community (PLC) of individuals, “who value change and who seek change in order to increase their efficacy as teachers” (Hall & Hord, 2011, pp. 16) to enact the change. The suggested participants for the PLC at Dartmouth to enact the changes are: the Fogarty Principal Investigator and Co-Investigator; the Fogarty Grant Administrator; the Director of the MPH Program; the MPH Academic Administrator; and the author, a course director in the MPH Program who acts as an advisor to the Fogarty Fellows. The suggested PLC team embodies the characteristics articulated by Hall and Hord of a well-functioning PLC (Hall & Hord, 2011, pp. 27):

- Shared values, vision
- Collective learning and application
- Supportive and shared leadership
- Supportive environment
- Shared personal practice

As noted above, it is expected that the report to Dartmouth, developed by the author, will be shared with and reviewed by the team at Dartmouth and key stakeholders, however, ultimately, the Fogarty Principal Investigator will approve a specific course of action. Any actions or changes at the MPH Program will be implemented by the MPH Program administrator and colleagues, with the approval of the Director of the MPH Program.
4.8.b. How Do We Measure Success?

Since the report to Dartmouth needs to be reviewed and approved by the leadership in the Fogarty Program and the MPH Program it is difficult to identify, definitively, what the specific interventions or changes might be and the related outcome measures. However, it is possible to theorize potential outcome measures that might be tracked as a result of implementing interventions. Appendix W is a Logic Model that hypothesizes the possible outcomes and measures to indicate the success of any interventions. Logic Models are a management tool frequently used in the Fogarty Program and they are a visual depiction of the inputs, resources, planned activities, and expected outcomes; a Logic Model attempts to show causality – the measure or activities that lead to a desired outcome (W.K. Kellogg Foundation, 2004).

It is theorized that the measures of success will be the Fogarty scholars’ level of assimilation into the MPH Program, their academic performance in the MPH Program, their career developments and accomplishments after graduation, and their commitment to Dartmouth, post-graduation. Some of the findings will be subjective, accounted for through the perceptions of the Fogarty Fellows’ and other key stakeholders, while other measures will be objective – for example, grades, retention and graduation rates, and research and scholarly efforts after graduation.

It is also important to consider the long-term relationship that the Dartmouth will foster with the Fogarty Fellows. It is critical for Dartmouth to establish an enduring relationship with the Fogarty Fellows and one recent effort has been to work to implement
a Fogarty Alumni Association, based in Dar es Salaam. It is envisioned that the Fogarty Alumni Association will continue and expand to join forces with other Fogarty networks in Africa. This will make it possible for the Fogarty Alumni in these countries to develop working relationships and partnerships, thus, increasing the capacity to provide public health services and undertake health research in this region of the world and supporting one of the strategic goals of the Fogarty International Center mission which is to “Build research capacity through individuals, institutions, and networks to meet future and evolving global health challenges” (FIC, 2014c).

4.9 Implications, Macro-level

It is envisioned that the report prepared for Dartmouth, which is outside the purview of this dissertation, will be approved for distribution to the 25 sister institutions that house a Fogarty Program and host Fogarty Fellows, in order to provide some insights and some programmatic suggestions. The impact of the report will be on a case-by-case basis and each institution will determine the utility of the report and applicability of the recommendations to their institutions. Further research at the 25 sister institutions is recommended before implementing any of the Dartmouth-based recommendations.

In fall 2015, an NIH-sponsored annual meeting of all Fogarty Programs is scheduled and I have been invited to present this dissertation research project, findings, and recommendations. This may have macro-level implications, depending upon how the information is received. The recommendations for quality improvement of the Fogarty Program and the development of formal East African network of Fogarty Alumni to expand
research capacity may be perceived as supporting one of the key strategic goals of the Fogarty International Center and may impact policy decision-making at the NIH level.

Finally, a manuscript has been prepared with the intention of seeking publication in the Journal of Studies in International Education (See Chapter 5.) Whether publication results in change at the macro-level is difficult to determine, but often the literature is reviewed and relied upon when developing programs, policies, and interventions.

4.10 Conclusions

In the US, the interest in and demand for global health training is growing, yet only few studies address the unique assimilation challenges and dilemmas of international health graduate students or those participating in the Fogarty AITRP and their experiences while matriculating in the US. While there is some information regarding several of the Fogarty International Center programs, a small, but increasing amount of information about best practices and guidelines for global health training programs is currently being published. This project builds upon this nascent body of literature.

This study shows the importance of: a) providing cross-cultural information about living, teaching and learning environments at key milestones in an international student’s experience in the US educational system; b) linking students before, during, and after matriculation; c) providing training for cultural sensitivity for both students and faculty; d)
providing faculty with training in transnational teaching; and e) leveraging technology to
overcome gaps in understanding and knowledge of the US educational system. These
efforts will provide a better foundation and experience for the international students and
the host community; however, it is critical to point out that these are labor-intensive and
require the time of faculty and staff and institutional commitment.

International education is crucial to our functioning in a global community; it helps
to build relationships between people and communities around the world and in the US.
These relationships can be the foundation to solve pressing global challenges including the
eradication of poverty, the improvement in health outcomes, and the provision of quality
health care in countries that carry a disproportionate burden of disease.

Having international health care practitioners in classrooms, provide unique
perspectives that can include insights into the challenging experiences of delivering
healthcare in low-resource areas. The perspectives that international students bring can
serve to enrich the classroom and expand the worldview of their peers. International
students’ perspectives can bring experiences that sensitize us to the basic human rights of
dignity and health care for all.

It is incumbent upon host institutions to understand and support the unique needs
of these diverse students as they enter the geographic, social, and academic cultures of their
host institutions. Much may be gained from taking deeper looks at the process intern-
national students undergo as they matriculate in American universities and to understand
the critical junctures in the students’ experience that may be enhanced by formal programs
and student support. Allocating the time to reach out to international students, study their
experiences and learn about them, can provide insights that will enable effective teaching strategies and student services that may provide some much needed support, guidance, and a welcoming environment that will enable the international student to flourish and succeed.

4.11 Summary

This chapter presented the results of the case study findings. The results of the interviews were considered and informed the recommendations for program improvements. Considerations for implementing the changes both at the micro-level at Dartmouth as well as the macro-level were also detailed. The next chapter is a manuscript for submission to the *Journal of Studies in International Education*. The sixth and final chapter is a comprehensive bibliography followed by an Appendix Section. The Appendix Section provides the reader with more detailed information presented in the narrative.
CHAPTER 5: MANUSCRIPT FOR JOURNAL OF STUDIES IN INTERNATIONAL EDUCATION
UNDER DEVELOPMENT

Exploring Fogarty AIDS International Training and Research Program Fellows’ Experiences in the US

Lisa Purvis, MBA, MPH

Abstract
The United States is a major host to international college students. In the field of health training, the National Institute of Health’s Fogarty International Center (FIC) has been a leader. While the FIC has successfully trained more than 6000 international Fellows, little research has been conducted about the experiences of the Fellows. This study examines the US-based educational experiences of HIV physicians from Tanzania, funded by the Fogarty AIDS International Training and Research Program, who completed a Master of Public Health (MPH) Program at Dartmouth College from 2003-2013. Qualitative interviews were conducted with 22 Fogarty Alumni, faculty, and administrators. Recommendations included formalizing the program at several milestones; using technology for orientation; formally linking Fellows to peers, mentors, and advisors; and cross-cultural training for MPH students and faculty. Colleges and universities need to understand the experiences and the support needs of international student in order to foster a supportive environment that will lead to effective learning and academic success.

Key Words
Global health education, international students, National Institutes of Health, Fogarty International Center, Tanzania

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Introduction
The United States (US) is a major host nation to international college students and scholars (Farrugia & Bhandari, 2014). The Institute of International Education, the leading organization in the US that studies trends in international study by college students, reported that in 2014 the US continued to attract the most international college students,
with nearly one million studying in the US, representing approximately 4% of the college population (Farrugia & Bhandari, 2014). Through this mechanism, international students and scholars enrich American academic institutions by challenging our beliefs, exposing our colleges and universities to world views, and by bridging the gaps in our understanding of the world and the varied cultures. Along with the economic, social, and cultural assets that international students bring, are key challenges in their transition, assimilation, and acculturation. It is critical for colleges and universities to understand the unique experiences and student support needs of the international student in order to foster a welcoming, supportive environment that will lead to effective learning, academic success, and student retention.

Global health is garnering attention and interest at the policy level and elsewhere, with President Obama and then Secretary of State Clinton identifying global health as a leading international issue (Clinton, 2010). In the last few decades, there has been a significant increase in the demand for global health training from students (Crump & Sugarman, 2010; MacFarlane, Jacobs & Kaaya, 2008). Academic institutions have responded to the demand by increasing the number of short-term trainings and formal programs being offered (Heimburger, Warner, Carothers, Blevins, Thomas, Gardner, Primack, & Vermund, 2014).

The Fogarty International Center (FIC) at the National Institutes of Health (NIH) has been in the vanguard of global health training. Since its inception in 1968, FIC has offered training programs to combat infectious and chronic diseases to more than 6,000 health care practitioners from low- and middle-income countries (LMIC) (Kirby, 2014).
Recent reporting notes that FIC currently funds more than 540 research and training projects at 100 US and foreign universities (FIC, 2014).

Beginning in 1988, as a result of the spread of the HIV/AIDS pandemic, FIC developed an AIDS International Training and Research Program (AITRP) aimed at HIV prevention and treatment training for Fellows from LMIC (Kristiansen, 2012). Since 1988, AITRP has trained more than 2,000 Fellows from more than 100 countries (Kristiansen, 2012).

While research has been conducted on the experiences of international students matriculating in the US (Brown, 2008; Chen & Ullen, 2011; Curtin, Stewart, & Ostrove, 2013; Guidry Lacina, 2002; Heggins & Jackson, 2003; Hellstén, & Prescott, 2004; Kim, 2011; Ladd & Ruby, 1999; Peterson, Briggs, Dreasher, Horner, & Nelson, 1999; Roberts, 2012; Selvadurai, 1992; Trice, 2004; Wood & Kia, 2000; Yoon, Lee, & Goh, 2008; Wang, 2009), little is known about the educational experiences, benefits, and consequences of Fellows enrolled in the Fogarty AITRP in the US.

Recently, however, some articles have been published regarding FIC programs, that focus mainly on explaining FIC’s strategic plan for research and training (Breman, Bridbord, Kupfer, & Glass, 2011; 2011; Kirby, 2014; Voelker, 2008); describing specific university-based FIC program’s infrastructure and their work (Heimburger et al., 2014; Matar, Garner, Millum, Sina, & Silverman, 2014); reporting on FIC programs in non-US settings (Barnot, Coria, Barnett, Clark, Gartland, Jaganath, Mendenhall, Seu, Worjoloh, Carothers, Vermund, & Heimburger, 2014; Bennett, Paina, Ssengooba, Waswa, & M’Imunya, 2013) or describing the impact of training programs (Benziger & Gilman,
2014; Heimburger, Carothers, Gardner, Primack, Warner, & Vermund, 2011). None of the articles examined the experiences of the Fogarty Fellows in a US setting nor dealt with providing feedback to administrators on the functioning of the FIC program from multiple perspectives, including those of students and faculty.

This project sought to expand upon the nascent body of research regarding several of the other Fogarty training programs. Using a case study approach, this project focused on Fogarty Fellows enrolled in a Master of Public Health (MPH) Program at Dartmouth College, with the goal of seeking ways to improve the experience for the trainees. Since 2002, the Fogarty Program at Dartmouth has hosted 18 physicians from Tanzania who have participated in short- and long-term advanced health care trainings with a special focus on HIV/AIDS. The Fogarty Fellows at Dartmouth are physicians from Tanzania, a low-income country in East Africa.

It has been noted that some Fellows had assimilation issues while matriculating at Dartmouth. The issues were wide-ranging and included difficulty becoming immersed in the culture and learning environment, language issues, academic issues, and, for some, feelings of isolation. It was important to resolve these issues in order to assist and support the Fogarty Fellows and improve their assimilation and educational experiences. After graduation, the Fogarty Fellows are expected to return to their home countries and become leaders in tackling significant health crises in their home countries. The more deeply the Fellows acquire knowledge, skills, and tools in their US-based training programs, the more effective they will be as change agents in their home country.
Literature Review

International Study in the US

While international study has been in existence for many centuries, it became more pronounced in the 20th century with a steady influx of international college students taking place after the end of World War II (Trice, 2003; Bevis & Lucas, 2007). The Institute of International Education, reports that in 2014, the US continued to attracted the most international college students, with 886,052 international students studying in the US; 329,854 were enrolled in graduate programs and 339,854 were enrolled in undergraduate programs while the remainder of the students enrolled in non-credit courses (Farrugia & Bhandari, 2014). The total number of international students studying in the US represents an increase of 8% from the previous year and a significant increase of 72% from 2000 (Institute of International Education, 2014a). Students studying in the US come from diverse areas, including 226 countries worldwide and over 50% of the students originating in China, India, South Korea, and Saudi Arabia; international students now represent 4% of all students enrolled in universities in the US (Farrugia & Bhandari, 2014; Institute of International Education, 2014a).

Research indicates that many efforts are made to market universities and programs in an increasingly competitive global environment (Altbach & Knight, 2007; Altbach, Reisberg, & Rumbley, 2009; Andrade & Evans, 2009; Douglass & Edelstein, 2009; Hudzik & Briggs, 2012). In addition to the diversity that international students bring, they also increase revenue. International students, typically, pay full out-of-state tuition and do not, generally, receive scholarships (Institute of International Education, 2014b). The
Brookings Institute reports from 2001-2012, international students paid approximately $95 billion in tuition and living expenses (Ruiz, 2014).

Oftentimes, once students arrive, universities do not put forth the same level of effort to “welcome, serve, retain, [educate, train,] and involve international students in mutual intercultural learning with Americans,” (Peterson, Briggs, Dreasler, Horner, & Nelson, 1999, pp. 67) does not take place (Guidry Lacina, 2002). This disconnect impacts the international students’ cultural and learning experiences.

Host countries have much to offer and much to gain from the international diversity of these students. International students and scholars enrich academic institutions by challenging our beliefs, exposing our colleges and universities to world views, and by bridging the gaps in our understanding of the world and varied cultures. Along with these benefits, however, come issues and concerns as international students adjust to the host country and assimilate into the culture of the region and of the host university.

Assimilation Issues for International Students

While studying in other countries offers numerous benefits and positive experiences for some students, studies have shown that there can be many assimilation issues for some international students that result in their struggling academically and socially. Andrade and Evans (2009) group these issues into three main risk categories: 1) academic; 2) social; and 3) personal (pp. 32). Researchers have noted specific issues that include: inadequate English language skills; academic learning anxiety; low self-efficacy; lack of appropriate study skills or strategies; lack of awareness of the US style teaching, learning, and assessment; unfamiliarity with US geographic and academic cultures;
financial insecurity; social isolation, and separation from family and friends (Brown, 2008; Curtin, Stewart, & Ostrove, 2013; Glass & Westmont, 2014; Lee, 2010; Zhang & Goodson, 2011).

Some studies have indicated that international students experience a period of adjustment or “culture shock” as they begin to assimilate into their new environment. Winkelman (1994) defined culture shock as:

…a multifaceted experience resulting from numerous stressors occurring in contact with a different culture. Culture shock occurs for immigrant groups (e.g., foreign students and refugees) [and others]. Cultural shock reactions may provoke psychological crises or social dysfunctions when reactions to cultural differences impede performance (pp. 121).

**Academic Issues**

In the classroom setting, differences in academic pedagogy and environments can be problematic for international students who may be used to teacher-centered learning provided by an authoritarian figure. Students may be adrift in the American format of teaching and active learning an approach that has become popular in the US (Brown, 2008; Heggins & Jackson, 2003; Hellstên, & Prescott, 2004). Likewise, students may be uncomfortable with informality of US colleges.

Difficulty with language or being at ease in conversing in English may cause students to be reluctant to engage in classes or in group projects and can also result in international students taking longer to process readings, assignments, and exams (Kanno & Varghese, 2010; Phakiti, Hirsh, & Woodrow, 2013). A consequence of this can be
additional stress, inhibition in joining in-class discussions and group projects, and poorer grades (Trice, 2003). Isolation, due to a lack of fluency with English, may occur outside of the classroom, as well, with students not fully integrating into their new social environment (Gomez, Ursua, & Glass, 2014; Trice, 2004; Trice, 2007).

Another nagging and serious academic concern is plagiarism. Ladd and Ruby (1999) report, “Faculty members often report… an unusually high rate of plagiarism among international students. In some cultures, knowledge is considered to be in the public domain; other cultures believe it is disrespectful to alter an authority’s original work” (pp. 366). Further, in some cultures copyright laws for documents and ideas do not exist, making attribution to sources a context-driven requirement (Ladd & Ruby, 1999). Appreciating this issue, some university library services have begun to provide specialized trainings to international students on the American approach to documentation and attribution of resources (Chen & Ullen, 2011).

**Faculty Perceptions of International Students**

Limited research exists on faculty perception of international students (Trice, 2003). Summarizing the scant literature that is available, the most distinctive impressions are that there can be benefits and challenges to having international students enrolled. Benefits can include the opportunity for international students expanding the world views of faculty and students, offering insights into other cultures, and providing students with the reality of working in diverse groups (O’Reilly, Hickey, & Ryan, 2013; Trice, 2003). Further, some faculty view international students with raising the profile of their institution, adding prestige, and expanding connections to other parts of the world. (Trice, 2003).
The challenges mentioned include significant English as a Second Language (ESL) issues both in oral and written formats as well as with comprehension of materials presented and read (Kondakci, Van den Broeck, & Yildirim, 2008; O’Reilly et al., 2013; Poyrazli & Grahame, 2007; Robertson, Line, Jones, & Thomas, 2000). Other challenges include the extra time required of faculty and others to work with international students, in terms of describing, explaining, and clarifying course content, classroom expectations, and performance issues as well as the extra time needed to assist the international students in integrating into the classroom. (Andrade & Evans, 2009; Sanderson, 2011).

