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**FIELD REPORT | PUBLIC HEALTH STUDY ABROAD**

## Transitioning a Public Health Study Abroad Program to Virtual Format During the COVID-19 Pandemic: Implications for Public Health Practice

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### ABSTRACT

High impact learning practices (HIPs) are practices that promote deep learning through student engagement. They focus on the knowledge, attitudes, and skills college students need to succeed academically and professionally and afford students the opportunity to participate in activities beyond the classroom, resulting in learning and personal development. HIPs take various forms and include study abroad, signature experience, first-year seminars, and learning communities. As part of its HIPs, the Georgia State University (GSU) School of Public Health (SPH) offers students the opportunity to study abroad every summer under the auspices of faculty. However, in the summer of 2021, all GSU SPH study abroad programs, including my program, Field Study of Contemporary and Emerging Public Health Issues in Ghana: A Focus on Water and Sanitation, HIV, and Women's Health Program, were canceled due to the COVID-19 pandemic. Owing to student continued interest, it was imperative to devise a creative method to ensure that students received a comparable experience despite the pandemic. This paper documents the transitioning of a three-week program to a virtual synchronous format to give students the opportunity to work with and learn from in-country partners in Accra, Ghana. The activities, challenges, and lessons learned from transitioning the program are also shared. Overall, students and in-country partners completed three comparative field studies that explored issues related to water and sanitation, the human immunodeficiency virus (HIV), and women's reproductive health in Ghana. Students and partners identified and reflected on areas of similarities and differences between Ghana and the United States on the public health issues they focused on in the field.

**Keywords:** • Field Study • Public Health • Water and Sanitation • HIV • Women's Health • Ghana

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### 1. Introduction

Certain educational practices in universities, such as study abroad programs, have been identified as high-impact learning practices (HIPs).<sup>1</sup> This is because they engage students in active learning that elevates their academic performance and also equip them with the knowledge, attitudes, and skills they

need to make discoveries and connections, grapple with challenging public health real-world questions, learn new cultures, and address complex public health issues.<sup>1</sup> In recognition of the benefits of HIPs, the Georgia State University (GSU) School of Public Health (SPH) curriculum has a study abroad component that is implemented by faculty every

summer for graduate and undergraduate students. Unfortunately, owing to the coronavirus disease of 2019 (COVID-19) pandemic, all GSU SPH study abroad programs for the 2021 summer semester were canceled. This included my study abroad program, *Field Study of Contemporary and Emerging Public Health Issues in Ghana: A focus on Water and Sanitation, Human immunodeficiency virus (HIV), and Women's Health*. Consequently, I transitioned the three-week program to a virtual format. In this paper, I document the activities, challenges, and lessons learned from transitioning the program to a virtual format. The following reports document the results of the field studies conducted on the three focus areas of the field study, and the reflections of GSU students and in-country partners: 1) Individual and Community Level Factors Related to Sanitation, Water Quality, Treatment and Management in Rural Communities in Accra, Ghana; 2) Individual and Community Level Factors Related to HIV Diagnosis, Treatment, and Stigma in Kumasi, Ghana; and 3) Individual and Community Level Factors Related to Contraceptive Access, Family Planning, and Reproductive Health Challenges among Women in Kumasi, Ghana.

### **1.2 Statement of Problem and Objectives**

Due to student continued interest in the Ghana study abroad program, the recommendation of the GSU Study Abroad Director, and the need for students to fulfill an academic requirement for graduation (either as their signature experience or elective) at both the undergraduate and graduate levels, I decided to transition the program to a virtual synchronous format.

The objective of the three-week program was to provide undergraduate and graduate students with an opportunity to learn first-hand about three contemporary global public health issues (water and sanitation, HIV, and women's health) in Ghana, and how these issues, though universal, are influenced by global disparities in wealth, differences in cultural norms and practices, gender inequity, and the general lack of access to basic resources. It also gave the students the opportunity to analyze primary data collected from the field on their behalf by in-country partners over a

period of four weeks prior to the commencement of the three-week study abroad program, and to reflect on areas of similarities and differences on these topics in Ghana (Accra and Kumasi) and the United States (US) on these issues. The three contemporary global public health issues were selected because they are experienced in both Ghana and the US.

