

01 Jul 2021

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Recommended Citation

Tewari, S., & Zhang, P., & Zhuang, Y. (2021, July), Achieving Domestic Internationalization and Global Competence Through On-Campus Activities and Globally Responsive Education Paper presented at 2021 ASEE Virtual Annual Conference Content Access, Virtual Conference. 10.18260/1-2--36640

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Achieving Domestic Internationalization and Global Competence Through On-Campus Activities and Globally Responsive Education

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Mr. Peng Zhang has both academic and practical experiences in international higher education. Currently, Mr. Zhang is a Ph.D. candidate in international education with the primary research interests in global and intercultural teaching and learning, the internationalization of the curriculum, and international partnerships and branch campuses. Meanwhile, Mr. Zhang is a practitioner in international higher education. He works with academic departments and faculty at Missouri State University to develop academic programs and partnerships with Missouri State University international partner universities. He is also the founding chair for the Globally Responsive Education and Teaching (GREAT) program.

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Abstract

The impacts of the COVID-19 pandemic on students and educators are well known. However, there is a paucity of literature available on its impact on educational institutions in the context of their abilities to develop global competence in the middle of an ongoing pandemic. The virtual communication and remote delivery of educational content have been a popular trend for many universities to adapt to the pandemic challenges and re-think their internationalization strategies.

The limited travel opportunities because of the pandemic have highlighted a big need for the domestic internationalization mechanism at educational institutions. In this paper, the authors discuss how the Globally Responsive Education and Teaching (GREAT) program at Missouri State University is promoting globally responsive and inclusive teaching and learning among faculty and internationalization of the curriculum. It provides an overview of the activities and program structure of the GREAT program. In addition, it covers how culturally responsive teaching and global learning are being promoted for global competence by increased domestic Internationalization efforts.

The importance of exploring global teaching and learning models and the significance of faculty engagement are emphasized in this paper. It also discusses how international virtual exchange learning gained popularity because of COVID-19 and how the GREAT program plans to integrate it by offering a grant to support faculty with an aim to promote the internationalization of the curriculum and global learning for all. This paper also discusses how lessons learned from teaching abroad and international education are being incorporated for domestic internationalization to provide similar international learning experiences for both domestic and international students.

Introduction

The COVID-19 pandemic has put a significant restriction on international travel, which directly impacts on students' mobility in international higher education. According to Association of International Educator (NAFSA)'s Financial Impact Survey [1], the estimated loss of international higher education revenue for U.S higher education due to COVID-19 is about \$4 billion, in which nearly \$1 billion is the loss from study abroad programs and another at least \$3 billion is the loss due to the significant decline of international students enrollment for fall 2020.

The impact of the pandemic is just not limited to the revenue loss. Almost all stakeholders of the education system are impacted in many ways. Students did not have valuable in-person international exposure. Academic institutions were impacted by the lost opportunities for collaborations, reduced exchange of scholars, recruitment, and outreach in addition to the lost revenue. Internationalization and globally responsive education help employers as they get

quality employees with the cultural awareness and the needed understanding of the global dimensions of their future profession. Students graduating with limited international exposure because of the pandemic, are entering the workforce with a distinct disadvantage and it is significant in today's environment as American companies grow and expand their footprint worldwide.

The National Science Foundation (NSF) reported in its 2014 Science Indicators that 24.9% of science and engineering papers published worldwide in 2012 were internationally co-authored; for science and engineering papers published in the U.S. for the same year, 34.7% were internationally co-authored. This is an increase from 1997 values of 15.6% and 19.3%, respectively [2]. These numbers have increased since then. In its 2011-2016 fiscal year strategic report, the NSF identified one of its key performance goals to “[k]eep the United States globally competitive at the frontiers of knowledge by increasing international partnerships and collaborations.” This is especially true for science and engineering (S&E) fields but has equal significance for fields that are outside S&E. The plan stated further that “[a]s S&E expertise and infrastructure advance across the globe, it is expected that the United States will increasingly benefit from international collaborations and a globally engaged workforce leading to transformational S&E breakthroughs” [3].

