JRCERT Update

Integrating Study Abroad Opportunities in The Health Sciences Curriculum

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What if students could work collaboratively with other students from the radiologic sciences or interprofessional health programs in other countries? Studying abroad provides extracurricular applied-learning experiences that enhance understanding of course content, personal development, and job readiness. Health Sciences faculty at Columbia State Community College in rural Tennessee have an ongoing goal to expand student learning to include different cultures, health care delivery models, procedures and protocols, and pathways for credentialing.

Advantages of Studying Abroad

The Joint Review Committee on Education in Radiologic Technology (JRCERT) Standards for an Accredited Educational Program include requirements for a curriculum that prepares students for professional practice. Standard 4 Objective 4.2 states, "The program provides a well-structured curriculum that prepares students to practice in the professional discipline."[1] Included in this objective is the incorporation of innovative educational approaches and study abroad programs. In addition, the JRCERT requires programs to follow the American Society of Radiologic Technologists curricula for radiography, radiation therapy, and magnetic resonance imaging. Medical dosimetry programs follow the program provided by the American Association for Medical Dosimetrists.[1] Both curricula incorporate cultural competencies, diversity, and inclusive environments.[2] Via study abroad opportunities, programs are incorporating cultural awareness and competency throughout the curriculum. Cultural competency has value in every context and helps students prepare for gainful employment providing exceptional patient care to an increasingly diverse society.

In addition, study abroad programs strive to improve the quality of education for the targeted populations by cultivating personal and professional skills to better prepare students for a diverse workplace. In other health sciences study abroad programs, students reported improvements in the following abilities:

- increased self-confidence, self-reliance, professional knowledge, and knowledge of international health care systems[3]
- opportunities to compare cultural differences and similarities, build communication skills, and enhance respect for cultural differences[4]
- soft skills (eg, understanding cultural differences and improved relationships with instructors)[5]

With the acceleration of the changing health care landscape, there is a demonstrated need for future health care professionals who have increased knowledge and experience regarding differences in culture, health care delivery, academic preparation, protocols, and career opportunities beyond the students' locality. The collaborative nature of studying abroad explicitly challenges students to broaden their cultural awareness and heightens awareness of the interdisciplinary expectations of the workplace.

Challenges With Studying Abroad

According to a report on the international education exchange,[6] life sciences student participation in study abroad programs is disproportionately low, and White students compose the majority of student abroad participants (see **Table**). Health sciences students also are underrepresented in study abroad programs. The typical academic structure of health science programs, scarcity of free electives, and year-round enrollment make participation in general education, summer, multiweek, or semester-abroad options virtually impossible

Table

Number of U.S. Students in Study Abroad Programs by Discipline and Race and Ethnicity[6]

Discipline	2019-2020, n (%)[a]	2020-2021, n (%)[b]
Business and management	33 829 (20.8)	2512 (17.3)
Social sciences	31 239 (19.2)	2502 (17.2)
Physical and life sciences	12 078 (7.4)	1398 (9.6)
Engineering	6933 (4.3)	1292 (8.9)
Foreign language and international studies	12 749 (7.8)	1283 (8.8)
Race and Ethnicity	**2019-2020 (%)**	**2020-2021 (%)**
American Indian or Alaska Native	(0.5)	(0.4)
Asian or Pacific Islander	(8.6)	(10.0)
Black or African American	(5.5)	(4.1)
Hispanic or Latino(a)	(10.6)	(12.3)
Multiracial	(4.8)	(4.8)
White	(70.0)	(68.3)

[a] *N = 162 633*

[b] *N = 14 549*

after a student is accepted into a program cohort. In response, Tennessee community college faculty began creating options for embedding study abroad opportunities as a component of existing, in-program, clinical practicum courses.

Suggested barriers to community college education abroad include:

- curricular conflicts[5]
- fear of travel[7]
- inability to take time away from family or work[8]
- lack of finances[7]
- lack of knowledge about the opportunity to study abroad[8]

Many of the known benefits of enrolling at a community college extend to studying abroad, including lower tuition rates, less restrictive admission criteria, and flexible scheduling. The short-term nature of embedded clinical experiences also is minimally disruptive for students who often are balancing school with family and work responsibilities.

Improving Student Success Through Study Abroad Programs

According to NAFSA: Association of International Educators, research has shown that students who study abroad, particularly those who are underrepresented or are at risk, are more likely to complete their degrees or certificate programs than are students who do not study abroad.[9] The NAFSA report indicated transfer rates from 2- to 4-year colleges for community college students who studied abroad are greater than for those who did not study abroad.[9] Students who study abroad might be more motivated to continue pursuing their studies. Further research is needed to uncover the deeper meaning of this increased motivation and academic success.