Faculty may be unaware of the different types of teaching styles international students may be used to, prior to arriving in the US. Some studies suggest that faculty are not adequately prepared to teach international students or do not value them (Andrade 2010; Trice, 2003). This may impact a faculty members interactions with international students and their perceptions and assessments of the international students’ academic performance and capabilities (Gopal, 2011; Sawir, 2011; Smith, 2009).

**Support Services for International Students Studying in the US**

International students’ support services have grown through the years and the main role of an international student office is “ensuring a smooth transition into a different educational system” (Wood & Kia, 2000). Typically, services provided by international student offices include “advising and ‘support’ to international students for everything from visa processing to cultural adjustment” (Roberts, 2012, pp. 4-5) and will often link students to the community and other offices within an institution such as academic services,

In the aftermath of 9/11/01 and the passing of the USA Patriot Act, which mandates the tracking of international students, international student offices have increasingly been required to focus human resources on immigration policies and compliance with the Student and Exchange Visitor Information System (SEVIS), a federal program overseen by the Department of Homeland Security (Danley, 2010; Wong, 2006). Visa documentation and SEVIS reporting requirements are costly, complex, and time-consuming tasks, and have been associated with low morale and high turnover among staff (Rosser, Hermsen, Mamiseishvili, & Wood, 2007) and a shift away from the provision of other services traditionally provided by international affairs offices (Wood & Kia, 2000).

**Future Internationalization of Education**

With the internationalization of education, experts expect a doubling of the number of students studying outside of their home country from 2.5 million in 2009 to upwards of 7 million by 2020 (Altbach, Reisberg, & Rumbley, 2009). Educating internationals is a burgeoning field, as is global health. However, the research has not kept pace with the growth. As such, academicians are calling for “…[college] practitioners to pay closer attention and listen more attentively to the needs of the international graduate students in hopes of meeting their expectations and better preparing them to go out into the world…” (Roberts, 2012, pp. 6).
Global Health Education in the US

As the world grows smaller, due to globalization, increased access to transportation, and the explosion of technology, making connections to other areas of the world easier and faster, the awareness of global health disparities has increased and the demand for global health training is rising (Kerry, Ndung’u, Walensky, Less, Kayanjas, & Bangsberg, 2011; Kanter, 2008). The Center for Strategic and International Studies theorizes that there are three root causes for the increase in the demand for global health training in the US: 1) a greater emphasis on internalization; 2) US foreign policy that includes a global health agenda; and 3) funding to support the growth of global health studies (Merson & Chapman Page, 2009).

In addition to the growing interest in global health, a serious shortage of the medical workforce has been identified by the World Health Organization’s (WHO) Commission on Social Determinants of Health as a significant issue worldwide, jeopardizing access to care and creating health inequities for millions (WHO, 2008). The shortage is particularly true for disenfranchised communities who carry the largest burden of disease and are generally LMIC (WHO, 2008). In these countries there is a need for well-trained, competent health care providers.

Pressure is also coming from student groups with the International Federation of Medical Students, which includes 1.2 million medical students from 91 countries, advocating for a comprehensive global health framework to be included in the curricula of medical schools (Kerry et al., 2011). In the US, the Center for Strategic and International Studies reported that there were 46 global health programs or centers at US universities as
of 2009 (Merson & Chapman Page, 2009). Since then, to meet the increasing demand from the global health community and medical and health students, the number has more than doubled to 102 global health degrees or tracks, as of 2013 (Consortium of Universities for Global Health, 2013).

**Fogarty AIDS International Training and Research Program**

With HIV/AIDS reaching epidemic proportions in the 1980s, an AIDS International Training and Research Program (AITRP) was established at the FIC in 1988 and focuses on enhancing in-country capacity by training medical and public health scientists from LMIC with the hope that the Fellows return to their home countries and assume leadership positions in the delivery of HIV/AIDS health care and in conducting HIV/AIDS health care research (Fogarty AITRP, 2015). The main focus of the training “is to build multi-disciplinary biomedical, behavioral and social science research capacity for the prevention, care and treatment of HIV/AIDS and HIV-related conditions for those adults and children affected by HIV/AIDS in the collaborating country” (Fogarty, 2015, para 5).

Fogarty International Fellows originate from outside the US and are selected to study in the US and elsewhere, and enroll in short-term or long-term training programs including masters and doctoral programs. At this time, twenty-six universities in the US participate in the Fogarty AITRP by inviting medical practitioners to enroll in advanced health and science degree master or doctoral programs at these universities.
The Tanzanian Context

In order to begin to understand the Fogarty International Scholars experiences at Dartmouth, an important consideration for this project is the context of Tanzania – the home country of the Fogarty Fellows at Dartmouth. Tanzania has a rich and turbulent history that has a profound impact on the society and culture of the country.

An important shipping center located on the East Coast of Africa, Tanzania is a small country, roughly twice the size of California, with 26 regions and about 130 tribes and ethnic groups representing more than 95% of the population (CIA, 2015). The remainder of the population is a mixture of Asians, Europeans, and Indians (CIA, 2015).

Tanzanian history is that of conflict, oppression, colonialism, slavery, poverty, and tribalism (URT, 2015). Tanzania has been a county dominated by others – Arabic, British, German, and Portuguese conquers have all played a significant role in shaping the country and its culture (URT, 2015). In the nineteenth and twentieth centuries, Tanzania was a colony of Germany from 1880 to 1919; as a consequence of losing World War I, Germany handed over Tanzania to Britain under a mandate from the League of Nations (URT, 2015). Tanzania was a British colony from 1919 until 1961 (Vilby, 2007). The transfer to self-rule was largely peaceful (Brennan, Burton, & Lawi, 2007).

At the time of independence, in 1964, Tanzania was, the result of the merger of two states, Tanganyika and Zanzibar. Julius Nyerere, a Tanzanian and a former teacher educated at the University of Edinburgh, directed the struggle for independence and, thereafter, became the country’s president, leading a one-party system, for 22 years (World
Bank, 2009). It was not until 1995 that two-party elections were held and the country became a young, democratic nation (World Bank, 2009).

Under Nyerere a socialist government was formed that led to political stability but severe economic decline (Mkude, Cooksey & Levey, 2003; Nyerere, 1964; US Department of State, 2012). For decades, after independence, the country faced significant poverty due to its economic policies. Currently, Tanzania is a low income country with 40% of Tanzanians living in poverty (USAID, 2015); the average per capita income is less than $600 (World Bank, 2014).

Despite its economic woes, Tanzania has consistently been a country that accepts refugees from surrounding countries (Ongpin, 2008). During the 1990s, 1.5 million refugees found shelter in Tanzania (Ongpin, 2008). This level has been reduced and the United Nations, reports in 2015, Tanzania sheltered nearly 290,000 refugees (UN, 2015). Accepting refugees has placed an additional economic burden on the country and has led to a more diverse population, overuse of the lands, a straining of the educational and health care systems and more poverty and food insecurity, to name just a few of the challenges related to the influx of refugees (URT, 2015).

Higher Educational Institutions and Intellectual Development in Tanzania

At the time of independence, the trained work force was extremely limited, “in 1961, there was only one Tanganyikan civil engineer, 16 physicians, and two lawyers” (Vavrus & Bartlett, 2013, pp. 11). It was not until 1964 that Tanzania established a university in the country, the University of Dar es Salaam, and the university was
established under the umbrella of the University of London; later, it became a part of the University of East Africa (Mkude, Cooksey & Levy, 2003). Prior to this, most academic training took place out-of-country in neighboring countries and the home countries of donors, especially for health care workers.

Since 1964, 41 private and public colleges and universities have been established (Tanzania Commission for Universities, 2015a). More are underway, since the current government wants to move the country from a LMIC and recognizes a strong educational system and highly trained workforce will be key to moving into the middle-income country category (Bloom, Canning, & Chan, 2006; Mawoyo & Wilson-Strydom, 2012; URT, 2015). The government is focused on improving access to higher education, increasing the presence of females as faculty and students, and changing the educational philosophy from teacher-centered to student-centered and competency-based learning (Bloom et al., 2006; MUHAS, 2014a; Vavrus, 2009).

Since HIV is the sixth leading cause of death in Tanzania (Centers for Disease Control, 2013) and there is an acute shortage of trained health care practitioners, the Tanzania Commission for Universities, the regulatory body that oversees higher education in Tanzania, has determined that one of the strategic objectives for higher education to focus on is “enhanced mitigation against the HIV/AIDS pandemic” (CDC, 2013; Kwesigabo, Mwangu, Kakoko & Killewo, 2012; Tanzania Commission for Universities, 2015b). This objective should help to address the critical shortage of health care workforce in Tanzania. Tanzania has approximately 148 health care workers per 100,000 people (Leon & Kolstad, 2010). Physician shortages are particularly acute. In 2006, in Tanzania,
physicians accounted for only 1% of the healthcare workforce with a physician-per-population ratio of 2.3 per 100,000, one of the lowest ratios in the world (WHO, 2006). In contrast, during this period, the US physician-per-population ratio was 230 per 100,000 (WHO, 2006).

**Health and Medical Training in Tanzania**

To meet the needs of health and medical training, the Muhimbili University of Health and Allied Sciences (MUHAS) was established, in the 1990s, in Dar es Salaam, the largest city and commercial capital in the country, and, initially, was part of the University of Dar es Salaam (Mkude et al., 2003). Prior to this, medical and health students trained in East Africa and Europe. The University of Dar es Salaam has had a turbulent history with the government heavily involved in the running of the university, limiting its autonomy (Mkude et al., 2003). In more recent years, MUHAS has become a separate entity that is overseen by the government, with the Chancellor of MUHAS reporting to the president of Tanzania (MUHAS, 2014a). Since most of the Fogarty Fellows at Dartmouth receive their medical training at MUHAS it warrants special reporting.

MUHAS provides undergraduate and graduate training in 81 programs in medicine, dentistry, pharmacy, public health, and laboratory and allied sciences (MUHAS, 2013). The latest report from 2010 noted that over 2,500 students were enrolled at MUHAS (MUHAS, 2013).

Overall, at universities including MUHAS, the prevailing academic tone is formal and it is influenced by the British system with faculty members referred to as Dons and with similar traditions and pedagogies being utilized (G. Kwesigabo, personal
communication, November 14, 2011). Similar to the British system, the teaching has been very formal and a faculty-centric approach has been pervasive (Kitta, 2004; Stambach, 1994; Vavrus, 2009).

Acknowledging the need to change educational approaches led the government to enact educational policies to improve the quality of teaching and learning (Mushi, 2009). Reforms to improve both teaching and learning, by moving from a teacher-centered pedagogy toward a learner-centered approach have been in existence since 1982 but have been slow to be implemented (Vavrus, 2009; Vavrus, Thomas, & Bartlett, 2011). Only in the last several years, has the Ministry of Education and Culture established a reform policy focusing on competency-based, student-centered learning (Vavrus et al., 2011). MUHAS has issued directives to all departments to undertake sweeping educational reforms to accomplish these new initiatives (MUHAS 2014a; Ngassapa, Kaaya, Fyfe, Lyamuya, Kakoko, Kayomboe, Kisenge, Loeser, Mwakigonja, Outwater, Martin-Holland, Mwambete, Kida & Macfarlane, 2012).

**Challenges for Tanzanian Academic Institutions**

The common challenges faced by higher education institutions include: impoverished students, economic issues, lack of resources (often textbooks are decades old and only a few copies available), stable access to the internet, a lack of well-functioning infrastructure and governance, gender inequalities, and a lack of political will to support educational efforts and policies (Aitchison, & Alidou, 2009; Benjamin & Dunrong, 2010; Ishengoma, 2004). Tanzania, like other African countries, is realizing that despite issues with stable access to the internet, distance learning can overcome many of the barriers and
may be the key to increasing enrollment in higher education (Frehywot, Vovides, Talib, Mikhail, Ross, Wohltjen, Bedada, Korhumel, Koumare, & Scott, 2013; MUHAS, 2013; Nartker, Shumays, Stevens, Potter, Kalowela, Kisimbo, Kinemo, & Egan, 2009).

**Progress in Tanzania: What is Working?**

Since gaining its freedom from colonial rule, the country has undertaken steps to improve economically, developed good working relations with major donor organizations and Tanzanian-friendly countries, expanded its democratic structure, improved its educational system, developed a higher education system in-country, and improved health outcomes, for example, life expectancy rates and adult and child mortality rates, and the health gap between urban and rural dwellers have all improved (Robinson, Gaertner, & Papageorgiou, 2011; World Bank, 2014; USAID, 2014; USAID, 2015). Tanzania has plans to move from a low-income country to a middle-income country by 2025 which will be predicated on improving the economic base of the country; developing and expanding its infrastructure, particularly its transportation system; expanding its commercial and manufacturing bases; improving the health status and quality of life and educational system; curbing a moderate level of corruption; and, finally, instituting effective debt management by the government (Robinson et al., 2011; Temu, 2011; USAID, 2014).

It is against this backdrop of a rich and varied culture, indigenous and colonial beliefs, turbulence, instability, and economic unease, that learning for the Tanzanian student takes place. These cultural and educational experiences may impact the transition for the Fogarty Fellows to a US educational system, and some of these issues were explored in this qualitative research project.
Research Design

Qualitative Approach

Since this research project sought to understand participants’ experiences, perspectives, and opinions, in detail, qualitative research methods were used (Glesne, 2006, pp. 1). Berry’s (1997) theory of acculturation guided the research questions. Berry posits that many factors are involved in the entry, adaptation, and assimilation into another culture (Berry, 1997). For the purposes of this research, the five main constructs of Berry’s framework were used. The constructs are: 1) experiences occur as the individual’s culture comes into contact with a different culture; 2) meaning takes shape as the individual assesses the experiences; 3) depending on the experiences, different coping strategies will be utilized; 4) during the fourth stage, complex interactions take place and stressors occur, and reactions may be either negative or positive; and 5) long-term adaption to the new culture may take place (Berry, 1997). These stages are influenced by the students’ native culture and adopted culture, and include many complex social, behavioral, environmental, and personal issues (Berry, 1997). (See Appendix A for Conceptual Model of Acculturation.)

Informed by the Berry model, a review of the literature, and through discussions with the Fogarty Program and MPH Program leadership at Dartmouth, the specific questions were:

1) What are the academic similarities and differences in the Fogarty Fellows’ previous academic training and the Dartmouth training?
2) What are the academic, social, and cultural experiences encountered during the adjustment and transition process?

3) Do the students express experiences of culture shock and, if so, what are the causes? What strategies were used for managing cultural shock and adaption?

4) What supports were provided? Were they assessed as being adequate? If not, why not? How can Dartmouth provide more support?

5) Are there ways that Dartmouth can make changes to the Fogarty Program or MPH Program to address or help students transition to the new culture or program?

(See Appendix B for topic guides.)

**Qualitative Methodology**

Two qualitative approaches were used: 1) qualitative interviews and 2) in-country field research in Tanzania and at Dartmouth. Initially, it was proposed to conduct a review of syllabi, course materials, and educational reports at Dartmouth and MUHAS; however, after completing in-country meetings at MUHAS, it became apparent that such materials at MUHAS either did not exist or were not available for dissemination to the general public.

**Data Collection: Qualitative Interviews**

To capture the perspectives of the many factions involved in the Fogarty Program at Dartmouth, 22 participants from four groups were interviewed: 1) ten Fogarty graduates; 2) five Dartmouth MPH faculty; 3) two MPH administrators, one of whom also held a faculty position and was included in the faculty co-hort as well; and 4) five Fogarty Program leadership including a Fogarty Program administrator; Fogarty Program Investigators, and a Fogarty Program Officer at NIH. To avoid coercion, only Fogarty
Fellows who graduated from the program were interviewed. One hundred percent participation occurred; 43% were female and 57% were male.

Semi-structured interviews lasted from 45 minutes to 60 minutes; detailed notes were taken during the interviews. All interviews were conducted in English and recorded, when practical, except for several interviews which occurred in public locations in Tanzania. Interviews took place from 2013 through 2014.

*Data Collection: Field Research*

To complement the qualitative interviews, detailed field observations took place. Because the majority of the Dartmouth Fogarty Fellows from Tanzania train at MUHAS, field research took place at MUHAS to gain a better understanding of the teaching and learning environment experienced by the Fogarty Fellows prior to enrolling at Dartmouth. Field observations included: 1) in-class observations at MUHAS; 2) observations at Muhimbili National Hospital in clinics, wards, and during Grand Rounds; and 3) observations at the Muhimbili National Hospital HIV/AIDS research clinics where the Fogarty Fellows train. Similarly, field research occurred at Dartmouth’s MPH Program.

*Limitations*

The Fogarty Fellows program at Dartmouth is small, in nature, thus, the potential sample size is small which can be seen as a limitation. However, qualitative research may be conducted with a limited number of interviews since qualitative research focuses on capturing a rich, thick description of “things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Creswell, 2007, pp. 36).
In this study, the concern was not in capturing a large data set; rather, the focus was on capturing information about a process and perceptions and was not concerned with findings that may be generalizable to a specific population. However, the results may provide insights to the twenty-five sister programs and institutions that host international Fogarty Fellows.

**Data Analysis**

After reviewing the data manually, all interview transcripts were entered into NVivo software and coded and analyzed. Line-by-line coding took place, using an iterative approach in keeping with commonly used qualitative approaches (Barbour & Barbour, 2003). Thematic analysis was used, with coding based on the research questions. Data was coded by participant category, initially, to learn of any group-to-group variations (Creswell, 1994; Glesne, 2011). During the analysis, tapes and notes were referred to for a richer understanding. The results of the coding were examined and a hierarchical framework was developed (Glesne, 2011). Initially, 251 broad categories emerged which were then clustered around six main themes.