Internationalization at Home

Given the significant impact on students and faculty mobility due to COVID-19, many universities in the U.S. reevaluated their internationalization strategies and naturally the value of internationalization at home becomes more relevant and prominent. Internationalization at home is a strategy beyond student and faculty mobilization, bringing international and intercultural dimensions to the core of higher education - teaching and learning and the related activities [4]. Thus, the concept of internationalization at home was defined as the activities integrating international and intercultural dimensions into teaching and learning, research, extra-curricular activities, and community engagement, etc. [5]. Internationalization at home also helps university administrators and faculty to change their view on international education from add-on services to an essential education, promoting intercultural understanding and people to people relationships. Therefore, the concept of internationalization at home promotes global learning for all, by extending the access to the value of intercultural education and international experiences to all students and all other stakeholders.

Role of Faculty in Internationalization at Home

The role of faculty in the process is essential in implementing the strategy of internationalization at home. Although many universities emphasize on cultural activities on campus to increase intercultural exposure on campus, Brunton and Jeffrey [6] claimed that teachers have a more significant role than that of the cultural activities for students developing their intercultural competence and learning empowerment. Similarly, Helms [7] suggested that engaging faculty is the real element driving the development of global learning and internationalization at home. Then the question is how to better support faculty to engage in internationalization at home. Romani-Dias and the colleagues [8] studied the underestimated role of faculty in internationalization of higher education by interviewing 16 faculty and researchers at universities. The findings suggested four characteristics of faculty and researchers that can

significantly influence the internationalization of higher education - international academic experience, participation in international collaboration projects or networks, international co-authorship, and experience in international publications [8]. Besides these personal factors, there are also some external barriers that prevent faculty from engaging in internationalization work, for instance, not taking into account faculty international services or contribution for the tenure or promotion, lack of financial incentives, and many competing demands on faculty's time and workload [9]. In Niehaus and Williams' [10] case study, a structured professional development program for faculty was suggested as one way to support faculty to engage in internationalization work. The key elements of this type of professional developments need to focus on teaching, including internationalization in course content, pedagogy, etc., and also to provide resources to address the external barriers [10]. These studies provided empirical support for establishing the Globally Responsive Education and Teaching (GREAT) program as a professional development initiative at Missouri State University (MSU), a public university in the mid-west region of the United States to support its faculty to engage in internationalization at home.

GREAT program

The GREAT program at MSU was established with a clear mission of promoting internationalization of the curriculum, advocating intercultural classroom teaching and learning on campus, and facilitating global research collaborations [11]. Domestic internationalization focuses on creating global competence through on-campus activities, globally responsive education and the embedded culturally-responsive communication.

The study-abroad and international-student programs are commonly understood to transform their participants into "global citizens" possessing "cross-cultural competencies". The GREAT program, in nature, is complementary to these programs. It provides support and resources at home for global academic engagement without challenges of study-abroad and international-student programs. The program is guided by two theories: culturally responsive teaching and networked improvement community.

Culturally Responsive Teaching Theory

As the literature suggested, one of the key elements of the professional development program for internationalization at home is to focus on teaching [10]. To promote the internationalization of the curriculum, it is critical to make the curriculum culturally responsive. Thus, the culturally responsive teaching theory is identified as the guiding theoretical framework for the development of the program events. Particularly, the two fundamental premises for culturally responsive teaching will be used as overarching guidance for the development of the program events: "[T]eachers' beliefs about ethical, racial, and cultural diversity determines their instructional diversities" (p. 126), and plurality in class. Teachers' awareness of students' cultures can better equip them to interact with diverse students [12]. The plurality in culturally responsive teaching theory reflects cultural synergies within the class, developed from the notion that race, class, culture, ethnicity, and gender shape the diverse students' learning styles, requiring multiple instructional strategies for the common learning outcomes [12]. Therefore, cultural synergies can be viewed from three aspects. It requires various teaching techniques in class to accommodate various students' learning styles; it is reflected on relevant curriculum by locally contextualizing contents and connecting to students' cultures and interests; and, it also encourages students to

build knowledge beyond one culture [12]. These three aspects of cultural synergies serves as a guideline for the GREAT professional development activities, for instance, the workshop of understanding international students in your classroom was developed for faculty to better learn about international students and their learning styles, so that it might help faculty to contextualize their teaching. More examples of the GREAT activities will be illustrated in the later section.