Raby et al published relevant best practice findings in the *Community College Journal of Research and Practice*. Their article, Community College Study Abroad: Implications for Student Success, explored connections between studying abroad and academic achievement.[10] Using a mixed-methods design, the California Community College Student Outcomes Abroad research project examined data that illuminated how study abroad program participation has implications for personal development and global learning, as well as a range of indicators of academic success variables.[10] Raby et al suggested that participation in study abroad programs creates opportunities for students to experience shared common experiences and collaborative activities with peers and supportive faculty.[10]

First-generation community college students rarely have access to study abroad opportunities.[11] George Kuh argued that global education experiences are powerful for underserved youth because of a compensatory effect that occurs.[12] When a young person has sudden exposure to a high-impact and empowering educational experience such as studying abroad, the learning curve is steeper for them than for students for whom international travel or study abroad as early as junior high school is common. According to the Consortium for Analysis of Student Success through International Education, only 8% of first-generation students study abroad, yet those who do are more likely to graduate within 6 years and have higher grade point averages at graduation.[13]

Study abroad experiences provide a set of rich learning opportunities that cannot be replicated elsewhere and make this an especially important component of increasing global awareness and perspective taking. In their article Student Intercultural Proficiency From Study Abroad Programs, Clarke et al suggested that participation in study abroad experiences can lead to multiple global-learning skills such as increased openness to diversity, global-mindedness, increased understanding of self-identity, and greater proficiency in intercultural interactions.[14] The study noted that students described study abroad as life-changing,[14] yet little empirical evidence exists to explain the nuances and importance of this statement.

Clinical Study Abroad Program for Radiography Students

The opportunity to participate in a nuclear medicine study abroad partnership program with colleagues from Chattanooga State Community College in 2018 prompted us to investigate developing a similar program for radiography students. After some preparatory work, the first short-term, radiologic technology–embedded clinical study abroad partnership program was offered in 2020 under the auspices of the Tennessee Consortium for International Studies. Imaging students and faculty from 3 Tennessee community colleges (Chattanooga State Community College, Columbia State Community College, and Jackson State Community College) traveled to the United Kingdom. The program intentionally prioritizes including students who might be least likely to have these experiences: first-generation college students, underrepresented populations by discipline, financially disadvantaged students, and nontraditional students. Tennessee Student Engagement, Retention, and Success Grants and institutional international studies fees partially offset the cost of participation for students. As a result of the program, students with limited previous opportunities were able to travel internationally.

The program gives students an opportunity to work directly with a diverse population of employees and patients in a culturally unique city. This program's onsite partner is a racially diverse institution with 59.9% of enrolled students being nonwhite. In addition, the health care workforce in the selected city, London, is quite diverse, with 40.2% of employees being nonwhite.

The typical program schedule includes 2 days at a host university medical center attending classes and shadowing local students, health care providers, or both (see **Figure 1**). Examples of opportunities not available at home institutions include a pathology museum that houses thousands of specimens dating back more than a century and the institution's cadaver laboratory. A full-day walking tour with a medical historian exposes students to a selection of cultural and medically relevant experiences unique to London, including the National Gallery, the Royal College of Physicians, the Old Operating Theatre Museum, the British Museum, and the Science Museum (see **Figure 2**). Students are fascinated to learn how medicine was portrayed in the arts throughout the centuries.

Assigned student groups participate in pretravel research to learn about various health care industry models (eg, socialized medicine and the UK's National Health System), educational pathways, and routine protocols. Participants engage with students enrolled in similar programs in another culture with different standards of academic preparation and credentialing. Group sharing on site with students, faculty, and health care professionals has evolved into 2-way

Figure 1. *Radiologic technology and emergency medical services students prepared for their clinical rotations at St George's Hospital in London, England. Photo courtesy of the author.*

Figure 2. *Students enjoy a guided tour of the National Gallery in London focusing on the history of medicine in art. Photo courtesy of the author.*

question-and-answer sessions in which hosts and guests share experiences and learn from one another. Other program requirements include journal entries and individual video reflections. Students complete surveys after travel and provide invaluable feedback to help faculty plan future programs. A focus for planning involves gradually expanding the program to more disciplines. Meetings with the emergency medical services lead faculty member during the 2020 program led to options to add paramedic students to future offerings.

During the 2020 program, COVID-19 began appearing around the globe. Despite the restricted travel requirement that followed for the next several years, faculty were determined to create a valuable cultural learning experience. During summer 2022, Columbia State Community College hosted a virtual study abroad day for radiologic technology, emergency medical services, and medical laboratory technology students and faculty. The medical historian provided a live synchronous tour of London. Catered high tea was served at lunch, complete with a brief explanation of the associated history and traditions. The wildly successful virtual study abroad day, conceived in response to pandemic travel restrictions, will continue as a yearly event, exposing a larger number of students from more disciplines to study abroad, some of whom cannot participate in the travel program for various reasons. The summer 2023 virtual study abroad excursion explored the medical history of Paris.

There is considerable interest from London colleagues in reciprocal opportunities. In summer 2023 an emergency medical services student visited Columbia State as a component of a master's degree program course. Faculty are assisting in arranging experiences with classes, service providers, and certification boards, along with cultural excursions. Emergency medical services faculty at the host institution in London are already working on clearing the way for students to be allowed to ride along on an ambulance shift in 2024.

Implementing Study Abroad Programs

When considering implementing a study abroad program, a few factors to address are:

- developing selection processes that prioritize participation by relevant target populations for the sponsor institution (eg, minority race and sex by discipline, economically disadvantaged students, nontraditional students, veterans, and first-generation college attendees)
- exploring alternative funding sources and advance planning to reduce or alleviate financial barriers
- finding convenient public transportation or walkable locations
- developing safety and communication

Conclusion

Short-term clinical experiences abroad are a win for students, faculty, and institutions. Careful planning and implementation create experiences that future employers value and that are proven to contribute to student success and program completion.

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