**Institutional Approval**

This research protocol received approval from The University of Vermont’s Institutional Review Board. Dartmouth College’s Office of Institutional Research and the School of Public Health and Social Science Dean’s Office at MUHAS also approved this project. No incentives were offered.
Findings

A key finding in this study was that many aspects of the Fogarty Program are meeting expectations. The Fogarty Program is highly regarded and valued by the Fellows and the MPH Program. The administrative and academic support provided by both the Fogarty Program and MPH Program teams were notable for their excellent quality, high level of effort, and personalized attention. The personal attention and support are some of the key factors contributing to the success of the Fellows, all of whom have completed the MPH Program on time. As with many things, attention to detail and small gestures matter. As one Fellow noted, “How can you compare being met at the Dartmouth Coach by the Principal Investigator with a basket of fresh strawberries?” (Fellow 3)

The Fogarty Program is perceived by many participants, especially those most familiar with the Fogarty Program, as having a strong commitment to the educational goals of the Fogarty Program, the MPH Program, and to Dartmouth. This is apparent to many participants, with the Fogarty Program being lauded for its dedication to recruiting, enrolling, and supporting highly committed and talented Fogarty Fellows who are emerging as leaders in their country. The Fogarty Program’s support and efforts are evident to the Fogarty Fellows in all phases: from the initial recruiting meetings, through communicating about and arranging travel to the US, arranging for logistical matters, providing academic support and involvement in the research work of the Infectious Disease (ID) team at Dartmouth-Hitchcock Medical Center – the academic teaching hospital affiliated with Dartmouth College – and the Fogarty Program team’s substantial work in Tanzania. The Fogarty Program is thought to be supportive by the Fellows, the MPH
faculty, and MPH administrators through providing mentoring throughout matriculation and career support once the Fellows return to Tanzania.

Equally, the MPH Program was viewed by the Fogarty Fellows and Fogarty Program leadership as being dedicated to attaining the educational goals of the MPH Program and to upholding the standards of Dartmouth. The MPH Program was viewed, by the Fellows and the Fogarty Program team, as being well-run and responsive to the needs of students. The Fellows felt that matriculating in the MPH Program was invaluable to their career development and they felt supported through the efforts of leadership and administrators on their behalf. This belief is best summarized by this comment, “My time at Dartmouth was life changing; I use what I learned at Dartmouth with my work in Tanzania.” (Fellow 3)

What emerged from the research is that Fellows have assimilation issues that are, unsurprisingly, unique to being an international student operating in an environment that is quite different in terms of culture, language, teaching and learning styles, and resources. Some of these issues regarding academic preparedness, the campus climate, and academic integration are universal and mirrored those that are found in the educational literature and discussed above, and these issues were understood by all the participants. While others issues that the Fellows experienced were not known to either faculty, the Fogarty Program administrators or the Fogarty Program leadership and these will be discussed in further detail below.

Another key finding was the faculty’s somewhat limited understanding of the Fogarty Program and understanding or awareness of the differences in international
students’ prior educational learning environments. In recognition of this, some faculty expressed interest in undertaking training in strategies to work with international students. Some faculty held the belief that some international students require more time for faculty to support their learning.

An overview of assimilation issues and the stakeholder groups that identified the issue is found in Table 1. An X denotes that at least one member from the key stakeholder group commented on the issue or challenge. The findings will be discussed below, from each stakeholders’ perspective.

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<thead>
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<th>Table 1: Assimilation Issues for Fogarty Fellows</th>
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Since Berry’s theories of acculturation were used as the theoretical framework for this research project, the findings from the Fellows’ perspectives will be discussed following the constructs Berry’s identified as influencing an individual’s ability to adapt, namely: acculturation, appraisal of experience, strategies used, immediate effects, and outcomes (Berry, 1997). While there are many definitions of acculturation, for the purposes of this research, Berry’s (1997) definition will be used: “Acculturation [refers to] the general processes and outcomes…of intercultural contact” (pp. 8).

**Fogarty Fellows’ Perspectives**

**Acculturation**

As might be expected, the Fellows needed a period to adjust to the US culture, the culture of Dartmouth, the MPH Program and its teaching pedagogies. The fast-paced and technologically-oriented US society and the wide array of consumer choices were particularly daunting. For most Fellows, the new living and studying environments were overwhelming and they navigated through with the assistance of the Fogarty Program team, the MPH Program, host families (Friendship Families), and peers. For those Fellows who were acquainted with the US, the adjustment was less pronounced.

*Acculturation – Fogarty Fellows’ Perspective of the US culture*

Several Fellows described their issues with the US culture as being overwhelming on many levels:

*It was a dramatic shift. E-learning, electronicized [sic] everything...you had to pay with coins or cards for everything including a printer, a soda! Everything! I know you cannot image how overwhelming this is – but you learn even at the airport, with e-tickets. You go to a supermarket and use a card. We do not do this. So these whole cultural issues were very, very overwhelming but I appreciate the differences.[It was] a dramatic shift of*
cultural experiences, academic experiences, and system challenges—
electronic-printer, e-learning, supermarkets, food, airports, washing machines, simple day-to-day routines compounded with a limited social network were among issues of cultural shock that I went through. (Fellow 8)

Universally, participants in all sub-categories but most especially the Fellows believed that a period of adjustment was needed to address the major cultural and educational shifts. Arriving at least one-week before the start of orientation would provide time to adjust. Equally, while some information is provided about the program and Dartmouth, more information about the culture and academic expectations would help. Specifically, many suggested: using videos to show the typical living arrangements and classroom dynamics, providing US cultural “Survival 101” guides, and providing a comprehensive package about the educational expectations.

For some Fellows, the lack of diversity was noticeable as were some peers’ views of multiculturalism and diversity.

The culture—it is always there. It is very broad from food to, well, everything. It is unavoidable. For me, it was huge. The area is predominantly white and you always felt that. You need to behave differently. It takes something of adjusting to. (Fellow 7)

In terms of racism, Dartmouth is the least mixed Ivy League—you know this because you receive memos from administration about harassment. I did not feel any except that I had a roommate that made some my comments about having experience using or knowing what a microwave was and made a comment when I used a face mask because I was ill (he thought I might have TB) and did not want to pass it to others. (Fellow 4)

Training for students and faculty regarding multiculturalism was mentioned as a pro-active approach to broaden the understanding and acceptance of cultural diversity.
**MPH Teaching and Learning Environment: Fogarty Fellows’ Perspective of Faculty-Student Interactions**

Tanzania is, culturally, a very rich country that has a very layered society; it is a tribally-based culture and inherited, and still has, some vestiges of colonial cultures, particularly, British and German cultures. Group identity, respect for elders, and a reverence for tradition are common features of society in Tanzania, as noted by the following comment: “In the Tanzanian setting...group [structure] support is key in many social settings. It is a cultural difference.” (Fellow 8) In contrast, the casual nature of Dartmouth surprised many Fellows and they needed time to learn the in-class and out-of-class etiquette.

*In Tanzania, the professor is the master. In the US the professor can have a relationship with the student. This would never happen in Tanzania. Students are trained to fear the professor in one way or the other. There is a huge wall between the student and the professor. Students do not ask many questions. If I interrupt in class, I will be chased out of class. Interruption is a sign of disrespect. This made me very hesitant to talk in class at Dartmouth. (Fellow 2)*

*The dress is different – I was surprised by the short dresses and tight clothing. Students presented, in class, short shorts which is not okay. For Muslims it must be difficult. Also, I was surprised by students eating in class – we are not trained to do this. (Fellow 5)*

**Acculturation – Fogarty Fellows’ Perspective of MPH Teaching and Learning Environment: Participatory Pedagogies**

Dartmouth has adopted student-centered, active learning teaching approaches which require students to actively engage and participate in class and in group projects and prepare written assignments. In contrast, most of the learning in Tanzania is faculty-
centered, with faculty lecturing at a fixed podium in large lecture halls filled with students which makes participation for Fellows challenging.

In the US, you are, first, commended for asking the question and you do not feel intimidated. In the US, the teaching requires interactive learning, students read materials before class [in Tanzania, students read materials after class], and [are] expected to actively participate. The relations between instructors and students is very different – instructors are called by their first names. Student can become friends with the teachers and can discuss education and life stuff. This was very hard for me to adjust to. It took me 4-5 months to open up and raise my hand and ask a question. (Fellow 2)

If you ask a question in class in Tanzania, it means that you are not prepared or do not know. (Fellow 9)

Acculturation – Fogarty Fellows’ Perspective of MPH Teaching and Learning Environment: US-centric Content

The MPH Program at Dartmouth focuses primarily on improving the US healthcare system and the US-centric program content was overwhelming and confusing for the Fellows. Some Fellows and faculty questioned the relevance of learning about the US system and how this knowledge might be applied in their home country.

The program is very US-based. For example, critical issues in US healthcare, the utilization of US health services. This did not apply to me and I wondered....where do we fit? It was not useful. Having more than information about the US system would improve the program...it would be beneficial to have a component on global health. (Fellow 5)

Acculturation – Fogarty Fellows’ Perspective of MPH Teaching and Learning Environment: Technology
E-learning is uncommon in Tanzania, due to the instability of electricity and the cost of owning computers. While e-learning is beginning to be introduced into the classroom in Tanzania, it is not common to have widespread access to computers; instead, cell phones are more commonly used and communication is often through text messaging (The Commonwealth Report, 2013).

*I was anxious because of the technology and reading materials – there were many readings. We do not use technology for teaching in Tanzania.* (Fellow 3)

Technology outside of the classroom was also new to most of the Fellows and in unexpected ways. The automated aspects of US society are not found in Tanzania and some Fellows, who had not been to the US beforehand, found it be surprising and challenging.

*Using technology was different – using a washing machine was new to me. I had never seen a coin-operated washing machine. Swipe cards to access my apartment and school were new, too. I did not know these. I expected to receive a key, but was given a card. I did not realize that doors locked automatically. Ordering online – I had never done this [because] the postal system in Tanzania is not reliable. My Friendship Family and roommate helped me to understand how things worked.* (Fellow 2)

**Acculturation – Fogarty Fellows’ Perspective of MPH Teaching and Learning Environment: English as a Second Language (ESL)**

Unsurprisingly, English proved to be a challenge for most Fellows and required a great deal of effort for them to keep up with the readings, to process in-class lectures, discussions, and conversations, and to prepare written work. The official language for Tanzania is Kiswahili and most Tanzanians also speak a tribal language or dialect, with
English being their third language. In addition, Tanzanian students do not begin to be taught in English until they reach the third grade.

There is a language barrier – while English is not my first language, even an American speaker will agree with me that the accents are different in America. I spent a good three months struggling with understanding the NH dialect. It is not that you don’t know the American language it was just struggling to understand the accents, struggling to understand what was being said. It was overwhelming, I am telling you it was overwhelming. (Fellow 8)

Acculturation – Fogarty Fellows’ Perspective of MPH Teaching and Learning Environment: Assessments

Learning assessments in Tanzania focus mainly on an individual-level and students are assessed usually at two milestones – mid-year and end-of-term with multiple choice question (MCQs) exams used. MCQs require rote memorization rather than critical thinking skills that are required at Dartmouth. Dartmouth assignments are a mixture of individual assignments and group assignments and more writing assessments are used rather than exams. It is rare for an exam to be an MCQ-based assessment; instead, open ended questions, mini-cases, quantitative data sets, and problem-solving questions are utilized. Another difference in assessments is that, historically, in Tanzania, students have not been judged on in-class participation or incremental projects and rarely speak in class. Coming from Tanzania-style training, adjusting to Dartmouth’s approach was jarring for most of the Fellows.

Acculturation – Fogarty Fellows’ Perspective of MPH Teaching and Learning Environment: Attribution of Sources
Some students struggled with the requirements for attributing sources in the US format. When these issues arose, they found it was helpful to have advisors, who were not a faculty member of the course, helpful to talk with and be guided by. ESL tutoring also helped with these issues.

Appraisal of Acculturation Experience by Fogarty Fellows

Despite the adjustment issues and differences in culture and educational approaches, the Fellows were extremely enthusiastic about their time at Dartmouth and their time as students in the MPH Program. The Fellows repeatedly expressed their satisfaction with both, and noted how much support they received from both the Fogarty and MPH Programs.

At Dartmouth, there was more interaction between professors and students. An added advantage at Dartmouth was that they helped you to learn what they are teaching you. [Professors] paid close attention to you. Having Teaching Assistants was very different. It was very helpful – you could stop into their office. There were more lines of communication [at Dartmouth] which is an advantage. At Dartmouth, they [faculty, staff] look for ways to assist. (Fellow 3)

Assimilation Strategies Used by Fogarty Fellows

The Fellows adopted a variety of strategies to proceed through the program. These ranged from working with an informal advisor; meeting and working with Fogarty Program mentors; connecting socially with peers, other international students, host families, and with friends and family in Tanzania; and utilizing academic support via the Teaching Assistant system, a system which is not used in Tanzania, and through tutors for epidemiology, biostatistics, and ESL. The Fellows were careful to plan their time since the reading load is quite overwhelming, in part due to English comprehension issues, getting
through the reading assignments could be very time consuming. The Fellows also adopted strategies to try new things and see different parts of the country. For some, connecting with a host family offered the opportunity to do both as well as provided assistance with navigating the American culture and provided a much needed “home away from home.”

*Weekly meetings with the Fogarty team were very helpful. Discussions were friendly. They quickly problem solved – identified problems and solved issues. They would ask, ‘Are there any problems? Do you need any help?’ It was very good in the sense that things were quickly solved. (Fellow 10)*

*Having a social network is really important. Linking to a network of Fogarty Alumni, physicians, and international students is very helpful. It helps because you have shared experiences. (Fellow 9)*

### Immediate Effects of Assimilation from the Fogarty Fellows’ Perspectives

Collectively, the Fellows commented that they felt supported in and out of the classroom, during their time at Dartmouth, by both the Fogarty Program and the MPH Program with the following indicative of the experiences of the Fellows:

*The ID team frequently communicated with me, this was very helpful. It allowed me to relate what I was learning to real work. I applied my education through working with the ID team. But I was racing to catch up. (Fellow 9)*

### Outcomes of Assimilation to Dartmouth from the Fogarty Fellows’ Perspectives

For the Fellows, the experiences at Dartmouth and the education provided by the MPH Program were very positive. Due to matriculating in the MPH Program, the Fellows are using the knowledge, skills, and tools learned at Dartmouth in their home country:

*My current work is shaped a lot by Dartmouth – research, monitoring, and evaluation, case follow-up, and mass treatment. I work with the poorest of*
the poor and what I learned at Dartmouth I use with them. My time at Dartmouth was life changing. (Fellow 3)

Many Fellows commented on continuing their relationships with the Fogarty Program after graduation, and they noted that while they do receive some career guidance, they wish to have more career support especially around pursuing doctoral programs, developing research careers, and establishing professional connections to Fogarty Alumni in the East Africa region.

Nearly all Fellows have either enrolled in doctoral programs or expressed an interest in locating a doctoral program that will meet their professional interests and provide some flexibility in delivery. It should be noted that the availability of doctoral programs in East Africa is rather limited and many scholars travel to European or the US to enroll in doctoral programs, which is very difficult to accommodate while maintaining a Tanzanian-based career or family life. On a related note, while Dartmouth has no influence regarding the use of GRE scores for admission to doctoral programs, the Fellows commented on how challenging the GREs are for a non-US student, specifically, understanding the nuances of the GRE questions is very challenging because the questions can be quite US-specific in context.

The Fellows are very career-focused and wish to be more involved in research and are quite interested in career advancement. Ties to the FIC are very important to the Fellows and they wish to keep connected to the FIC in order to become more knowledgeable about Fogarty initiatives in Tanzania, to become aware of and to participate in additional Fogarty training programs, either in the US or in-country, and to collaborate with other Fogarty Alumni in the East African area. Several Fellows suggested that a
formal East African Fogarty Fellows association be developed. To broaden their networks, the Fellows envision a Fogarty Alumni partnership for professional development, research endeavors, and scholarship and publications. Several Fellows and Fogarty leadership identified the Ugandan Society for Health Scientists, founded by Fogarty Alumni in 1999, as an exemplar. The Ugandan Society for Health is notable in that it has become a formal entity, it is registered as a non-governmental organization, it focuses on conducting scientific and public health research, and it hosts training conferences.

*Summary of the Fogarty Fellows’ Perspectives of Matriculating at Dartmouth*

In summary, while enrolling in the MPH Program at Dartmouth had its rewards as well as its challenges for the Fogarty Fellows, the basic underlying infrastructure of both the Fogarty Program and the MPH Program adequately supported the Fogarty Fellows. The Fellows continue to be accomplished public health professionals; they have returned to their home country to assume leadership positions in Tanzania, enroll in doctoral programs, participate in research efforts, and become faculty members.

What emerged from the results of the interviews with the Fellows, is that the experiences of the Fellows at Dartmouth could be fine-tuned. To help with the myriad adjustment issues, a multi-pronged approach was suggested to provide more information: 1) use videos to show classroom and group dynamics; 2) arrange for a pre-departure workshop in Tanzania facilitated by Fogarty Alumni to introduce and guide in-coming Fellows regarding the teaching environment and the lessons that Fogarty alumni learned while enrolled at Dartmouth; 3) match incoming Fellows with Fogarty Alumni to stay connected via texting and social media; 4) provide packaged materials/prospectus about
the MPH program and expectations, including plagiarism, as well as a primer on the US health care system; and 5) provide “Survival 101” guides to introduce cultural aspects of the US, New England, and Dartmouth. Lastly, several faculty members thought that a more inclusive approach to testing, such as untimed essay periods on exams, might be beneficial to international students.

Faculty’s Perspectives

The Dartmouth MPH Program enrolls a small but growing number of international students. This growth has been organic as the MPH Program does not recruit overseas nor does it contract with overseas recruiting agencies. As the Dartmouth MPH Program has grown and become more well-known in the last five years, it has experienced an influx of international students, with international students representing approximately 20% of the students enrolled in the MPH Program in 2014. Some faculty realize the implications that enrolling international students may have:

*Our program, in its current incarnation, is not so forgiving on that [working with transnational educational issues]. It rarely focuses on transnational elements sometimes and I think that affects many students. So I think it will be important to recognize from our own part that these are individuals. We have students coming in from several different places and we need to be understanding.* (Faculty 1)

Since transnational education has not been a mission of the MPH Program, faculty have a somewhat limited knowledge of academic issues related to transnational teaching and no formal training has been introduced yet. While the faculty recognize that there are likely to be issues with including international students in the classroom environment and
are interested in learning about them and teaching strategies, they are not conversant in many of the issues. The following passage speaks to this:

Should I have an appreciation for the differences [in educational systems in the US versus a non-US settings]? Are the differences, as you mentioned we not only have Fogarty Fellows but we have others [international students], so are there differences that I should be aware of that would be helpful or not? (Faculty 4)

When asked about issues that have arisen with teaching in a mixed classroom, faculty observed a number of issues. Since this research took place when 20% of the students were internationals, faculty’s comments were not always confined to the Fogarty Fellows. For this project, five faculty were interviewed and noted the following issues:

Adjustment Issues – some faculty had some understanding of issues with adjusting to the US culture and academic environment.