Networked Improvement Community Theory

Considering participation in international collaboration projects and networks as the favorable characteristics or experiences of faculty and researchers in engaging internationalization of higher education, establishing a learning community or network for MSU faculty to engage and learn together in improving global teaching and learning become another key purpose of the GREAT program. This purpose was grounded in the theory of Networked Improvement Communities (NIC) based on the improvement science [13]. The rationale of introducing improvement science in the education context stems from the ineffective pattern of change in public education - “implement fast, learn slow, and burn goodwill as you go” [13]. Consequently, it leads the good ideas of making changes and improvements to a graveyard. Therefore, as a paradigm shift, improvement science emphasizes the learning process with the goals of developing know-how skills and knowledge for a reform idea and eventually leads to an effective improvement at scale. A NIC is a combination of “the conceptual and analytical discipline of improvement science with the power of networked communities to innovate and learn together” [13]. Typically, a NIC is a community of individuals collaborating together around a shared problem or a common interest, in which individuals share their experiences and expertise, further stimulating insights and ideas among others [13]. The overall goal of a NIC is to develop the necessary know-how for the improvement of a shared problem or interests and spread and share this knowledge and improvement faster and more effectively [13]. Therefore, a NIC “aims to exploit how the social intelligence of a group can accelerate not just individual learning, but a whole profession's capacity to learn and improve” [13]. The GREAT program was established to form a NIC for faculty, led by a faculty advisory board with extensive international academic background and experiences, to learn together on the shared interest in the internationalization of higher education and develop necessary knowledge on the successful international teaching and research practices.

The GREAT Program Activities

Based on these two theoretical frameworks, the GREAT program develops a series of activities and resources to support MSU faculty to participate in the global academic engagement.

The monthly GREAT Program Newsletter [14] was launched in May of 2020, which gives MSU faculty the opportunity to let their voice be heard by sharing their international online teaching experiences and tips (e.g., Asia and South America). The articles also covered the appropriately timed topics (e.g., the impact of COVID-19 on international higher education and globalization, re-visioning the future of international education, and the new challenges of diversity, equity and inclusion in both virtual and physical classrooms) and various disciplines and fields of study (e.g., wine major class, language class of Teaching English to Speakers of Other Languages,

engineering and science, collaborative biology programs). The newsletter has been well-received and subscribed by MSU faculty.

In addition to the online newsletter, collaborating with the Faculty Center for Teaching and Learning (FCTL), MSU faculty could reach out to the GREAT Program for additional online resources and assistance to design internationalized online teaching and learning materials. A video series of GREAT Online Teaching Tips were created having MSU professors to share their first-hand globally online teaching experience. The videos offered practical advice on class preparation, teaching strategies, language barriers, technical and logistic issues, assessment and other adjustments for global online teaching.

“Developing global citizens with the aspiration and ability to think globally and act locally is one of the ultimate goals for our global engagement mission” [15]. To encourage and support MSU faculty to explore innovative and collaborative ways of teaching and thinking globally, GREAT launched its Grant International Virtual Exchange Project in 2021. The current and future courses which fit and/or include an international exchange and projects that have virtual exchange components could be submitted and reviewed for the grant. Each semester a selective number of faculty members will be recognized with an award to support their teaching and projects. Currently, we are in the process of accepting applications for Fall 2021 curriculum.

To provide more guidance and assistance for our Grant and also International Virtual Exchange curriculum in general, a GREAT Panel Discussion series was created. The most recent one featured three guest speakers from MSU who discussed two International Virtual Exchange programs that they just completed. This recorded panel discussion was recorded and will be posted online for more discussion from MSU faculty.

The GREAT Program would not have progressed in the past year if we did not have our Faculty Advisory Board which consists of MSU faculty representatives from different colleges and departments. Our current board members are all voluntary MSU faculty members. The advisor board members are GREAT promoters, but more importantly, are the experts with multicultural and multinational teaching and research experience. The GREAT Program wants to support MSU faculty and help them achieve success. However, the support and guidance from MSU faculty advisory board members has become the core of the program which, we believe, will lead our program to great success.