## **2. Methods**

### **2.1. Setting**

The program was implemented in the US over a period of three weeks during the 2021 summer semester. It was originally scheduled to be implemented in two administrative regions in Ghana: Ashanti and Greater Accra.<sup>2</sup> Ghana is a country in West Africa with a land area of 238,535 KM<sup>2</sup>. It shares boundaries with Burkina Faso to the north, Cote d'Ivoire to the west, and Togo to the east. Ghana is located on the Gulf of Guinea and is divided into 16 administrative regions. The Ashanti region is located in the middle belt of the country and is the third-largest administrative region. It occupies a total land surface of 24,389KM<sup>2</sup> and its capital is Kumasi. The population of the Ashanti region is about 5,924,498.<sup>3,4</sup> The Greater Accra region is located in the southern belt of Ghana and is the smallest of all the administrative regions. It occupies a total land surface of 3,245M<sup>2</sup> and its capital is Accra. The population of Accra is about 5,055,883.<sup>4</sup> The lack of access to clean water and adequate sanitation,<sup>5</sup> the prevalence of the human immunodeficiency virus (HIV),<sup>6</sup> and women's reproductive health issues<sup>7</sup> are some of the leading causes of morbidity, mortality, and disability in Accra and Kumasi.

### **2.2. Program Activities**

Program activities were implemented in two phases: (1) pre-program-related activities and (2) program activities.

#### *Phase I - Pre-Program Related Activities*

Phase I activities occurred prior to program implementation. During this phase, faculty worked with 17 students (nine undergraduates enrolled in the Bachelor of Science in Public Health (BSPH) program, and 8 graduates enrolled in the Masters in Public

Health (MPH) program) and 11 in-country partners on a number of pre-program activities to set things up for phase 2. Table 1 provides detailed information on the activities that were performed with students and in-country partners. None of the students enrolled in the program had ever been to Ghana, Africa.

### *Phase 2- Program Implementation*

Phase 2 activities occurred during program implementation. During this phase, students participated in 11, two-hour virtual synchronous interactive lectures on three contemporary public health issues (water and sanitation, HIV, and women's health) in Ghana over a period of three weeks. Lectures were delivered via Cisco WebEx<sup>®</sup> virtually by in-country faculty partners from the University of Ghana (School of Public Health and Department of Sociology) in Accra and the Kwame Nkrumah University of Science and Technology in Kumasi), and by in-country experts from the Ghana Community Water Supply and Sanitation Agency (CWSA), SkyFox (a water and sanitation non-governmental organization), the Ghana AIDS Commission, the Barnor Memorial Hospital, and the Suntreso Government Hospital. In-country data collectors for the three contemporary public health issues also conducted mini-sessions to brief students on their data collection process, observations, and challenges. In addition to the lectures, students also participated in a virtual tour of the University of Ghana campus, virtual field trips to two water and sanitation facilities in Accra, and a maternal health clinic in Kumasi. In order to give students a balanced experience, they participated in two virtual excursions to cultural and historical sites in Accra including the DuBois Center, Nkrumah Memorial Park, and the independence square to places of interest in Accra including the Makola market, Labamba beach, the Ghana Arts Center and Oxford street in Osu. The virtual tour, field trips, and excursions were implemented via WebEx<sup>®</sup> with commentary from the tour guide.

As part of phase 2, students completed three online discussion posts on each of the three contemporary public health issues, a reflection paper, and worked in three groups on one of the three contemporary public health issues of their choice (water and sanitation,

HIV, and women's reproductive health). They analyzed data collected on their behalf by overseas partners, created PowerPoint slides on their field study findings, and did group oral presentations with feedback from their peers, faculty, and in-country data collection partners. Students also worked in their groups to write a field study report that compared their findings to what pertains in the US, using publicly-available data. To chronicle their journey, students completed daily journal entries and individually shared their experiences in a debriefing session at the end of the program.

### **2.3. Data Collection and Analysis**

All three field studies used a cross-sectional mixed-methods study design. Using convenience sampling, data were collected electronically using Qualtrics from 301 participants in Accra and Kumasi by in-country data collection partners using a questionnaire administered face-to-face. Data were collected using local languages in Ga and Twi, or the English language depending on the participant's preference.

In their assigned small groups, students cleaned, analyzed, and interpreted quantitative and qualitative data. Quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 27 (IBM Corp. Released 2019. IBM SPSS Statistics for Windows, Version 26.0. Armonk, NY: IBM Corp). Qualitative data were analyzed using NVivo version 13 (Released March 2018)<sup>8</sup>. Students worked with in-country data collection partners to ensure that analyzed data were accurately interpreted.