Transition of culture is one thing, the transition to the work load and the academic environment is another thing and it would be great if they could take those in pieces and not have to do them simultaneously. They have done, again, some excellent work academically and they show that they are not crumbling, but it has always been clear that the other stuff has been a headache [logistical and living arrangements]...this was a struggle for them. (Faculty 1)

Connecting Fellows – several faculty thought matching Fellows with peers would help with acculturation while another felt that connecting Fellows with physicians at Dartmouth-Hitchcock Medical Center (DHMC) in their areas of interest would benefit the Fellow and the DHMC physicians. One faculty noted:

You know it would have been great to have [one of the Fogarty Fellows] come to a OB/GYN grand rounds, that would have been great – I mean pediatric residents would love to have a pediatrician from Tanzania come and meet with them...without making them [the Fellows] feel like it’s all
about them serving everyone else, but just kind of helping with those connections. (Faculty 2)

Coordinated Efforts/Point Person – some faculty noted that it was difficult to know the student profile of the incoming class in order to prepare to teach a mixed group of students. Several faculty felt that it would be helpful to have information about the enrollment of students before the academic year began and suggested it would be efficient to have a point person coordinate information and monitor the students, since for some faculty, there was an additional amount of time spent working with some international students:

“...because if there was someone, and maybe there is someone who is kind of managing and aware of international students and their needs. If I received an e-mail before classes started that here are your people, we’ve met with all of them and we’ve identified that these ones seem like they are going to be ok, this one needs whatever.” (Faculty 5)

Dartmouth Fogarty Program – for the most part, faculty had a hazy awareness of the Dartmouth Fogarty Program as noted by this comment:

I know so little about the Fogarty Scholars. I didn’t even know that you were involved. I didn’t even know who I would talk to about my worries. I thought they were here by themselves. Just like somebody says go to Dartmouth and they are here and they are on their own and I’ve been worried all this time about these people. (Faculty 4)

Others acknowledged that they felt that some entity was supporting the students.

I’ve always loved the Tanzanians but I’ve always seen them as people who do have support and are succeeding and they add so obviously to the classroom. (Faculty 5)

One faculty member had more familiarity with the Fogarty Program and had a personal experience with being a peer of a Fellow.

I appreciate the Fogarty Program. I think that it is important that all of you who work on it know that the experience that I have had since I was a
student and educating with the 3 Fogarty Scholars that I have met have just been fantastic. (Faculty 1)

Ease with Technology – a few faculty are aware of the disparities in educational resources and that international students may not have been taught using computers or learning management systems. That said, faculty noted that adjusting to technology-based learning can be a struggle.

English Comprehension – some faculty wondered about the time it took for international students to understand presentations and discussions in class and noticed that some international students used in-class dictionaries. Faculty expressed concern about international students keeping up in-class, during exams, and outside of class. The faculty also realize the extra burden on the international students to navigate in a second language.

There are words they don’t know and they come and ask for help with some vocabulary. Some of our other international students also need to ask. So there is something that makes me feel when I answer their questions usually on a test, it is the only time I think they feel strongly enough to get it straight, but I wonder how much else have I said that you don’t understand. I worry. I’m thrilled to help them understand that but then I wonder were there 10 things that I said in last week’s class you didn’t know what it was and if they know the word. (Faculty 3)

Extra Time – some faculty noted that while the students needed extra time to learn, the faculty also had to provide additional time to help international students.

We have someone from India, we have all these places [8 international students] with different cultural norms, I can’t keep track of it and I can’t meet with everyone for two hours every week. (Faculty 5)

Faculty-Student Interactions – at times, the interactions have been quite stilted, leaving the faculty bewildered as to whether information was conveyed appropriately. One faculty
commented on the interaction with a student when meeting with them about an academic issue:

*I was met with silence* but *silence without any expression.* Silence, no body movement, no facial movement and not even really anything with the eyes. *We [the teaching team] huddled, sort of afterwards... ‘Do you think they got it?’* (Faculty 3)

Informed Faculty – for the most part, faculty were generally unaware of the myriad of issues that international students face in the US. The information that they have gleaned has been during informal teaching collaborative meetings and they would welcome additional information; brief in-services prior to the start of an academic year were suggested.

*I think because everything I know about the [Fogarty Fellows]...I think everything is an exaggeration, but I feel like most of what I know about the struggles or the things that might be hard or the explanations or reasons that Fogarty Fellows have issues all are learned from the teaching collaborative. There is no other source of information that I, as a faculty member, receives.* (Faculty 5)

Plagiarism – there have been instances of plagiarism and most faculty feel that more training is necessary. As one faculty member noted:

*I feel like I’ve come across...along the years, again, through the [teaching] collaborative mostly this idea that plagiarism has a different cultural...I don’t know if definition is the right word but just a perception of what is right and wrong. The way we think about it here is different and the difference is that we are much stricter on what you should be citing and attributing notations for. I don’t know much more than that.* (Faculty 5)
Program-Student Fit – since the MPH Program at Dartmouth is very US-centric, some faculty questioned the relevance of the course content to the work that the Fellows will be undertaking in their home country.

One recommendation is – ask honestly... ‘Is this a good fit? Does it make sense? Is Dartmouth the best place for Tanzanians? Would they benefit elsewhere? Do the tools we have really serve them?’ (Faculty 4)

Student Participation – generally, faculty noted a reluctance of the Fellows to participate freely which left the faculty wondering whether information had been transmitted or wondering how far to push a student to participate in the classroom. Some felt that their cultural background emphasized politeness and this had an impact on their willingness to engage in classroom discussions.

They seemed less vocal than we would expect someone. Somehow they are holding back from our point of view...when we are in the classroom this creates a challenging dynamic for them and for the fellow students and for the teachers. (Faculty 3)

Training – faculty have not been trained in transnational or inclusive teaching and some seem receptive to learning other teaching strategies. As noted by one of the faculty, a shift in teaching approaches would be something that would be a consideration for the leadership of the MPH Program and others.

We have Chinese students; we are going to have more Chinese students. We have students from the Middle East. We have students coming in from several different places and we need to be understanding and [undergo trainings]. (Faculty 1).

For me, I guess in some ways we aren’t going to cater the teaching methods to visitors but having someone who assures that whatever teaching methods we are using if they are so off base from what the students are used to that they are getting extra support for that I guess would be what I think of when I see that. (Faculty 5)
**Value of Fellows** – while the Fellows are not extremely visible in the classroom, faculty have appreciated the diversity that Fellows bring to the classroom and have found them to be excellent students.

*I think it’s important not just to look at this as a one-way stream of paternalistic knowledge going back to East Africa, but that they really are bringing a perspective to us that is extremely valuable in what, otherwise, could be, in many ways, a very insular program focused on the United States health care system and clinical medicine sometimes is a little too much and to just broaden that perspective is I think is a very valuable tool to have in our toolbox.* (Faculty 1)

**Visibility of the Fogarty Program** – one of the key findings is that the faculty have extremely limited knowledge or understanding of the Fogarty Program.

*...If you asked me what the goal of it is or whatever, I wouldn’t have any idea other than people from Tanzania come over here...The program itself is sort of invisible.* (Faculty 4)

Several faculty felt it would be helpful to receive more information about the Fogarty Program and about the Fellows to gain a better sense of the purpose of the training. It is also important to some faculty to know how the Fellow apply their MPH skills in their home country.

*It is really helpful to learn more about the Fogarty Program and I think...Dartmouth is unique because we are only one of 26 MPH programs in the US that have Fogarty Fellows who come here. [We need] to kind of get people [at Dartmouth] aware. I think kind of preparation of faculty so we know a little more about them before are sort of embroiled in the hand-to-hand combat of class.* (Faculty 2)

*It would be great to see that [their leadership roles once in home country] and it would be great to make that more visible to the Dartmouth community so that you kind of get what happens [after they graduate].* (Faculty 2)
Summary of MPH Faculty’s Perspectives

A key finding is that faculty, while they appreciate the value of the Fellows in the MPH Program, have little knowledge of the Fogarty Program and would welcome information about the purpose of the program and its role in global health. Equally, the faculty are very interested in knowing the impact that the MPH Program has on the Fellows’ careers and would welcome an update on their work, post-graduation. Faculty recommended a number of ways to convey information about the Fellows career developments.

While faculty welcome a diversity of students, the faculty have a limited knowledge of the complexities of being an international students as well as the complexities of teaching in a transnational setting and teaching strategies commonly used in a mixed classroom setting. Training for transnational teaching would be helpful, for faculty, as would providing more information to the faculty about incoming international students and the learning environments they have been accustomed to.

Faculty appreciated the diversity of international students, but there was an acknowledgement that, at times, more time is required of the faculty to teach effectively an international student population. Faculty felt that having a central office or a point person to coordinate the international students would help to lessen some of the confusion about the teaching needs of the international students, limit the unease that some faculty experienced in working with international students, and reduce the extra time required on the faculty’s part to provide additional support and tutoring to the international students.
MPH Program Leadership’s Perspectives

Similar to the Fogarty Program leadership, the MPH Program leadership recognizes the value of a diverse student body and the struggles that students have adjusting to rural New England and to the MPH Program at Dartmouth. In particular, the MPH Program leadership is aware of the challenges the Fellows undergo to move to the US and enroll in the MPH Program at Dartmouth. This viewpoint is noted by this passage:

*I’m always amazed that the Tanzanians are willing to what I would call sacrifice a lot to come here for a year. Whether it is leaving families for a year or going to someplace they have never been to before or other than hearing from others that have gone before them, not having a sense of what they are getting into socially, culturally, academically, but they choose to come here, I think it’s fascinating to me. (Administrator 1)*

The MPH Program is invested in supporting the Fogarty Program, having worked with the Fogarty Program for more than 10 years, and is focused on learning of ways to “make them [Fogarty Fellows] feel like they belong.” To foster a welcoming environment, plans are underway to have more connections to other entities at Dartmouth that deal with matters related to international students, including the Dartmouth medical school, Dartmouth-Hitchcock Medical Center, and the Dartmouth-based Fogarty Program.

The recent influx of international students entering the MPH Program and the impact to the classroom environment is recognized by leadership. The need for teaching in a transnational setting will require training of faculty.

*That is a tricky subject with a lot folks in education, but there is a recognition that there are new ways. The students we are getting are prepared in different ways for different methods of teaching and that we should try to find ways of bridging that gap, as opposed to making them [international students] have to do all the work. (Administrator 2)*
Summary of the MPH Program Leadership’s Perspectives

In addition to making changes to the systems and services within the MPH Program and working the faculty to provide more information regarding teaching in transnational settings, the MPH Program is supportive of developing a strong Fogarty Alumni network based in Tanzania. These measures will help to support the changing demographics of the student population enrolled in the MPH Program, by creating an environment that is inclusive of diversity. If the trend of enrolling more international students continues, it is likely that additional resources will be required to accommodate and support these students, such as additional staff trained in international student support services.

Fogarty Program Leadership’s Perspectives

Members of the Fogarty Program have a strong commitment to the Fogarty Program with more than 15 years of experience administering the program and extensive in-country experience; collectively the Fogarty Program team has travelled to Tanzania more than 75 times. These experiences provide the Fogarty Program team with a deep knowledge of the functioning of the Fogarty Program, Tanzania, and transnational educational needs.

In practical terms, the Fogarty Program team begins outreach and assimilation with the Fellows during the interview process which usually takes place in Dar es Salaam. During the initial meetings, the Fogarty Program team spends considerable time discussing the MPH content and approaches to learning in order to be transparent. After a Fellow is selected, the Fogarty Program team is in frequent contact to create a seamless bridge between Tanzania and Dartmouth by arranging logistics, support, monitoring, advising,
and career development. Due to Dartmouth’s isolated location and the small size of the program, the Fogarty Program team has a personalized approach that has been appreciated by the Fellows. From the Fogarty Program team’s perspective the most critical issues that are linked to the Fellows’ academic success and for which guide much of their programmatic efforts are:

- Assimilation to the US culture and teaching environment
- Support, mentoring, and monitoring throughout matriculation and post-graduation
- Research training in the MPH Program, especially during the Fellows’ internship and culminating master’s thesis, and post-graduation
- Career development after returning to their home country

The following passage best characterizes the Fogarty Program team’s understanding of the cultural differences and challenges that impact the Fellows’ experience at Dartmouth:

*The system in Tanzania is extremely hierarchal and there has not been much experience over the early part of our Fogarty Program of Fogarty Fellows experiencing lectures as we do them - participatory learning, asking questions, raising ideas that may differ from what the professor says, that sort of thing.*

*They are more used to the British system which is a professor comes in, goes to the lectern and he or she will lecture for one hour or whatever and then leaves. And then they [the students] are supposed to take back and learn from that lecture. That is one of the big differences. There has not been a tradition of asking questions in class or working in small groups to solve problems.*

*Oh and the technology, which is vastly different with less technology. And so I am sure they start off with some of the technology issues here when they come. Probably not a good grasp of understanding of citing references and plagiarism type of things. They don’t understand...[attribution]*.
And, too, just the dramatic differences in the standard of living and the amount of money that people have here versus the amount of money there to provide services that we take for granted. And most of the U.S. students in our programs I don’t think they could even grasp what poverty is and what people have to live on.

It is a difficult transition....they are a long way from home and they are isolated and they miss their families. (Administrator 1)

Summary of Fogarty Leadership’s Perspectives

The Fogarty Program team is very interested in improving the program and is supportive of making changes, when practical. An important consideration for the Fogarty Program team is to make the process more formal without impacting the small nature of the program and personal service provided. Many of the recommendations found in the Appendix C originated with the Fogarty Program team and focused on:

- Fine-tuning the operations by developing standard operating procedures
- Learning from other Fogarty Programs at the 25 sister institutes
- Working more closely with the MPH Program to be aware of the MPH operations and to avoid overlap and duplication
- Providing more comprehensive and unified information to the Fellows about the US culture and learning environment and the MPH Program including “Survival 101” guides that provide information about the cultural nuances
- Leveraging the use of technology to develop videos that help to highlight the living environment and teaching environment; using social media to connect and for communications
- Linking to key groups, local hosts, peers, and mentors
- Establishing a roster of tutors for academic support
- Providing support for re-entry and transitioning to home country including career support
- Supporting the development of the Fogarty Alumni association

Recommendations and Discussion

An important aspect of this research project was in identifying strategies to overcome challenges and for program improvements and interventions. From interviews
with participants, key milestones emerged as being crucial to either the Fellows’ success or points in time when interventions would be beneficial. These milestones are noted below in Figure 1.

Specific recommendations for interventions at these milestones are discussed more fully below and are focused around Swail, Redd, and Perna’s work regarding minority student retention (Swail, Redd, & Perna, 2003). A framework for institutions to strengthen student retention was developed by Swail and colleagues (2003), consisting of five academic components: “recruitment and admissions, academic services, curriculum and instructions, student services and financial aid” (pp. 91). Borrowing from this literature, the recommendations that resulted from the research are clustered around six main academic components, as seen in Figure 2.
Financial aid is not a consideration for this project, since the Fogarty Program provides full scholarships for tuition and academic supplies and stipends for housing and living expenses. Student monitoring was added, since it a key feature at Dartmouth. For the purposes of this research project, Institutional Commitment includes both the Fogarty Program and the MPH Program as representing the institutional commitment of Dartmouth. The recommendations are presented below in the narrative and in an Action Plan in Appendix C.

Institutional Commitment

The commitment of both the Fogarty Program and the MPH Program to supporting students’ academic success was praised by participants. Both Programs upheld the standards of Dartmouth for educating students. The level of effort by both is unquestioned: what emerged were suggestions for improvement and fine-tuning the processes and information provided. Broadly speaking, the recommendations cluster around: 1) orientation to the US and Dartmouth; 2) orientation to the MPH Program and the teaching and learning environment and preparation for both; 3) social and academic integration; and 4) post-graduation support.

Fellows felt that while great effort was made on their behalf, improvements could be made for academic preparation during pre-matriculation by making the processes less fragmented and by providing more comprehensive information. Specifically, participants suggested information about the US culture, the MPH Program, and the style of learning in several packaged formats, such as a guide to Dartmouth and “Survival 101” guides, be provided before arrival.
In addition, while the Fellows now arrive before orientation, it was universally felt by all participants that arriving at least a week before the start of the formal orientation schedule aids in overcoming jet lag, adjusting to the local environment, learning more about their living arrangements and the Dartmouth campuses, and adjusting to the American culture. A more formal schedule during this transition week would make the week more useful and less fragmented. (See Appendix C).

Finally, evaluating the Fogarty Program at different points in time will help to uphold Dartmouth’s educational standards and commitment to excellence. Establishing an advisory committee to provide input into the Fogarty Program’s operations and evaluation efforts is recommended. It is recommended that evaluations be completed by Fogarty Alumni and sister institutions to provide multiple perspectives. Specific program evaluation activities are noted below in Appendix C.

**Campus Climate**

Since some participants noted that their peers held unusual racial beliefs, while others commented that the area where Dartmouth is located is predominantly white and some of their peers had not experienced working with an African national, a cross-cultural session during orientation is recommended. Faculty also expressed an interest in learning more about the cultures of international students. Cross-cultural training will help with supporting diversity and multiculturalism at Dartmouth and help with integration.