Bringing Home the International Experience

The office of international programs at MSU has facilitated teaching-abroad experience to many of its faculty from many different departments and programs. These faculty had opportunities to travel and teach various courses for varying durations. Some faculty led research focused studies internationally. In most cases, the international experience has provided the participating faculty a greater perspective and better outlook at personal as well as professional levels. Many of these faculty shared their experiences and insights through the GREAT newsletter to expand thinking beyond boundaries and promote global perspective. Individually, faculty have reaped great benefits. More importantly, they were able to pass on these experiences and perspectives to the student body. The GREAT program plays an important role to facilitate and promote this exchange.

It is relatively easy to send a couple of faculty on such teaching-abroad trips as compared to sending the whole class away for studying abroad. In authors' opinion, a culturally-aware and globally-responsive student tends to do better in general in their professional environment, specifically at international level. Therefore, faculty who have gained insight and broader perspective should share these enriching experiences with their students in their teachings to make domestic students culturally-aware and globally-responsive

One of the authors, Dr. Sanjay Tewari, was a part of such an experience. Dr. Tewari along with six other faculty from MSU participated in the Global Immersion Program during the summer of 2019 at Southwest University, a national level public university in China. More than 100 faculty from about 25 countries were invited after a screening process to teach various classes during the summer. It was a satisfying and rewarding experience for many reasons.

Reflections on collective lesson learned and insights gained

Language barrier: In most cases, people are generally aware of challenges that arise during a communication with people whose first language is different from their own. The role of the language and classroom communication on learning, drawing upon concepts, and conveying instructions in a clear and concise manner for learning to happen is very important. Therefore, while teaching a class of students who may not have expected fluency in the language of instruction, it is critical for instructors to have an out-of-box mindset to convey instructions and ideas. The use of multimedia is recommended. Visuals (images and videos) overcome language barriers and provide better clarity. This will also serve students who are visual learners. However, one should be cautious about using online media. Some countries do not allow access to certain websites. One should make sure that all the links and websites embedded in the course materials will be accessible in the host country. Once the language barrier is overtaken by instructors as well as students, teaching and learning happens at a rapid pace. We must remember and convey it to our students regardless of their backgrounds that the lack of proficiency of a language is not a measure of someone's intellectual abilities. This lesson will challenge the "deficit thinking - oriented" teaching and come to a great use in an increasingly global working environment where students will be dealing with people from all of the world with varying proficiency of an international language.

Teaching using global issues/examples: Remember your audience and use issues and examples that the audience is most aware of and can relate to easily. One would have to do extra work to find such examples and issues but they are of great help. It helps students, who are in the early stages of learning the concepts, think quickly and understand better. It usually results in more in-depth discussion with greater participation levels. Sometimes, it could be an educational moment for instructors as well because it gives instructors to learn about perspectives that they may have not known before. This lesson can be applied to the domestic courses for global learning with student-centered reciprocal teaching and learning.

Localization of a global problem: Certain issues and global issues and people usually relate to these issues easily. Instructors should review their course materials ahead of time and edit references to local/domestic issues in a manner that would give a launching pad for discussion on global issues. Based on the audience type, one must be flexible and ready to make changes to their material as needed. Start with a local problem and relate it to a global issue or take a global

problem and localize it as needed. This concept of a global problem reifies global citizen education and helps students think globally and act locally.

Cultural perspectives: One must remember that our cultural backgrounds shape our ways of thinking. When it comes to learning and gaining insights, cultural perspective generally plays no dominant role in lower level fundamental courses. However, cultural backgrounds and perspectives play increasingly important roles in courses that are more applied and have elements of society. These courses are in every major, even in engineering, especially in civil, environmental and global engineering.

Social elements and compassion: This International Immersion Program provided a unique opportunity for participants (students and instructors alike) to take teaching beyond traditional classrooms. Instructors were invited to various social events and provided with tours of local attractions. It provided a great opportunity for every party to know each other's social and cultural background in an organic and granular level which was beyond typical stereotypes. This resulted in better and more involved class examples and discussions. It has changed the author's perspective on in-class behavior of sticking to only teaching and not showing compassion. As a result, instructor's teaching evaluation scores have gone higher and students feel more connected. This is more important now than ever before because of the pandemic. Instructors need more compassion and social perspective for them to keep students engaged in meaningful learning. The casual interactions served well to the student body as well. In many countries, instructors are treated as revered and powerful personalities therefore a psychological barrier prevents more casual and open discussion between the two groups (instructors and students). Following social interactions students were able to interact freely and more actively during the class discussions. The causal interaction among faculty participating in the immersion program from more than 25 countries also was beneficial from an internationalization perspective. These interactions usually happened over breakfasts, lunches, and dinners. The casual discussions ranged from usual issues faced in a course to preparing students for problems and challenges that are not even identified or discovered as they are getting their degrees.