### **2.4. Ethical Approval**

The Institutional Review Board (IRB) of the Kwame Nkrumah University of Science and Technology approved the study.

## **3. Findings**

After comparing the data collected from the field study in Ghana (Accra and Kumasi) to publicly-available data in the US, some similarities and differences were found. Results from the Individual and Community Level Factors Related to Sanitation, Water Quality, Treatment and Management in Rural Communities in Accra field study showed that while 61.4% of study participants in the selected rural communities in Accra

**Table 1: Phase I: Pre-Program Related Activities**

Activity	Activity Description
Students	
Meeting to Draft Data Collection Instruments	<ul style="list-style-type: none"> <li>• Conducted first virtual meeting to introduce the program to students</li> <li>• Students formed three groups around the three contemporary public health issues</li> <li>• Students brainstormed domains and developed draft questionnaires</li> </ul>
Data Collection Instrument Review, Pilot-Testing, and Finalization	<ul style="list-style-type: none"> <li>• Reviewed and provided feedback on the three draft questionnaires</li> <li>• Students revised draft questionnaires based on feedback</li> <li>• Shared revised draft questionnaires with the three in-country data collection partners' for feedback</li> <li>• Students updated questionnaire based on in-country partners feedback</li> <li>• Created final questionnaires in Qualtrics</li> <li>• Students created questionnaires in Qualtrics and pilot-tested with in-country data collection partners</li> <li>• Students finalized questionnaires in Qualtrics</li> <li>• Sent final Qualtrics data collection link to the three in-country data collection partners</li> </ul>
In-Country Partners	
Notification of in-country Partners About Program Transition	<ul style="list-style-type: none"> <li>• Notified all in-country partners about program shift to a virtual format</li> <li>• Renegotiated class times and duration due to differences in time zone</li> </ul>
Program Materials Development	<ul style="list-style-type: none"> <li>• Discussed content of program materials and format of lectures with all in-country partners</li> <li>• Provided feedback on draft materials (PowerPoint slides, videos, further reading list) to in-country partners prior to finalization</li> <li>• Obtained copies of all finalized materials prior to the commencement of each class</li> <li>• Organized dry runs with all in-country partners to familiarize them with WebEx</li> </ul>
In-country Data Collection	<ul style="list-style-type: none"> <li>• Conducted individual meetings via WhatsApp and WebEx with the three in-country data collection partners to discuss the approach and purpose of the data collection effort</li> <li>• Conducted data collection simulations with in-country data collection partners via WebEx</li> <li>• Provided the three in-country data collection partners with a template for individual presentations on their data collection process, observations, and challenges</li> </ul>
In-country Tour, Site Visits, and Excursions	<ul style="list-style-type: none"> <li>• Conducted meetings with appropriate in-country partners to discuss the choice of sites, content, and duration of videos via WhatsApp and WebEx</li> <li>• Discussed and provided appropriate in-country partners with the tool for sharing videos via WhatsApp and WebEx</li> <li>• Obtained final copies of all videos from appropriate in-country partners prior to the commencement of each class</li> </ul>
Institutional Review Board (IRB) Approval	<ul style="list-style-type: none"> <li>• Worked with an appropriate in-country partner to obtain institutional review board approval for the field study.</li> </ul>

*Interactions with in-country partners occurred two months (in April and May 2021) prior to program implementation in Summer 2021.*

have access to safe water, 80.0% of residents in rural areas in the US have access to safe water. Results also showed that not as many study participants in the selected rural communities in Accra and residents of rural communities in the US lacked access to toilet facilities. Results from the Individual and Community Level Factors Related to HIV Diagnosis, Treatment, and Stigma in Kumasi study showed that more people living with HIV in Kumasi (71.7%) than in the US (67%) were concerned about revealing their HIV status to their friends and family. Study results also showed that whereas people living with HIV (PLWH) in the US have to pay for HIV medication, almost all PLWH in Kumasi have access to free HIV medication. HIV-related stigma is significant in both Kumasi and the US. Results from the Individual and Community Level Factors Related to Contraceptive Access, Family Planning, and Reproductive Health Challenges among Women study in Kumasi showed that although study participants in Kumasi know where to access birth control services, they have little desire to use them compared to American women who are more desirous and interested in using such services. Results also showed that while cultural norms and gender roles serve as the primary barriers to family planning and contraceptive access for women in Kumasi, access to health insurance is the primary barrier to family planning and contraceptive access for women in Kumasi, access to health insurance is the barrier in the US. In-depth findings of the three fields studies associated with the virtual study abroad program can be found in separate manuscripts published in this journal volume.