**Recruitment and Orientation**

The Fellows, universally, lauded Fogarty Program’s recruiting efforts and work undertaken to make arrangements for the Fellows arrival in the US. Recommendations
focused on providing a smoother transition by providing more information in the following ways:

**Recruitment**

- Transparency – provide more clarification during the recruitment process regarding the roles of the Fogarty Program versus the MPH Program and the selection criteria used for admissions.
- Recruiting Information – use technology such as videos and Facebook to show the living and learning environments and include testimonials by the Fogarty Alumni.
- Linking – with incoming Fogarty Fellows with Fogarty Alumni for mentoring.

**Orientation**

- In-country Workshop – facilitated by Fogarty alumni to expose the incoming Fogarty Fellows to the teaching pedagogies used at Dartmouth by simulating a typical classroom discussion using a mini-case study of the US health care system. The workshop would allow time for sharing of lessons learned by the Fogarty Alumni.
- Pre-orientation Materials (Academic and Cultural) – nearly every participant recommended both types of materials including pre-readings about the US health care system, course materials, and information about the classroom teaching and learning style and the US culture. Packaging the materials into comprehensive documents and being available at least three months in advance would allow for time to read and digest the materials.
Academic Preparation and Support

In addition to the measures recommended above, information about plagiarism should be part of the pre-departure workshop, the Dartmouth materials, and survival guides. Training international students regarding plagiarism is a growing field and workshop and training materials are readily available online.

Since students struggle with different academic areas, continuing to support tutoring efforts for ESL issues and epidemiology and biostatistics will help achievement.

It was felt the Fogarty Program could aid in enhancing social and academic integration through matching with a number of key figures and at various time points. Matching and mentoring emerged as a recommendation from most participants, with matching occurring throughout the continuum of the Fellows’ experience with the Fogarty Program, noted in Table 2.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Matched To</th>
<th>Purpose</th>
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| Application                           | Fogarty Alumni        | ✓ To learn about the program  

✓ Serve as a resource during program  

✓ Linkages after graduation
| First Week on Campus through Matriculation | MPH Alumni (locally based) | ✓ To be a Welcome Ambassador  

✓ Serve as a resource during program and for academic integration
| First Week on Campus through Matriculation | Host Families (locally based) | ✓ Help adjust to living in local environment  

✓ Provide insights into American culture  

✓ Provide a “home away from home”  

✓ Provide cross-cultural exchanges
| Orientation through Matriculation | MPH Peer | ✓ Peer-to-peer support, academic, and social integration |

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Table 2: Matching/Linking Fellows with Key Groups

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<th>Time Period</th>
<th>Matched To</th>
<th>Purpose</th>
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<tr>
<td>Matriculation</td>
<td>International Graduate Student</td>
<td>✓ Social integration</td>
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</table>
| Matriculation       | Infectious Disease Mentor                      | ✓ Provide advising
                                                                            ✓ Include Fellows in activities of ID Department
                                                                            ✓ Provide Fellows with opportunity to present, informally |
| Matriculation       | Dartmouth-Hitchcock Medical Center Specialists  | ✓ Provide Fellows with opportunity to connect with colleagues specializing in same fields
                                                                            ✓ Provide cross-cultural exchanges |
| Post-matriculation  | US-based Fogarty Program Mentors and In-country Mentors | ✓ Provide career and research support |

As Fellows move through the MPH Program and return to their home country, a re-entry meeting would help them to ease back into society since Fellows and administrators have commented that adjusting to the pace and opportunities in Tanzania has required some effort. After re-entry, to their home country, continued career mentoring and support was universally requested by Fellows. Specific areas include: career counseling, research development support, counseling for doctoral programs, training opportunities, and assistance with developing scholarly writing. One aspect of supporting their career interests is to support the development of the nascent Fogarty Fellows Alumni network and to expand into other East African countries that have Fogarty Alumni. The development of an East African Fogarty Alumni network would support the Fogarty International Center’s strategic goal of building research capacity through partnerships.
Curriculum and Instruction

Faculty had little exposure to the Fogarty Program and were unsure of its purpose and many faculty also had little training in teaching in transnational environments and noted that they would welcome training in this area. Since the Fogarty Program has low-visibility providing a short overview of the Fogarty Program, during faculty meetings, along with a précis of the incoming international student body was requested by several faculty members. Faculty would also appreciate an update of the Fellows’ accomplishment after graduation and suggested that testimonials from the Fogarty Alumni, housed on Dartmouth’s website, would be beneficial.

Providing workshops on transnational teaching will help to reduce the uncertainty of teaching in a mixed classroom and increase the inclusiveness of the teaching. As Dartmouth continues to increase the enrollment of international students, this will become more important to a wider group of students.

Student Monitoring

While students are monitored, informally, via the MPH administrative team and during regularly scheduled meetings with the Fogarty Program team, assigning a specific advisor could provide additional support and smoother communications between the relevant parties. Adopting a formal advising system has been debated by the MPH Program and is still under discussion. Even if a formal advising system is not instituted, the Fellows expressed their appreciation of having an informal advisor – the system that is currently used – but they would appreciate more transparency in the roles of the different members of the Fogarty Program. Including this information in a directory of Dartmouth would help.
An Action Plan for recommended interventions and the specific groups who would be responsible for implementing the changes is in Appendix C.

Conclusions

In the US, the interest in and demand for global health training is growing, yet only few studies address the unique assimilation challenges and dilemmas of international health graduate students or those participating in the Fogarty AITRP and their experiences while matriculating in the US. While there is some information regarding several of the Fogarty International Center programs, a small, but increasing amount of information about best practices and guidelines for global health training programs is currently being published. This project builds upon this nascent body of literature.

This study shows the importance of: a) providing cross-cultural information about living, teaching and learning environments at key milestones in an international student’s experience in the US educational system; b) linking students before, during, and after matriculation; c) providing training for cultural sensitivity for both students and faculty; d) providing faculty with training in transnational teaching; and e) leveraging technology to overcome gaps in understanding and knowledge of the US educational system. These efforts will provide a better foundation and experience for the international students and the host community; however, it is critical to point out that these are labor-intensive and require the time of faculty and staff and institutional commitment.

International education is crucial to our functioning in a global community; it helps to build relationships between people and communities around the world and in the US. These relationships can be the foundation to solve pressing global challenges including the
eradication of poverty, the improvement in health outcomes, and the provision of quality health care in countries that carry a disproportionate burden of disease.

Having international health care practitioners in classrooms, provide unique perspectives that can include insights into the challenging experiences of delivering healthcare in low-resource areas. The perspectives that international students bring can serve to enrich the classroom and expand the worldview of their peers. International students’ perspectives can bring experiences that sensitize us to the basic human rights of dignity and health care for all.

It is incumbent upon host institutions to understand and support the unique needs of these diverse students as they enter the geographic, social, and academic cultures of their host institutions. Much may be gained from taking deeper looks at the process international students undergo as they matriculate in American universities and to understand the critical junctures in the students’ experience that may be enhanced by formal programs and student support. Allocating the time to reach out to international students, study their experiences and learn about them, can provide insights that will enable effective teaching strategies and student services that may provide some much needed support, guidance, and a welcoming environment that will enable the international student to flourish and succeed.

Declaration of Conflicting Interest

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References for Manuscript


**Bio**

Ms. Purvis is an Instructor at the Geisel School of Medicine at Dartmouth. This article is a result of completing a dissertation research project on this topic. Her research interests include: HIV/AIDS, international education, and vulnerable populations.
Manuscript Appendix A – Conceptual Model of Acculturation

(Area of Research Denoted by Rectangle)

Source: Berry, 1997, pp.15.
Manuscript Appendix B – Qualitative Interview Topic Guides

MPH Administrators, Faculty

Questions:
1) What, in your opinion, are the academic similarities and differences in the educational systems in the countries where the Fogarty Fellows are trained (Tanzania) and the Dartmouth training?
2) What are the academic, social, and cultural experiences encountered by the Fogarty Fellows during the adjustment and transition process? The academic year?
3) What, if any, are the causes of cultural shock and what strategies were used by the Fogarty Fellows for managing cultural shock and adaption?
4) How can Dartmouth provide more support? What facets might be improved, for example: pre-arrival orientation, readings, materials, interaction; orientation; advising; mentoring; teaching methods; academic support; social or psychological support?
5) What ways can Dartmouth improve the Fogarty Program?
6) How do you see the Fogarty Program developing in the future?
7) Is there anything else I should have asked about or is there anything we have not covered that you would like to comment on?

Fogarty Program Administrators

Questions:
1) What, in your opinion, are the academic similarities and differences in the educational systems in the countries where the Fogarty Fellows are trained (Tanzania) and the Dartmouth training?
2) What preliminary information is provided to the candidates during the application process? To the students prior to arrival? What might be lacking?
3) How is pre-matriculation handled? What are the arrival logistics (e.g., immunizations, immigration/visas, pre-readings, orientation packages, flights and local transportation, legal issues, banking information, orientation upon arrival – grocery shopping, housing, introduction to key stakeholders)?
4) What, if any, are the causes of cultural shock and what strategies were used by the Fogarty Scholars for managing cultural shock and adaption?
5) How can Dartmouth provide more support? What facets might be improved, for example: pre-arrival orientation, readings, materials, interaction; orientation; advising; mentoring; teaching methods; academic support; social or psychological support?
6) What ways can Dartmouth improve the Fogarty Program?
7) How do you see the Fogarty Program developing in the future?
8) Is there anything else I should have asked about or is there anything we have not covered that you would like to comment on?
Manuscript Appendix B Con’t. – Qualitative Interview Topic Guides

Former Fogarty Fellows

Questions:
1) What, in your opinion, are the academic similarities and differences in the educational systems in the countries where the Fogarty Fellows are trained (Tanzania) and the Dartmouth training? What teaching methods did you find unusual or challenging?
2) What preliminary information was provided to you during the application process? Was anything particularly helpful? Looking back, do you identify anything as lacking or could have been better?
3) How was pre-matriculation handled? What was your experience with arrival logistics (e.g., immunizations, immigration/visas, pre-readings, orientation packages, flights and local transportation, legal issues, banking information, orientation upon arrival – grocery shopping, housing, introduction to key stakeholders)? What helped? What might be improved?
4) What are the academic experiences that you encountered during the adjustment and transition process?
5) What are the social experiences that you encountered during the adjustment and transition process?
6) What are the cultural experiences that you encountered during the adjustment and transition process?
7) It is not uncommon to experience a kind of shock when you are in a new country. Would you say that you experienced cultural shock? Can you describe the strategies you used to manage cultural shock and adaptation?
8) Are there ways Dartmouth might have been more helpful to you? What facets might be improved, for example: pre-arrival orientation, readings, materials, interaction; orientation; advising; mentoring; teaching methods; academic support; social or psychological support?
9) Are there specific time periods during the academic year which seem ideal for Dartmouth to provide services? Such as pre-arrival, orientation, mid-year, at the end of the year?
10) As you look back, what ways can Dartmouth improve the Fogarty Program?
11) How do you see the Fogarty Program developing in the future?
12) Is there anything else I should have asked about or is there anything we have not covered that you would like to comment on?

Note: A literature search was conducted to understand more fully issues facing international students and to guide the development of the analytical approach. Research studies, research questions, topic guides, and surveys were reviewed to inform the study design (Abdrahim, 2010; Daley, 2004; Guidy Lacina, 2002; Heggins & Jackson, 2003; Hellstén & Prescott, 2004; Lee, 2010; Tseng & Newton, 2002; Väfors Fritz, Chin & DeMarinas, 2008; Winkelman, 1994; and Zhou, Jinal-Snape, Topping & Todman, 2008).
**Manuscript Appendix C – Recommended Action Plan at Key Milestones**

### Application Process

- Additional Information about Process (Course, Expectations, Learning Style, Criteria for Selection)
- Additional Information about Difference/Roles of Fogarty Program Versus MPH Program
- Introduction to Fogarty Alumni:
  - Applicant and Alumni Meet in-Country
  - Attend Pre-Departure Dinner and Workshop; Fogarty Program and MPH Faculty Participate Virtually (Mini-Case Study of the US Health Care System Used in Workshop)
- MPH Recruiting Materials Provided in Tanzania
- YouTube Videos/Testimonials – to Show American Culture, Campus, Housing, Classroom

### Pre-Matriculation

- Advanced Academic Information (MPH Course Content; Teaching and Learning Style)
- Arrival Guide – Logistics, Living Arrangements, Stipend Arrangements
- Face Book Site with Pre-Matriculation Information
  - Linkages/Matching with:
    - Fogarty Alumni
    - Linkages/Matching with MPH Alumni (Locally Based)
    - Linkages/Matching with MPH Peers
    - Linkages/Matching with Local Host Families (Locally Based)
- Pre-Matriculation Online Survey Completed by Fellows to Outline Career Goals and Interests (Used for Advising and Matching at Dartmouth)
- “Survival Guide 101” for Cultural and Day-to-Day Living Information
- YouTube Videos/Testimonials – to Show American Culture/Campus/Classroom/Housing

### Pre-orientation Week

- Pre-Orientation Guide for First Week – 10 Steps/Logistical Information and Key Contacts
- Tour Schedule Includes Introductions to: Key Offices and Fogarty Program Team, ID Team, and MPH Program Team
- Lunch with Matched MPH Alumni (Locally Based)
## Manuscript Appendix C – Recommended Action Plan at Key Milestones

**NOTE:** Consider developing Mobile App of Orientation and “Survival 101” Materials during Second Year of Revised Program

### Orientation

- **Formal Orientation, Fellows with Additional Time for:**
  - American Culture
  - Attribution Expectations
  - Library Use
  - Teaching Pedagogies
  - Technology – Learning Management System and other Technologies

- **Formal Cross-Cultural Orientation, Faculty**
- **Formal Cross-Cultural Orientation, Students**

### Matriculation

- **ESL Support – Writing Assistance or Writing Course**
- **Assign Academic Advisor**
- **Attributions Expectations and Training – Lunch and Learn Sessions; Online Interactive Training Session**
- **Coordinate Administrative Efforts with Fogarty Program**

### Curriculum

- **Expand Curriculum to:**
  - Include Online Offerings
  - Expand Focus to Include Non-US Information: Courses, Exercises, and Guest Speakers in Global Health
  - Expand Type of Courses to Include Skills-based Learning: Grants Writing, Grants Management, Manuscript Writing

### Engagement

- **Engender Class Participation Via:**
  - Orientation Sessions on Classroom Dynamics, Group Case Study
  - Faculty Training of International Students’ Learning Styles
  - Fellows Present

### Faculty Teacher Training/Exposure:

- Avoid/Limit Use of US Acronyms, US-based Idioms, Slang
- Cross-cultural Training/Orientation
- Fogarty Program Orientation at Faculty Meetings
- Provide List of International Students Before Beginning of Year and a Précis of Learning Issues/Teaching Strategies
- Provide Updates on Fellows’ Career Advancements
**Manuscript Appendix C – Recommended Action Plan at Key Milestones**

<table>
<thead>
<tr>
<th>Action Plan</th>
<th>Details</th>
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<tr>
<td><strong>Fellows Presenting</strong> – Opportunities to Present In-class, Dartmouth-Hitchcock Medical Center Other</td>
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<tr>
<td><strong>Linkages to:</strong></td>
<td>Dartmouth-Hitchcock Medical Center Specialists, Dartmouth Tuck MBA Program, Geisel School of Medicine at Dartmouth</td>
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<tr>
<td><strong>More Time on Exams</strong> (Addresses Comprehension Issues)</td>
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<td><strong>Re-Entry to Home Country Counseling</strong></td>
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<td><strong>Post-Graduation</strong></td>
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<td><strong>Career Advising:</strong></td>
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<td>✓ Employment</td>
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<td>✓ Mentoring (In-Country and From the US)</td>
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<td>✓ PhD Programs and Scholarship Opportunities</td>
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<td>✓ Research Interests/Efforts</td>
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<tr>
<td><strong>Enhance Development of Active Fogarty Alumni Association – Tanzania and Surrounding East African Countries</strong></td>
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<td><strong>Linkages to:</strong></td>
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<tr>
<td>✓ Fogarty Graduates in Tanzania</td>
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<tr>
<td>✓ Fogarty Graduates in East Africa</td>
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<td><strong>Provide Notifications of Fogarty Training Programs and Activities in Tanzania</strong></td>
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<td><strong>Research Opportunities:</strong></td>
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<tr>
<td>✓ Provide Collaborative Opportunities</td>
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<td>✓ Provide Notifications of Research Grants</td>
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<td><strong>Sponsor Alumni Network Workshops with Support from NIH</strong></td>
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<td><strong>Reporting to MPH Program of Fellows’ Career Activities; Dissemination to Faculty</strong></td>
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<td><strong>Fogarty Program/MPH Program Collaboration/Interaction</strong></td>
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<td><strong>Assign Specific Advisors</strong></td>
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<td><strong>Coordinate and Communicate Efforts/Activities (Share Materials, Schedules, and Updates)</strong></td>
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<td><strong>Establish Key Administrators and Specific Roles</strong></td>
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<td><strong>Establish Alumni Infrastructure and Link to East African Fogarty Alumni and Support Alumni Activities, with Support from NIH (Noted Above)</strong></td>
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<td><strong>Enhance Career Advising, Post-Graduation (Noted Above)</strong></td>
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<td><strong>Provide Overview of Fogarty Program and Profiles of Incoming Fellows to Faculty at Faculty Meetings</strong></td>
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<td><strong>Testimonials/Video Updates of Fogarty Alumni for Website and Publicity</strong></td>
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Manuscript Appendix C – Recommended Action Plan at Key Milestones

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<th>Other – Dartmouth Groups</th>
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<tr>
<td>• Enhance Relationships/Opportunities with the Geisel School of Medicine at Dartmouth</td>
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<td>• Enhance Relationships/Opportunities with Master of Health Care Delivery Science Program at Dartmouth</td>
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<tr>
<td>• Enhance Relationships with Tuck MBA Program at Dartmouth</td>
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<td>• Establish On-site, Informal Visits by Fellows to Dartmouth-Hitchcock Medical Center Departments (Based Upon Pre-Arrival Online Survey Outlining Interests/Expectations)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other – Program Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish an Advisory Board, Including: Volunteers from Fogarty Program at Sister Institutes; Fogarty Alumni; Representatives from Dartmouth entities: Geisel, Master of Health Care Delivery Science, MPH, and Tuck; and Tanzanian Stakeholders (i.e., MUHAS, Ministry of Health). Meet Semi-Annually</td>
</tr>
<tr>
<td>• Incoming Students Complete Online Survey Outlining Interests/Expectations – Used for Advising and Evaluation (Share Results with MPH Academic Advisor). Reviewed at 3 and 6 months and at Graduation</td>
</tr>
<tr>
<td>• Participate in Fogarty-Fogarty Evaluation by Sister Institute</td>
</tr>
<tr>
<td>• Survey Fogarty Alumni – Annually, Post-graduation</td>
</tr>
</tbody>
</table>
CHAPTER 6: COMPREHENSIVE BIBLIOGRAPHY

Footnote:


Bibliography:


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Appendix Section for Dissertation
Appendix A – US Federal Government Organizational Chart, Federal Departments and Agencies

Appendix B – US Department of Health and Human Services Organizational Chart

Source: US Department of Health and Human Services, 2014
Appendix C – National Institutes of Health Organizational Chart

Source: National Institutes of Health, n.d.
Appendix D – Fogarty International Center Overview

Overview

Mission Statement

The Fogarty International Center is dedicated to advancing the mission of the National Institutes of Health by supporting and facilitating global health research conducted by U.S. and international investigators, building partnerships between health research institutions in the U.S. and abroad, and training the next generation of scientists to address global health needs.