The GREAT program is bringing many such lessons and insights together and sharing them with other faculty on campus to promote the internationalization of the curriculum with the help of the Faculty Advising Board (FAB). Many of the FAB members have rich international experience and are the experts or administrators in their academic departments or colleges. The FAB members play an instrumental role in helping the GREAT program become a useful platform for internationalization at home.

Conclusion

Even though a comprehensive study will be required to assess the overall impact of the GREAT program on students and faculty, early signs point to a positive trend. Authors are excited and looking forward to assessing the impact in greater details over a longer period with more activities incorporated in the program and more data collected for the analysis. The need for such a program is heightened as the pandemic is taking longer to end and students are increasingly relying on virtual exchanges to compensate for the lack of travel opportunities. Robust and well-thought on-campus activities and globally responsive education will help students, faculty, and institutions to achieve global domestic internationalization and global competence. Varying

versions of the GREAT programs could be adopted by other institutions based on their unique needs and resources.

Reference

1. Association of International Educators (NAFSA). (2020). *NAFSA financial impact survey*. <https://www.nafsa.org/sites/default/files/media/document/2020-financial-impact-survey.pdf>
2. National Science Board (2014). “Academic Research and Development”, 2014 National Science and Engineering Indicators, 5-41 – 5-42. Retrieved from <http://www.nsf.gov/statistics/seind14/content/chapter-5/chapter-5.pdf>.
3. National Science Foundation (2011). “Empowering the Nation Through Discovery and Innovation”, NSF Strategic Plan for Fiscal Years 2011 – 2016, p. 8.
4. Wächter, B. (2003). An Introduction: Internationalisation at Home in Context. *Journal of Studies in International Education*, 7(1), 5–11. <https://doi.org/10.1177/1028315302250176>
5. Knight, J. (2008). Higher Education in Turmoil: The Changing World of Internationalization.
6. Brunton, M., and Jeffrey, L. (2014). Identifying factors that influence the learner empowerment of international students. *International Journal of Intercultural Relations*, 43, 321–334. <https://doi.org/10.1016/j.ijintrel.2014.10.003>
7. Helms, R. M. (2020). *Can internationalization survive coronavirus? You need to see my data*. Higher Education Today. <https://www.higheredtoday.org/2020/03/04/can-internationalization-survive-coronavirus-need-see-data/>
8. Romani-Dias, M., Carneiro, J., and Barbosa, A. dos S. (2019). Internationalization of higher education institutions: The underestimated role of faculty. *The International Journal of Educational Management*, 34(2), 300–316. <http://dx.doi.org.mutex.gmu.edu/10.1108/IJEM-07-2017-0184>
9. Andreasen, R. (2003). Barriers to international involvement. *Journal of International Agricultural and Extension Education*, 10(3), 65–69.
10. Niehaus, E., and Williams, L. (2016). Faculty transformation in curriculum transformation: The role of faculty development in campus internationalization. *Innovative Higher Education*, 41(1), 59–74. <https://doi.org/10.1007/s10755-015-9334-7>
11. Missouri State University. (2021). *Globally responsive education and teaching (GREAT)*. <https://international.missouristate.edu/great.aspx>
12. Gay, G. (2015). The what, why, and how of culturally responsive teaching: International mandates, challenges, and opportunities. *Multicultural Education Review*, 7(3), 123–139. <https://doi.org/10.1080/2005615X.2015.1072079>
13. Bryk, A., Gomez, L. Grunow, Al, and LeMahieu, P. (2017). *Learning to improve: How America’s schools can get better at getting better*. Cambridge, MA: Harvard Education Press.
14. GREAT Newsletter. (2021). <https://us10.campaign-archive.com/home/?u=9a8f8d950abb2e42086e2bec1&id=1ffdb1af63>
15. Missouri State University. (2021). *Supporting Grant for international virtual exchange project*. <https://international.missouristate.edu/supporting-grant-for-international-virtual-exchange.htm>