#### **4. Discussion and Implications for Policy and Practice**

The purpose of this paper was to document the activities, challenges, and lessons learned from transitioning the Ghana study abroad field study program from an in-person program to a virtual format following the global COVID-19 pandemic, and to provide a context for the three field study reports associated with the virtual program experience.

*Phase 1:* It was crucial for me to work with students and in-country partners prior to the commencement of the program. Working with students allowed me to provide guidance on the development of three

data collection instruments in Qualtrics that were vetted and pilot tested by in-country data collection partner before they were finalized. I worked closely with individual in-country partners for two months prior to program implementation to ensure that they understood what was needed from them, meet deadlines, and know how to send finalized versions of materials for review. Reviewing each program prior to finalization enabled me to identify duplications and ensure quality work.

*Phase 2:* The preliminary work done in phase 1 made it relatively easy to implement the program. Lecture content were appropriate, and lectures were delivered within the time allotted. Field trips focused on what students needed to see and reinforced what had been taught in class, and virtual excursions gave students a historical and cultural taste of Ghana.

##### **4.1. Challenges and Lessons Learned**

Implementing some aspects of the program virtually was quite challenging. As originally designed program schedules were no longer valid and thus had to be modified with a virtual slant in mind. Times and duration of sessions had to be renegotiated so they worked for both students and in-country partners as the program was to be implemented in two different time zones. On occasion, poor internet connectivity disrupted class sessions and sometimes hindered electronic data collection in the field. Not much could be done to address the connectivity issue for lectures, however, on the data collection front, all in-country data collections addressed the issue by either switching to an alternative internet provider or printed out and used hard copies of questionnaires. Implementing a study abroad program in a virtual format is novel to both faculty and students. It was important to be creative. Students appreciated the faculty's tenacity to bring the field study to reality albeit in the virtual format.

##### **4.2. Recommendation for Faculty**

To conduct virtual study abroad programs, it is important for faculty or program directors to work closely with in-country partners months in advance (at least 1 month), clearly communicate program expectations, be flexible, and be prepared to follow-

up regularly to ensure that all parties deliver what was expected of them.

### Compliance with Ethical Standards

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### Key Messages

- ▶ Study abroad programs can be implemented virtually if physical travel is prevented by circumstances.
- ▶ Pre-program activities must be identified early and set in motion prior to program implementation to enable smooth program implementation.
- ▶ Study abroad program directors/faculty must be prepared to work closely with in-country partners to provide guidance and ensure that all parties are on the same page.

### References

1. Kuh GD. *High-Impact Educational Practices: What They Are, Who Has Access To Them, and Why They Matter*. Washington, DC: Association of American Colleges and Universities; 2008.
2. The world factbook: explore all countries – Ghana. Central Intelligence Agency. <https://www.cia.gov/the-world-factbook/countries/ghana/>. Published 2021. Accessed July 26, 2021.
3. Ghana districts a resource base to all local assemblies in Ghana: Ashanti. Ghana Districts. <https://www.ghanadistricts.com/Home/Region/1>. Accessed July 26, 2021.
4. Population by regions: greater Accra. Ghana Statistical Service. <https://statsghana.gov.gh/regionalpopulation.php?population=MTMONTk2MjQzOS4yMDEI&&Greater%20Accra&regid=3>. Published 2021. Accessed July 26, 2021.
5. Awuah E, Nyarko KB, Owusu PA. Water and sanitation in Ghana. *Desalination*. 2009;248(1-3):460-467. doi:10.1016/j.desal.2008.05.088
6. Dako-Gyeke P, Asampong E. Experiences of stigmatization and discrimination in accessing health services: voices of persons living with HIV in Ghana. *Soc Work Health Care*. 2015;54(3):269-285. doi: 10.1080/00981389.2015.1005268
7. Akazili J, Kanmiki EW, Anaseba D et al. Challenges and facilitators to the provision of sexual, reproductive health and rights services in Ghana. *Sex Reprod Health Matters*. 2020;28(2):1846247. doi: 10.1080/26410397.2020.1846247
8. Nvivo: version 13. QSR International; 2020. <https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home>

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