Vision

The Fogarty International Center's vision is a world in which the frontiers of health research extend across the globe and advances in science are implemented to reduce the burden of disease, promote health, and extend longevity for all people.

History

On July 1, 1968 President Lyndon Johnson issued an Executive Order establishing the John E. Fogarty International Center for Advanced Study in the Health Sciences at the National Institutes of Health. In the 40 years since, support for Fogarty's international research and research training programs has grown from its first year budget of $500,000 to its current level of $69 million. The Center's research, training, and capacity-building enterprise extends to over 100 countries and involves some 5,000 scientists in the U.S. and abroad.

The AIDS International Training and Research Program (AITRP) began in 1988 as one of the first of a new generation of research training programs sponsored by Fogarty. This program provides training for scientists at institutions in countries defined by The World Bank as low-income, lower-middle income or upper-middle income.

The primary goal of this program is to build multi-disciplinary biomedical, behavioral and social science research capacity for the prevention, care and treatment of HIV/AIDS and HIV-related conditions for those adults and children affected by HIV/AIDS in the collaborating country. AITRP makes provisions for training in the United States, in other countries, and in the home countries.

Appendix E – Fogarty AIDS International Training and Research Program (AITRP) Major Collaborating Countries and Programs

The following countries have AITRP programs for each of the listed institutions.

<table>
<thead>
<tr>
<th>Country</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>Mount Sinai School of Medicine</td>
</tr>
<tr>
<td>Botswana</td>
<td>Baylor College of Medicine</td>
</tr>
<tr>
<td></td>
<td>Harvard University</td>
</tr>
<tr>
<td>Brazil</td>
<td>Johns Hopkins University</td>
</tr>
<tr>
<td></td>
<td>University of Pittsburgh</td>
</tr>
<tr>
<td>Burma (Myanmar)</td>
<td>University of California, Los Angeles</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Brown University/Tufts University (joint project)</td>
</tr>
<tr>
<td></td>
<td>University of California, Los Angeles</td>
</tr>
<tr>
<td>Cameroon</td>
<td>New York University</td>
</tr>
<tr>
<td></td>
<td>University of North Carolina, Chapel Hill</td>
</tr>
<tr>
<td>Chile</td>
<td>University of Illinois at Chicago</td>
</tr>
<tr>
<td>China</td>
<td>Harvard University</td>
</tr>
<tr>
<td></td>
<td>Johns Hopkins University</td>
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<tr>
<td></td>
<td>New York University</td>
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<td>University of California, Los Angeles</td>
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<td></td>
<td>University of Illinois at Chicago</td>
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<tr>
<td></td>
<td>University of Nebraska, Lincoln</td>
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<td>University of North Carolina, Chapel Hill</td>
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<td></td>
<td>Vanderbilt University</td>
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<td>Ethiopia</td>
<td>Johns Hopkins University</td>
</tr>
<tr>
<td>Georgia</td>
<td>Emory University</td>
</tr>
<tr>
<td></td>
<td>State University of New York Downstate Medical Center</td>
</tr>
<tr>
<td>Ghana</td>
<td>Brown University/Tufts University</td>
</tr>
<tr>
<td>Haiti</td>
<td>Weill Cornell Medical College</td>
</tr>
</tbody>
</table>
## Appendix E – Fogarty AIDS International Training and Research Program (AITRP) Major Collaborating Countries and Programs

<table>
<thead>
<tr>
<th>Country</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Albert Einstein College of Medicine, Brown University/Tufts University, Johns Hopkins University, New York University, University of California, Berkeley, University of California, Los Angeles, University of Pittsburgh, University of South Florida, University of Washington, Vanderbilt University</td>
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<tr>
<td>Indonesia</td>
<td>University of California, Los Angeles, University of Illinois at Chicago</td>
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<tr>
<td>Kazakhstan</td>
<td>State University of New York Downstate Medical Center</td>
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<tr>
<td>Kenya</td>
<td>Brown University/Tufts University (joint project), University of California, Berkeley, University of Washington</td>
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<tr>
<td>Lesotho</td>
<td>Baylor College of Medicine, Columbia University</td>
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<tr>
<td>Malawi</td>
<td>Baylor College of Medicine, Johns Hopkins University, University of Illinois at Chicago, University of North Carolina, Chapel Hill</td>
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<tr>
<td>Mali</td>
<td>Northwestern University</td>
</tr>
<tr>
<td>Mexico</td>
<td>Emory University, University of California, San Diego</td>
</tr>
<tr>
<td>Mozambique</td>
<td>University of Pittsburgh, University of Washington, Vanderbilt University</td>
</tr>
<tr>
<td>Namibia</td>
<td>Columbia University</td>
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</tbody>
</table>
# Appendix E – Fogarty AIDS International Training and Research Program (AITRP) Major Collaborating Countries and Programs

<table>
<thead>
<tr>
<th>Country</th>
<th>Institutions</th>
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</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>Harvard University, Northwestern University, University of Maryland, Baltimore</td>
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<tr>
<td>Pakistan</td>
<td>Vanderbilt University</td>
</tr>
<tr>
<td>Peru</td>
<td>IMENSA (Planning grant), University of California, Berkeley, University of Washington</td>
</tr>
<tr>
<td>Philippines</td>
<td>Brown University/Tufts University</td>
</tr>
<tr>
<td>Romania</td>
<td>Baylor College of Medicine</td>
</tr>
<tr>
<td>Russia</td>
<td>State University of New York Downstate Medical Center, Yale University</td>
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<tr>
<td>Rwanda</td>
<td>Albert Einstein College of Medicine, Emory University</td>
</tr>
<tr>
<td>Senegal</td>
<td>Harvard University</td>
</tr>
<tr>
<td>South Africa</td>
<td>Columbia University, Johns Hopkins University</td>
</tr>
<tr>
<td>Swaziland</td>
<td>Baylor College of Medicine, Columbia University</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Dartmouth Medical School/Boston University (joint project), Duke University, Harvard University</td>
</tr>
<tr>
<td>Thailand</td>
<td>Harvard University, Johns Hopkins University, University of California, Los Angeles</td>
</tr>
<tr>
<td>Uganda</td>
<td>Baylor College of Medicine, Case Western Reserve University, Johns Hopkins University, MU-JHU (Planning grant), University of California, Berkeley</td>
</tr>
</tbody>
</table>
### Appendix E – Fogarty AIDS International Training and Research Program (AITRP) Major Collaborating Countries and Programs

<table>
<thead>
<tr>
<th>Country</th>
<th>University</th>
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<tbody>
<tr>
<td>Ukraine</td>
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<td>Johns Hopkins University</td>
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<td>University of Texas, Houston</td>
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<td>Zambia</td>
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<tr>
<td>Zimbabwe</td>
<td>State University of New York, Buffalo</td>
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<td></td>
<td>University of California, Berkeley</td>
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</tbody>
</table>

Sources: John E. Fogarty International Center for Advanced Study in the Health Sciences Home Page, n.d., and Research Program (AITRP) Awards Home Page, n.d.
Appendix F– Dartmouth Fogarty AIDS International Training and Research Program (AITRP)

Dartmouth/Boston University (Funded since 2003)

Goals and objectives

The overall objective of the Dartmouth/Boston University AITRP is to establish critical biomedical and behavioral science expertise in HIV and tuberculosis among scientists in Tanzania at the Muhimbili University of Health and Allied Sciences (MUHAS).

The specific components of the program will strengthen basic research capability and will also facilitate the development of new or expanded research efforts in four priority areas and long term collaborations between MUHAS, Dartmouth Medical School, and Boston University School of Public Health.

It is recognized that these priorities may evolve over the 5 years of the program based on new research findings and new programmatic developments. Thus, they will be reviewed and revised annually by the Training Advisory Group and the Dartmouth/Boston University Fogarty Executive Committee. The ultimate goal of the resultant training and the associated research is reduction in morbidity and mortality due to HIV and tuberculosis.

- **Vaccine research.** Expertise will be developed in vaccine immunology, vaccine trials, vaccine safety, ethics, regulatory issues, cost-effectiveness and public policy. This expertise will be applied to multidisciplinary research studies of vaccines for the prevention of HIV and vaccines for the prevention of tuberculosis.

- **Mucosal immunity.** Expertise will be developed in innate and adaptive immune responses at mucosal sites, mucosal immune responses to HIV and tuberculosis, mucosal vaccine delivery, mucosal responses to vaccines against HIV and tuberculosis, and development of vaginal microbicides.

- **Behavioral change.** Expertise will be developed in behavioral sciences, behavioral interventions and their effects on the epidemiology of HIV and tuberculosis.

- **Treatment research.** Expertise will be developed in statistics, clinical trials, HAART therapy, drug side effects, laboratory monitoring, concurrent treatment of HIV and tuberculosis, and diagnosis and treatment of disseminated tuberculosis.

The Dartmouth/Boston University AITRP is designed to provide diverse degree and non-degree training to Tanzanian scientists with the overall goal of strengthening research capacity in HIV and tuberculosis at the Muhimbili University College of Health Sciences (MUCHS) in Dar es Salaam. The AITRP builds on an existing and successful collaboration which has launched the first efficacy trial for a vaccine against tuberculosis among persons with HIV infection. The Program is based on a sequenced plan of training
and subsequent research mentored by recognized experts in international public health, health outcomes research, behavioral science, immunology, HIV, tuberculosis and vaccine research. The Program will enhance research capacity in all basic areas (e.g. epidemiology, clinical trials) and will also provide innovative training in new and specialized areas (e.g., mucosal immunity, evaluative clinical sciences). Guidance and oversight is provided by a Training Advisory Group with outstanding credentials in international public health.

Source: Dartmouth College Program Report, 2013

Program Accomplishments: Fogarty graduates from our program continue to achieve success in HIV- or TB-related research and leadership roles in Tanzania or have moved on to more advanced academic degree programs (e.g., Patricia Munseri MD MPH [Dartmouth] now in Karolinska PhD program) to prepare them for research-based faculty careers at MUHAS.

Dartmouth sent a high level delegation to Dar in November 2011 lead by the Executive Vice President/CFO to engage in discussions with MUHAS about continuing to the academic, research and training collaborations between the two institutions. The on-going success of our program in Tanzania is directly related to the excellent support we receive from the MUHAS administration, specifically in the Office of the Vice-Chancellor, deans of the schools within the University, and academic leaders in the departments.

Our trainees work in a broad array of research, academic and health management settings in Tanzania including the CDC office in Tanzania, the Ministry of Health, various NGOs and other regional and national organizations. Because of this collaboration and the reputation of our accomplishments, we have been successful in securing funding for a Fogarty Frameworks grant and a Fogarty Collaborative IRB Training Program grant (ARRA funding), and a 5-year Fogarty Bioethics Training grant awarded in June 2011.

Future Plans: We will continue to strengthen ties with the MUHAS School of Public Health and Social Sciences with the goal of supporting their faculty and providing Fogarty support for more Tanzanian researchers to obtain MPH degrees at MUHAS as well as at Dartmouth and BU. We will strengthen our ties with the National Program on Tuberculosis and Leprosy and the National Institute for Medical Research (NIMRI). Additional MPH trainees will be enrolled at Dartmouth and BUSPH. Monthly Fogarty teleconferences will be held between basic science Fogarty PhD graduates at MUHAS and basic science faculty at Dartmouth. The DBU website will be updated regularly; we will also investigate the possibility of adding a Facebook page for our program and are planning another DBU Alumni event in Dar during the coming year. The monthly Fogarty Fellows meetings at Dartmouth will continue. Importantly, the Dartmouth-BU team will submit a Fogarty renewal application in July 2012 focused on development of a comprehensive HIV-associated tuberculosis research program at MUHAS with involvement of the Ministry of Health.

Instruction in Responsible Conduct of Research: An RCR workshop was held at the MUHAS School of Public Health and Social Sciences in March 2012 and 26 faculty attended; the 90 minute session modeled an active learning approach. Power Point slides were used to introduce the session, followed by a case study using Rebecca Skloot’s best-selling book *The Immortal Life of Henrietta Lacks* and small group discussions/role playing. Plans include repeating this training with other faculty at MUHAS.

Source: Dartmouth College Program Report, 2013
## Appendix H – Tanzania’s Progress to Achieving the Millennium Development Goals

<table>
<thead>
<tr>
<th>UN Millennium Development Goal</th>
<th>TZ Status</th>
<th>Tanzanian Government’s Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 1: Eradicate extreme poverty and hunger.</strong></td>
<td>Not achievable</td>
<td>Beyond income-based measures of poverty, food poverty is an issue, and that the gap beyond the rich and poor is widening. There is a sense that while the national economy is growing, the individual economy is contracting.</td>
</tr>
<tr>
<td><strong>Goal 2: Achieve universal primary education.</strong></td>
<td>Very achievable</td>
<td>Despite impressive enrolment rates (95% enrolled in primary school) completion rates are still low, with only 60% of pupils completing primary school education. Many pupils still do not know how to read and write.</td>
</tr>
<tr>
<td><strong>Goal 3: Promote gender equality and empower women.</strong></td>
<td>Achievable</td>
<td>Tanzania has achieved gender parity in primary education and has also increased the representation of women in parliament through preferential seats.</td>
</tr>
<tr>
<td><strong>Goal 4: Reduce child mortality.</strong></td>
<td>Achievable</td>
<td>The under fives mortality rate has fallen from 112 deaths per 1,000 live births in 2005 to 91 per 1,000 in 2008 and 81 per 1,000 in 2010, and the infant mortality rate has fallen from 68 per 1,000 live births in 2005 to 58 per 1,000 in 2008 and 51 per 1,000 in 2010.</td>
</tr>
<tr>
<td><strong>Goal 5: Improve maternal health.</strong></td>
<td>Not achievable</td>
<td>Only 43% of pregnant women receive the recommended minimum of four antenatal visits. About half of births are attended by qualified health professionals, while only 24% of the necessary contraceptives are available.</td>
</tr>
<tr>
<td><strong>Goal 6: Combat HIV/AIDS, malaria and other diseases.</strong></td>
<td>Achievable</td>
<td>The HIV/AIDS prevalence rate has stayed fairly static, at 6% in 2010, compared to the baseline of 6.3% in 2005, suggesting insufficient progress towards the target. The tuberculosis treatment success rate has, however, improved consistently, from 81.3% in 2003 to 88% in 2008, exceeding the target of 85%.</td>
</tr>
<tr>
<td><strong>Goal 7: Ensure environmental sustainability.</strong></td>
<td>Achievable</td>
<td>There has been improvement in urban access to drinking water from 68% to 79.9% of the population between 1990 and 2008. However, there is a challenge in providing safe rural water supplies, which only increased from 46% in 1990 to 57.1% in 2008.</td>
</tr>
<tr>
<td><strong>Goal 8: Develop a global partnership for development.</strong></td>
<td>Achievable</td>
<td>Tanzania is under-performing on debt and aid despite enjoying good relations with donors, the Bretton Woods Institutions and other multilateral...</td>
</tr>
</tbody>
</table>
Appendix H – Tanzania’s Progress to Achieving the Millennium Development Goals

<table>
<thead>
<tr>
<th>UN Millennium Development Goal</th>
<th>TZ Status</th>
<th>Tanzanian Government’s Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>organisations. External debt service as a percentage of exports shows a decline from 9.4% in 2001 to 1.4% in 2010, while the ratio of external debt to GDP between 2006 and 2011 has stood at an average of 33.3%. Tanzania is doing well on the communications targets of Goal 8, with 21 million mobile phone subscribers, a 47% penetration rate, and 4.8 million internet users.</td>
</tr>
</tbody>
</table>

Appendix I – Maps of Muhimbili University of Health and Allied Sciences (MUHAS) and Muhimbili National Hospital, Dar es Salaam, Tanzania

Location of the Institutions in Dar es Salaam

Distance Between Adjacent Campuses

Source: Google Maps, 2015
Appendix J – Conceptual Model of Theoretical Framework for Research Project

(Area of Research Denoted by Rectangle)

**Individual Level Variables**

**Moderating Factors Prior to Acculturation:**
- Age, gender, education
- Status, migration, motivation, expectations
- Cultural distance (language, religion, etc.)
- Personality (locus of control, flexibility)

**Moderating Factors during Acculturation:**
- Phase (length of time)
- Acculturation strategies: attitudes & behavior
- Coping: strategies & resources
- Social support
- Societal attitudes: prejudices & discrimination

**Group Level**

- **Society of Origin**
  - Political, economic, demographic factors

- **Group Acculturation**
  - Physical, biological, economic, social, cultural factors

- **Society of Settlement**
  - Attitudes, social support, larger society, ethic society

**Life Events** → **Stressors** → **Coping** → **Stress** → **Adapt**

**Acculturation** → **Appraisal of Experience** → **Strategies** → **Effects (now)** → **Outcomes (after)**

Source: Berry, 1997, pp.15.
Appendix K – Qualitative Interview Topic Guides

MPH Administrators, Faculty

Questions:
1. What, in your opinion, are the academic similarities and differences in the educational systems in the countries where the Fogarty Fellows are trained (Tanzania) and the Dartmouth training?
2. What are the academic, social, and cultural experiences encountered by the Fogarty Fellows during the adjustment and transition process? The academic year?
3. What, if any, are the causes of cultural shock and what strategies were used by the Fogarty Fellows for managing cultural shock and adaption?
4. How can Dartmouth provide more support? What facets might be improved, for example: pre-arrival orientation, readings, materials, interaction; orientation; advising; mentoring; teaching methods; academic support; social or psychological support?
5. What ways can Dartmouth improve the Fogarty Program?
6. How do you see the Fogarty Program developing in the future?
7. Is there anything else I should have asked about or is there anything we have not covered that you would like to comment on?

Fogarty Program Administrators

Questions:
1. What, in your opinion, are the academic similarities and differences in the educational systems in the countries where the Fogarty Fellows are trained (Tanzania) and the Dartmouth training?
2. What preliminary information is provided to the candidates during the application process? To the students prior to arrival? What might be lacking?
3. How is pre-matriculation handled? What are the arrival logistics (e.g., immunizations, immigration/visas, pre-readings, orientation packages, flights and local transportation, legal issues, banking information, orientation upon arrival – grocery shopping, housing, introduction to key stakeholders)?
4. What, if any, are the causes of cultural shock and what strategies were used by the Fogarty Fellows for managing cultural shock and adaption?
5. How can Dartmouth provide more support? What facets might be improved, for example: pre-arrival orientation, readings, materials, interaction; orientation; advising; mentoring; teaching methods; academic support; social or psychological support?
6. What ways can Dartmouth improve the Fogarty Program?
7. How do you see the Fogarty Program developing in the future?
8. Is there anything else I should have asked about or is there anything we have not covered that you would like to comment on?
Appendix K Cont’d – Qualitative Interview Topic Guides

Former Fogarty Fellows

Questions:

1. What, in your opinion, are the academic similarities and differences in the educational systems in the countries where the Fogarty Fellows are trained (Tanzania) and the Dartmouth training? What teaching methods did you find unusual or challenging?

2. What preliminary information was provided to you during the application process? Was anything particularly helpful? Looking back, do you identify anything as lacking or could have been better?

3. How was pre-matriculation handled? What was your experience with arrival logistics (e.g., immunizations, immigration/visas, pre-readings, orientation packages, flights and local transportation, legal issues, banking information, orientation upon arrival – grocery shopping, housing, introduction to key stakeholders)? What helped? What might be improved?

4. What are the academic experiences that you encountered during the adjustment and transition process?

5. What are the social experiences that you encountered during the adjustment and transition process?

6. What are the cultural experiences that you encountered during the adjustment and transition process?

7. It is not uncommon to experience a kind of shock when you are in a new country. Would you say that you experienced cultural shock? Can you describe the strategies you used to manage cultural shock and adaptation?

8. Are there ways Dartmouth might have been more helpful to you? What facets might be improved, for example: pre-arrival orientation, readings, materials, interaction; orientation; advising; mentoring; teaching methods; academic support; social or psychological support?

9. Are there specific time periods during the academic year which seem like ideal for Dartmouth to provide services? Such as pre-arrival, orientation, mid-year, at the end of the year?

10. As you look back, what ways can Dartmouth improve the Fogarty Program?

11. How do you see the Fogarty Program developing in the future?

12. Is there anything else I should have asked about or is there anything we have not covered that you would like to comment on?

Note: A literature search was conducted to understand more fully issues facing international students and to guide the development of the analytical approach. Research studies, research questions, topic guides, and surveys were reviewed to inform the study design (Abdrahim, 2010; Daley, 2004; Guidy Lacina, 2002; Heggins & Jackson, 2003; Hellstên & Prescott, 2004; Lee, 2010; Tseng & Newton, 2002; Väfors Fritz, Chin & DeMarinas, 2008; Winkelman, 1994; and Zhou, Jinal-Snape, Topping & Todman, 2008).
## Appendix L – Initial Coding Schema

### Academic Support
**Adjustment**
- Adjustment - Case-based learning
- Adjustment - Classroom
- Adjustment - Computers
- Adjustment - Critical Inquiry
- Adjustment - Cultural
- Adjustment - Decorum
- Adjustment - Difficulties with Language
- Adjustment - Foods Available
- Adjustment - Friendship families
- Adjustment - Group work
- Adjustment - In-class Decorum
- Adjustment - In-class participation
- Adjustment - Pace of classroom
- Adjustment - Reading load
- Adjustment - Social life
- Adjustment - Technology
- Adjustment - Weather and Darkness

### Advising
- Advising - Academic and Non-Academic
- Advising - ID Team
- Advising - Monthly

### Application Process
- Application - Clarify Link between Fogarty and TDI Application Process
- Application - Comprehensive Information
- Application - Good to Meet in TZ
- Application - Information

### Assessments

### Challenges
- Challenges - Banking is Lengthy Process
- Challenges - Classroom Dynamics
- Challenges - Group Projects
- Challenges - Limited Resources in TZ
- Challenges - Speaking in Class
- Challenges - The Upper Valley (Local Area) is Very White

### Differences
- Differences - Amount of Readings
- Differences - Approachability
- Differences - British versus American Teaching Styles
### Appendix L Cont’d – Initial Coding Schema

<table>
<thead>
<tr>
<th>Differences</th>
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<tbody>
<tr>
<td>- Classroom</td>
</tr>
<tr>
<td>- Critical Inquiry</td>
</tr>
<tr>
<td>- Cultural</td>
</tr>
<tr>
<td>- Dartmouth Varies Teaching Pedagogies</td>
</tr>
<tr>
<td>- Dartmouth Uses More Audio Visual Equipment</td>
</tr>
<tr>
<td>- Distance between Faculty and Students</td>
</tr>
<tr>
<td>- Dress Code</td>
</tr>
<tr>
<td>- Environment Formal (TZ) versus Informal (US)</td>
</tr>
<tr>
<td>- Etiquette</td>
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<tr>
<td>- Faculty-centered versus Student-centered</td>
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<tr>
<td>- Focus of Study - US Health</td>
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<tr>
<td>- Group Assessments (US) versus Individual (TZ)</td>
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<tr>
<td>- Inductive (TZ) versus Deductive (US)</td>
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<tr>
<td>- Large Class Size (TZ) versus Small Class Size (US)</td>
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<tr>
<td>- Learning and Teaching</td>
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<tr>
<td>- Multiple Voices for Teaching in US (Lecture, Guests, TAs)</td>
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<tr>
<td>- Number of Assessments</td>
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<tr>
<td>- Passive (TZ) versus Active (US) Learning</td>
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**Faculty Issues and Improvements**

- Faculty Awareness of Issues
- Faculty Issues with Teaching Internationals
- Faculty Knowledge of Internationals
- Faculty Perceptions
- Faculty Training

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**Improvements - Pre-Orientation Tours**

- Formalize Tours with Fogarty Program, TDI Office, DHMC, and Local Tours
Appendix L Cont’d – Initial Coding Schema

Improvements - Receive One Packet of Information with Schedule of Meetings, Key Contacts

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<td>Improvements - Linkages to DHMC Providers-peers</td>
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<td>Improvements - More Electives and on Non-US Focus</td>
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| Improvements - Online Course Would Free Up Time for Travel |
| Improvements - Provide More Opportunity to Develop Knowledge of How to Transfer Learning to Local Level |
| Improvements - Tape Lectures |
| Improvements - Writing Assistance Services or Course |

#### Improvements - Post-Graduation

| Improvements - Alumni Network Research Established/Sponsored |
| Improvements - Alumni Network Sponsor Workshops |
| Improvements - Career Advising |
| Improvements - Career Counseling for PhD Programs |
| Improvements - East Africa Professional Network Developed for Collaboration |
| Improvements - Fogarty Alumni Work on Fogarty Grant |
| Improvements - Information about Additional Fogarty Training Opportunities |
| Improvements - Matching with In-Country Mentors |
| Improvements - Meet other Fogarty Programs within Tanzania |
| Improvements - Mentorship Essential - Match with US and TZ |
| Improvements - Research Opportunities and Support |
| Improvements - PhD - GRE Exam Requirement - Challenging for ESL Students |
| Improvements - Postgraduate Training Support |

#### Institutional Support (Federal)

**Matching**
- Matching - Advising
- Matching - DHMC Peers
- Matching - Fogarty Alumni
- Matching - Local Host Families
- Matching - Mentors in TZ
- Matching - MPH Peers
- Matching - TDI MPH Alumni (Locally Based)
- Mentorship - Fogarty Program

**Similarities**
- Similarities - Attendance Required
- Similarities - Discipline to Complete Work
- Similarities - Expectations to Excel
- Similarities - Goal Driven
- Similarities - Professionalism and Respect
- Similarities - Professor Leads Session
- Similarities - Required to Work Under Pressure
- Similarities - Workload Heavy

**Time Period**
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<td>Time Period - Integration Back to Home Country</td>
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**What Worked**

- What Worked - Administrative Support - Fogarty Program Team
- What Worked - Administrative Support - MPH Team
- What Worked - Advising
- What Worked - Apply Learning with ID Team
- What Worked - Arriving Before Orientation to Adjust
- What Worked - Being Met on Arrival
- What Worked - Capstone - Opportunity to Work on Practical TZ-based Project
- What Worked - Care Package on Arrival with Food and Basics - Welcome to UV with Key Contact Information
- What Worked - Connecting with Dar-Dar Team
- What Worked - Connecting with Fogarty Alumni
- What Worked - Connecting with Internationals
- What Worked - Cultural Navigators
- What Worked - Dartmouth's Continued Presence in TZ and Understanding of TZ
- What Worked - Detailed Syllabi and Key Points
- What Worked - ESL and Writing Services
- What Worked - Fogarty ID Team Availability
- What Worked - Fogarty Program Team’s Support
- What Worked - Friendship Families (Host Families)
- What Worked - Having 2 Fogarty Fellows Enrolled Simultaneously
- What Worked - Health Care Financing Focus in Courses (New and Advance of Being Widely Used in TZ)
- What Worked - Home Visits (Local)
- What Worked - Housing
- What Worked - Linkages
- What Worked - MPH Administration
- What Worked - MPH Program - The Education, Training, Tools, and Skills
- What Worked - Matriculation
- What Worked - Mentoring Very Positive
- What Worked - Monthly Meetings with ID Team
- What Worked - My Time at TDI: Was Life Changing
Appendix L Cont’d – Initial Coding Schema

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## Appendix N – Orientation Videos, Exemplars, and Content

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<td>• Campus: MPH Campus and Classrooms</td>
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<td>• Housing</td>
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<td>• Tips for Success from Fogarty Alumni</td>
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<td>• Strategies for Studying and Preparing</td>
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<td>• Classroom Dynamics, Active Learning</td>
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<td>• Informality of Atmosphere</td>
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<td>• Attire: Informal for Classroom; Business Casual for Presentations</td>
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<th>American Culture, Living in the US, Making American Friends:</th>
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<td>• Interacting</td>
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<td>• Socializing</td>
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<td>• Use of Technology for Social Engagement</td>
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Sources: Rusty’s College Tour, n.d.; University of Southern California, 2014, a-c
Appendix O – Pre-departure Workshop

Purpose: This 3-hour evening dinner meeting and workshop will provide an opportunity for Fogarty Alumni to gather and greet the incoming Fogarty Fellows to assist in their orientation to:

a) the MPH Program;

b) the content of the MPH Program;

c) the US teaching and learning styles; and

d) provide guidance, lessons learned.

Format: Dinner hosted by Fogarty Alumni with US-based Fogarty and MPH faculty joining, via online links. Active learning methodology will be used for a mini-case discussion, to model a typical MPH learning session. The mini-case session will be facilitated by the Fogarty Alumni.

Agenda:

- Welcome and Introductions – from Tanzania and US
- Overview of MPH Program
- Mini-case on US Health Care System
- Case Discussion
- Lessons Learned/Tips for Success from Alumni
- Open Discussion
- Concluding Remarks

Pre-Reading:

NOTE: Should Fogarty Program or MPH team be in Tanzania, it is recommended that they join in-person; if not, virtual participation is recommended.

Source: Purvis, L., based on results of interviews conducted with participants for this dissertation research project.
Appendix P – Dartmouth Guide: Information You Need to Settle Into Dartmouth College

Table of Contents:

- Welcome Letter
- Key Offices and Contacts
  - Fogarty Program Office
  - Dartmouth MPH Office
  - International Office
- Pre-Departure Planning
  - Required Documentation
  - American Embassy Information
  - What to Pack
  - Finances – Suggested Amount of Money to Bring for Initial Period and Budgeting While at Dartmouth
  - Check List
- Travel to Dartmouth and Arrival in Hanover
  - Flight Information
  - Airport Information (Amsterdam) – ATM Machines, Food and Other Stores/Vendors
  - Airport Information (Boston Logan) – Customs, ATM Machines, Food and Other Stores/Vendors
  - Dartmouth Coach – Location at Boston Logan, Ticketing, and Drop Off at Hanover
  - Arriving at Hanover – Welcome Committee and Welcome Package/Escort to Your Apartment
  - Housing – Options and Locations
- Getting to Know Dartmouth
  - American and Dartmouth Traditions
  - Hanover Neighborhoods
Appendix P Cont’d – Dartmouth Guide: Information You Need to Settle Into Dartmouth College

- Maps:
  - Hanover (Main Campus, Housing Location)
  - Lebanon (TDI Location and DHMC Complex)

- Religious Organizations and Locations

- Academic Information
  - Assessments – What to Expect
  - Attribution of Sources/Plagiarism
    - How it is Defined in the US
    - How to Attribute Sources
    - Examples of Properly and Improperly Cited Materials
    - Dartmouth Resources for Mastering Attribution Practices
    - Online Resources for Learning More About How to Properly Attribute Sources

- Classroom Environment
  - Active Engagement
  - Cases
  - Group Work
  - Learning Expectation and Styles
  - Teaching Styles
  - Studying

- Overview of MPH Program and Courses
  - Course Descriptions
  - Course Teaching Teams
  - Year-long Schedule

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Appendix P Cont’d – Dartmouth Guide: Information You Need to Settle Into Dartmouth College

- Library Resources, Location, and Hours – Accessing and Understanding the Library System
- Strategies for Learning and Adapting
- Student Support
  - English As a Second Language Support
  - Writing Support
  - Tutors for Individual Courses
- Textbook and Computers
  - Fogarty Program Policy for Purchasing Textbooks
  - Fogarty Program Policy for Purchasing Computers
- Tips for Success In and Out of the Classroom
- Use of Technology In and Out of the Classroom

- Documentation
  - Health Insurance
  - Passport Verification
  - Social Security (US Work ID Number)
  - Taxes
  - Vaccinations
  - Visa

- Living in the US
  - American Society
    - Gender issues
    - Open society
    - Social interactions
    - Value system
  - Consumerism
  - Culture Shock
Appendix P Cont’d – Dartmouth Guide: Information You Need to Settle Into Dartmouth College

- Decorum/Etiquette – In and Out of Class
- Dress Code
- Healthcare Services
- Housing
- Metric System
- Socializing
- Food & Diet
- Technology/Automation: Copy Machines, Doors, Laundry Services, Ordering Online, Vending Machines
- Tips for Success
- Weather
- Year-long Calendar with National Holidays

- Local Logistics
  - Banking
  - Budgeting/Typical Expenditures
  - Entertainment and Local Culture
  - Health Insurance
  - Healthcare Services
  - Housing Options
  - News Sources
  - Postal Services
  - Shopping
  - Sports and Outdoor Recreation
  - Stipend Amount, Schedule, and Mechanism for Receiving Payment
  - Taking Care of Yourself: Health Coverages
  - Taking Care of Yourself: Staying Safe
  - Telephone Services
Appendix P Cont’d – Dartmouth Guide: Information You Need to Settle Into Dartmouth College

- Transportation

- Technology
  - ATM Machines
  - Automated Charging/Payment/Technology for Accessing Buildings, Copy Machines, Laundry Machines, Vending Machines
  - Email System
  - Learning Management System for Course Work, Group Projects, Online Quizzes and Exams
  - Online Banking
  - Online Ordering

- Travel in the US
  - Dartmouth College Travel Agency
  - Modes of Transportation
    - Bus
    - Car
    - Plane
    - Train
  - Online Bookings

- Travel Outside of the US
- Advice from Previous Fogarty Fellows
- Frequently Asked Questions

Source: Purvis, L., based on results of interviews conducted with participants for this dissertation research project.
Appendix Q – Potential Survival Guides

Hello! USA
Everyday Living for International Residents and Visitors
By Judy Pense
Mel's America, Inc.

Collins
International Students’ Survival Guide

U.S. Classroom Culture
Introduction to American Life

Fundlayed to part of the Bureau of Educational & Cultural Affairs of the U.S. Department of State
# Appendix R – First Week on Campus Guide

Exemplar from the University of Southern California

## Office of International Services

**First Week on Campus Guide**

### Passport Verification (PPV)
- For STU 50 and STU 60 holds, verification of immigration documents by Office of Int'l Services (OIS)
- Bring photocopies of all immigration documents to PPV sessions (see copy locations on page 2)
- Register for PPV sessions at: [http://sait.usc.edu/ois/new-stu/ppv.aspx](http://sait.usc.edu/ois/new-stu/ppv.aspx)

### USC Student ID Card
- PPV must be completed before USC card can be obtained
- USCard Services located in Parking Structure X (PSX) (G5 on USC map; 213-740-8709)
- [www.usc.edu/usccard](http://www.usc.edu/usccard)

### Class Registration
- For graduate students, PPV must be completed before class registration
- Department advisement typically must also occur to give permission to register (D-Clearance)
- Register online at myUSC
- For ?'s, [www.usc.edu/registration](http://www.usc.edu/registration) or Registration Office (REG) (G7 on USC map; 213-740-8500)

### International Student Orientation (ISO)
- Orientation Programs oversees ISO for both graduate and undergraduate students
- Office is located in Student Union (STU B7) (E5 on USC map; 213-740-7767)
- [www.usc.edu/orientation](http://www.usc.edu/orientation)

### Immunization
- Provide proof of immunization or get immunized
- Engemann Student Health Center (Located near Parking Structure B, B1 on USC map; 213-740-9555)
- [https://engemannsc.usc.edu/information-for-international-students/](https://engemannsc.usc.edu/information-for-international-students/)

### Degree Verification
- ADM 40 hold for USC Department of Verifications
- For info on how to submit degree verification: [www.usc.edu/degreeprogress](http://www.usc.edu/degreeprogress)
- For additional ?'s, DP office is located in Hubbard Hall (JHH 106) (F6 on USC map; 213-740-7070)

### International Student English Exam (ISE)
- ALI01 hold for American Language Institute (ALI)
- ALI is in the Jefferson Building (JEF 206) (D2 on the USC map; 213-740-0079)
- Register online to take the ISE exam [http://dorris.sc.usc.edu/ali](http://dorris.sc.usc.edu/ali)

### Tuition and Fees
- Pay tuition and fees for classes through Student Financial Services: Cashier’s Office
- [http://afs.usc.edu/depts/sfs](http://afs.usc.edu/depts/sfs)
- 213-740-7471
Appendix R Cont’d – First Week on Campus Guide

Exemplar from the University of Southern California

Source: University of Southern California, n.d.
Appendix S – Mobile App for First Week

Exemplar from New York University

Source: New York University, 2014
Appendix T – Faculty Orientation: Teaching International Students

Content Exemplar from the University of Michigan

University of Michigan: Teaching International Students: Pedagogical Issues and Strategies

One challenge that instructors face is how to design a course so the material engages students’ prior knowledge and their skills, whether the intent is to build on that knowledge, to interrogate it, or to situate new ways of thinking. When students bring diverse backgrounds, course design is particularly challenging. On the other hand, attending to student differences provides valuable clarity for both students and instructors; and drawing on student differences multiplies the teaching and learning exchange in a class.

Bridging differences in background knowledge and classroom practice

Issues

- Instructors cannot assume background knowledge of American history and cultural references
- Skills learned in universities abroad may not match those expected by instructors used to teaching U.S. students. Some skills may be far advanced; others may be less advanced
- Classroom participation and engagement strategies will be unfamiliar to some students

Strategies

- Regularly identify the skills you want students to learn and apply, being very explicit about the extent to which students need to absorb material and the extent to which they should question material presented
- Incorporate checks for comprehension into the classroom presentation style. Checks that can identify gaps in preparation for all students include
  - Asking students to paraphrase or apply ideas, and check for comprehension
  - Checking in regularly to ask “what questions do you have?” (not just “do you have questions?”)
  - Asking students to write down the names, events, or other references you make that they are not familiar with, to clarify later
  - Have a chat space for students to ask and answer questions that come up because material is unfamiliar
  - Using other Classroom Assessment Techniques (see http://www.crlt.umich.edu/tstrategies/tssf )
Appendix T Cont’d – Faculty Orientation Content, Exemplar from the University of Michigan

- Provide clear guidelines for participation and allow time for a participation learning curve (for example, a trial period before participation points can be accrued)
- Provide specific and clear instructions about policies, grading, and all assignments both orally and in writing
- Be very explicit about your classroom practices including:
  - Expecting students to ask questions if they do not understand
  - Valuing differences in student experience and preparation
- Be prepared for gaps in understanding and view them as opportunities for review, collaboration and discussion

Teaching non-native speakers of English

Issues

- A fast pace of lecture makes effective note-taking difficult for students, particularly for non-native speakers of English
- Amount and complexity of academic reading and writing may take more time for non-native speakers of English
- Non-native speakers of English may fall behind in class participation, especially in the beginning weeks of a class

Strategies

- Use a lecture pace that allows time for note-taking, and checks for comprehension as above
- Begin with a brief recap of the previous lecture, or review the overarching narrative of the course regularly
- Provide an agenda or outline for each class
- Post PowerPoint slides
- Illustrate key points with visual material
- Create study guides and study questions to help students prioritize reading material
- To enhance participation, ask all students to take a minute to write responses to questions asked in class, and then call for responses
- Use pairs so all students can talk about an idea, when you break into small groups
- Utilize online tools to stimulate student exchange (chatrooms, blogs, Piazza)
Appendix T Cont’d – Faculty Orientation Content, Exemplar from the University of Michigan

Improving climate

Issues

- Differences in fluency may lead native English speakers to finish sentences, or fill in words, for non-native speakers, rather than taking time to listen
- U.S.-specific examples, slang, idioms, and U.S.-specific humor in class may be used to liven lecture or discussion, but these exclude international students
- Referring to stereotypes of national “styles” or character marginalizes students, if unaddressed
- Commonly held preconceived notions about international students that may obstruct communications include:
  - International students are lacking characteristics of U.S. students (individualism, independence, and the like)
  - Asian students are naturally smart in math and science
  - All international students want to do is study
  - International students are quiet, don’t want to participate in class, like to keep to themselves

Strategies

- When speaking, be attentive to pace of speech, use of idioms and cultural references
- Identify social differences as being valuable resources in the classroom, facilitating student learning from various cultural perspectives
- Take time if you hear reference to national stereotypes to question the generalization and its application
- Focus on whether students have understood your point, not only on how well you stated a point
- Make use of non-verbal communication like gestures and eye contact
- Discourage sidebar conversations involving subgroups of (U.S. or international) students
- Facilitate equitable participation and sharing of diverse views and perspectives
- Get involved in discussions on how to promote international student engagement, facilitation of group work and discussion in a diverse classroom, etc.
Appendix T Cont’d – Faculty Orientation Content, Exemplar from the University of Michigan

Promoting academic integrity

Issue

- Some international students do not learn the same rules about copying and plagiarism that are fundamental to U.S. higher education

Strategies

- Emphasize academic integrity verbally, and include reference to the rules and sources of information in the course syllabus
- Suggest that students take a test to make sure they know what plagiarism is
- The following link has an excellent test: https://www.indiana.edu/~tedfrick/plagiarism/item1.html

Source: University of Michigan, 2014
Appendix U– Multi-Cultural Training for MPH Student Orientation

(Modified from Dartmouth-Hitchcock Medical Center, Center for Learning and Professional Development Training Materials)

Objective of the Training: To create a learning environment that is culturally sensitive and inclusive. This mandatory 90 minute workshop would be conducted during MPH student orientation with all national and international students in attendance.

Learning Objectives:

- Define “diversity” and “culture”
- Explain the similarities and differences between these two concepts and how they relate to education
- Identify your own cultural attitudes towards communication, family, health, education, time, authority, and work habits; describe how they impact your interactions daily and in an educational setting
- Identify behaviors that indicate a lack of cultural competence and those that indicate skills in cultural competence
- Explain the importance of cultural competence in an educational setting

Format: Active-learning focused with interactive sessions with small group and think-pair-share activities.

Agenda:

- Overview and introductions
- Workshop guidelines
- Concepts about diversity
- Concepts about culture
  - Gender issues
  - Culture privilege and race
  - Contexts of power in the US
Appendix U Cont’d– Multi-Cultural Training for MPH Student Orientation

(Modified from Dartmouth-Hitchcock Medical Center, Center for Learning and Professional Development Training Materials)

- Culture and education
- Cultural competence
- Wrap-up and evaluation

Source: Adapted from Dartmouth-Hitchcock Medical Center, Center for Learning and Professional Development training materials (n.d.)
Appendix V – Re-Entry to Home Country Session

Exemplar from International Student.Com

Returning Home

Before you left to study in the US, you probably had a lot of people warning you about the effects of culture shock, the feeling of adjusting to a new place when you arrive for the first time. What they might not have told you, however, is that culture shock can also affect international students upon their return home. This phenomenon is known as “reverse culture shock.”

Reverse culture shock generally consists of feeling out of place in your home country, or experiencing a sense of disorientation. Although everything around you is familiar, you feel different.

Common effects of reverse culture shock include:

- Extreme jet lag
- Surprise at what has or hasn’t changed
- Feeling misunderstood
- Homesickness for your US school

Jet Lag

You might find traveling back to your own time zone even more disconcerting than moving out of it in the first place. You will probably need at least a week to adjust.

To deal with this feeling of extreme jet lag, sleep when you feel you need it, and try to keep active when you’re awake. You will probably find that your body’s internal clock will be slightly out of whack for a little while, but eventually you will get back in the swing of things.

Dealing With Change — Or Lack Thereof

A lot has changed for you during your time away—you’ve moved to an entirely new country, adjusted to a new culture, made friends, and earned a degree in a foreign country. It is natural to expect things at home to have changed just as much as you feel you have.

In reality, you will probably find that things have not changed quite as much as you expected them to. The sense that everything is exactly the same as when you left can be disconcerting, and can make returning home a rather underwhelming experience. The
Appendix V Cont’d – Re-Entry to Home Country Session

Exemplar from International Student.Com

best way to counteract these feelings is to keep yourself busy, so you don’t find yourself with nothing to do and too much time on your hands.

Feeling Misunderstood

People you were close to when you left—even those you kept in contact with during your time away—might be separated from you by the unique experiences you have each had in your absence. You might find yourself getting annoyed by having to answer the same questions over and over from different people. People will naturally be curious about your time away, so try to be patient and remember that not everyone you meet has been to the US, and most will be curious about your time away.

Because many people you know back home have not been to the US, don’t be surprised if they don’t necessarily understand your stories about college life. You might feel misunderstood by those around you, but this feeling will pass as long as you’re patient. In the meantime, it might be a good idea to keep in touch with your fellow international students and college friends, so you don’t feel entirely isolated.

In spite of enjoying being back at home, you might find yourself pining for your college life. This is perfectly normal, and usually a result of the “grass is greener syndrome.” Just as it is possible to dramatize the glory of returning home, it is also possible to over-romanticize your experience abroad. Remember that nothing is ever perfect, and your life would still not be flawless even if you were back at school in the US.

Dealing With Reverse Culture Shock

Fitting your new life into your old life can be frustrating; it’s easy to become frustrated with aspects of your home culture that no longer make sense to you. Try to keep things in perspective; remember that every country has its flaws and its strengths.

Returning home is wonderful in many ways; you can spend time with your family and friends, eat at your favorite restaurants, and sleep in your own bed. Try to focus on the good of returning home, rather than dwelling on the bad.
Appendix V Cont’d – Re-Entry to Home Country Session

Exemplar from International Student.Com

Things that might make your return easier include:

- Talking to others who have studied abroad
- Keeping in touch with the friends you made while abroad
- Being patient with yourselves and others

For a look at what it’s like to return home after studying abroad, take a look at this international student’s account of returning home to Germany* after studying in the US.

Returning home after a long time away can be hard, but with time and patience you will readjust.

*Utilize a video of Fogarty Alumni in Tanzania discussing their re-entry experiences.

Source: International Student.com, n.d.
Appendix W – Logic Model for Measuring Impact of Dartmouth’s AIDS International Research and Training Program (AITRP)

**Goal:** To provide support to Fogarty Fellows enrolled in the Master of Public Health Program at Dartmouth College.

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Activities</th>
<th>Outputs</th>
<th>Short – Medium Term Outcomes</th>
<th>Long Term Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>In order to accomplish our goals, will need the following resources:</td>
<td>Admissions</td>
<td>Accomplishing the activities will likely result in the following for the Fogarty Fellows:</td>
<td>Accomplishing these activities will likely result in the following evidence of progress:</td>
<td>The activities will likely result in measurable changes:</td>
</tr>
<tr>
<td>- Support (policy and financial) from NIH Fogarty International Center</td>
<td>- Materials: comprehensive program materials, web-based information, and YouTube videos</td>
<td>- Academic and social adjustment</td>
<td>- Better prepared students in individual courses, as evidenced by feedback from faculty during faculty meetings and through a review of grades</td>
<td>- Graduating Fogarties transitioning to high-level positions in Tanzania</td>
</tr>
<tr>
<td>- Collaboration with other universities supporting Fogarty Fellows</td>
<td>- Matching: to Fogarty Alumni</td>
<td>- Absence of distress related</td>
<td>- Higher quality theses, as evidenced by high evaluation</td>
<td>- Active participation in supporting the public health infrastructure in Tanzania</td>
</tr>
<tr>
<td>- Fogarty Program administrators</td>
<td>Pre-arrival</td>
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<td></td>
<td>- Pre-readings and course information, guides to US, YouTube videos</td>
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<td></td>
<td>- Pre-arrival workshop: in Tanzania facilitated by Fogarty Alumni</td>
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Appendix W – Logic Model for Measuring Impact of Dartmouth’s AIDS International Research and Training Program (AITRP)

**Goal:** *To provide support to Fogarty Fellows enrolled in the Master of Public Health Program at Dartmouth College.*

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<td>-MPH Program administrators</td>
<td><strong>Pre-orientation (1 week before start of MPH Program)</strong>&lt;br&gt;-Welcome Committee: meets Fellows at Dartmouth Coach&lt;br&gt;-Materials: first week guide, mobile app with key information&lt;br&gt;-Pre-orientation tour: activities, and meetings&lt;br&gt;-Matching: MPH Alumni, host family, ID team,&lt;br&gt;-Online Survey: completed by Fellows identifying career interests/align advising efforts</td>
<td><strong>Orientation – Students</strong>&lt;br&gt;-Participation: in MPH Orientation</td>
<td>to “cultural shock”</td>
<td>-Grant applications/grant awards</td>
</tr>
<tr>
<td>-MPH Faculty</td>
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<td>-Academic achievement</td>
<td>-Research collaboration with Dartmouth and other research institutes</td>
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<tr>
<td>-Collaboration with Dartmouth MBA and School of Medicine Programs</td>
<td></td>
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<td>-Institutional commitment</td>
<td>-Presentations at national, regional, and international conferences</td>
</tr>
<tr>
<td>-Engaged Fogarty Alumni</td>
<td></td>
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<td>scores from internal and external reviewers</td>
<td>-Peer-reviewed published articles</td>
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<tr>
<td>-Time for meetings</td>
<td></td>
<td></td>
<td>-More comfortably assimilated students, as evidenced in student self-reporting at end-of-year Fogarty and MPH programmatic evaluations, conducted at the conclusion of the academic program and at 6 and 12 months</td>
<td>-Participation in in-country trainings</td>
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<td>-Meeting space</td>
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<td>-Technology (mobile app, tele-</td>
<td></td>
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**Goal:** To provide support to Fogarty Fellows enrolled in the Master of Public Health Program at Dartmouth College.

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<td>conferencing, web development, video)</td>
<td>-Cross-cultural workshop: included in orientation</td>
<td>-More satisfied students, as evidenced by positive scores by students on Fogarty and MPH Programmatic evaluations conducted at the conclusion of the academic program and at 6 and 12 months</td>
<td>-Alumni pursuing doctoral programs in biomedical and public health areas</td>
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</tr>
<tr>
<td><strong>Orientation – Faculty</strong></td>
<td>-Cross-cultural &amp; transnational education workshop</td>
<td>-Continued 100% retention of students (Note: no Fogarty has ever withdrawn</td>
<td>-An enlarged and engaged Alumni network, as measured by 80% of Fogarty Alumni participating in network</td>
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<td>-Distribute profile of Fogarty Alumni</td>
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<tr>
<td>-YouTube Video: of Fogarty Alumni testimonials about their careers</td>
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<td><strong>Matriculation</strong></td>
<td>-Student support monitoring: formal advisor meeting</td>
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<td>-Tutoring: ESL, epidemiology and biostatics</td>
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</table>
|        | -Mentoring: with ID and Fogarty Program Investigators  
-Integrate Fellows: into ID system  
-Linkages: meetings with DHMC specialists, GSM, Tuck, BU School of Public Health sister program (host Fogarties)  
-Bi-monthly social events: with individual Fogarty team members  
-Invitations: for holidays forthcoming for inclusion in US holiday events  
-Field experience: internship linked to HIV/TB projects, arrange introductions to organizations | from the Dartmouth MPH Program | Fogarty Program at Dartmouth Advisory Board  
-Stronger research capacity and enhanced collaborations and partnerships in the East African Communities |
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</table>
|        | -Capstone: advising  
         -Re-entry counseling |         |                               |                   |
|        | **Post-graduation**  
         -Formalize Alumni Association*  
         -Link: Uganda/Kenya Fogarty Alumni programs  
         -Sponsor Alumni meetings and workshops: to coincide with MUHAS’s annual Scientific Conference in Dar es Salaam (held in May)  
         -Career advising: Fogarty updates, grants, trainings  
         -PhD Program advising  
         -Linkages: mentors, colleagues  
         -Research Development: collaboration, mentor |         |                               |                   |
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</thead>
</table>
|        | -Presentations: Communicate opportunities  
Publication: collaborate, mentor  
Program Evaluation  
-Advisory board input**  
-End of year and 6 and 12 month surveys completed by Fellows |         |         |         | |

Assumptions:  
- MPH Program will implement formal advising system  
- MPH Program will arrange for additional orientation time for: a) attribution/plagiarism issues; b) group process; c) learning management system training, d) library services orientation and training, and e) technology training  
- MPH Program will expand offerings to include: global health courses, grants writing and grants management courses, manuscript development and writing, and online courses  
- MPH Program will support intercultural competency training for faculty and supporting teaching across cultures, including methods to foster in-class participation  
- NIH will implement policy to fund Fogarty Alumni Association to engender partnership development and to build research capacity  
- Fogarty Program is able to recruit Advisory Board of key stakeholders including: Fogarty Alumni, Fogarty Programs from sister institutions, Dartmouth stakeholders (Dartmouth Tuck Program, Geisel School of Medicine at Dartmouth, TDI

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Master of Health Care Delivery Science Program), MUHAS School of Public Health and Social Sciences and MUHAS School of Medicine, and Tanzania’s Ministry of Health