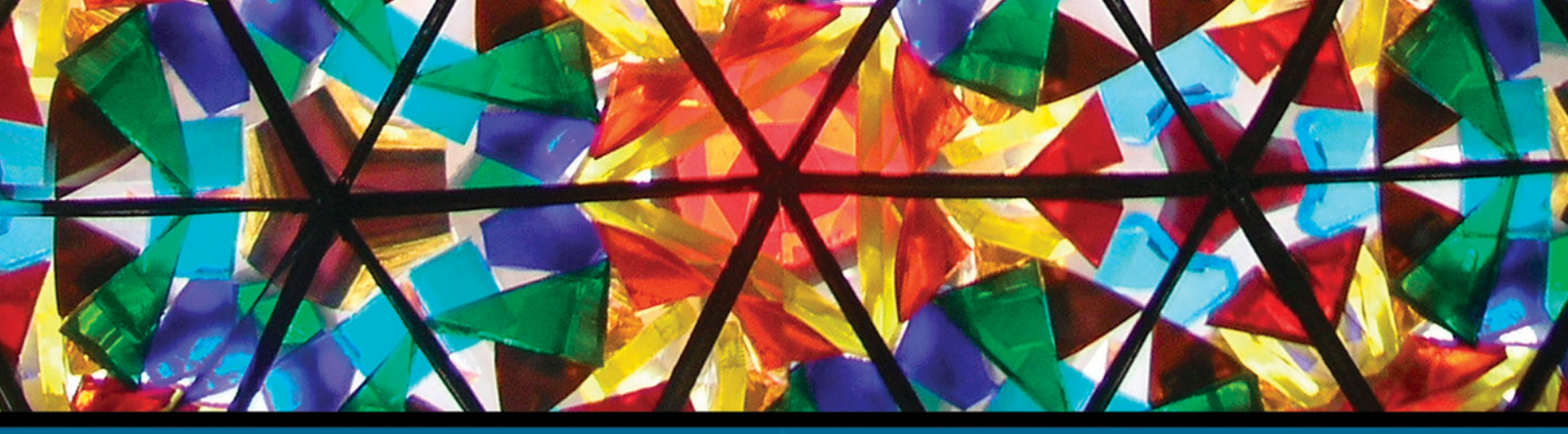


Mentored Undergraduate Research in Global Contexts

Integrated High-Impact Practices for Student Success

EDITED BY

Dawn Michele Whitehead,
Maureen Vandermaas-Peeler,
Susan Buck Sutton,
Mary F. Price,
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and Kris Acheson

AMERICAN ASSOCIATION OF COLLEGES AND UNIVERSITIES



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Table of Contents

v **Foreword**

vii **Acknowledgments**

1 **Introduction**
Why Focus on MUR-GC?
Our Positionality
Aims of the Current Project
A Conceptual Framework for MUR-GC

11 **High-Impact Practices**
Global Learning
Undergraduate Research
Mentoring
Intersections of MUR-GC
Global Perspectives on MUR-GC

25 **MUR-GC Design Principles**
Positionality
Full Participation
Ethical Engagement

31 **Presentation of Research**
Survey Project
Interview Project
Survey Demographic Findings
Case Study Project
Discussion of Research Findings and Implications

45 **Living a MUR-GC Ethos: Implications for Practice**
Attention to Context and Setting
Equity-Mindedness in Action
Inclusive Practices
Mentoring Strategies
Mentoring Models
Culture of Expectations of Engagement
Professional Development and MUR-GC
Assessment

59 **Additional MUR-GC Resources**

60 **About the Editors and Authors**

62 **References**

Foreword

The worst pandemic in more than a century proved to be a testing ground for international collaboration as well as a stark reminder of global interdependence when it comes to tackling the wicked problems and grand challenges, of which COVID-19 was emblematic. But while the worldwide health crisis precipitated by the coronavirus drove unprecedented global knowledge creation and information sharing, it simultaneously fueled levels of nationalism and nativism. This retreat from globalization has emerged at a time when preparing students to address the complex problems of the future will, of necessity, entail explicit engagement with global contexts. Indeed, fulfilling the promise of American higher education in the twenty-first century demands renewed attention to catalyzing active forms of global learning and ensuring universal participation.

Mentored Undergraduate Research in Global Contexts offers a compelling framework for fostering the integration of global learning, mentoring, and undergraduate research, providing insights into how the merging of these high-impact practices (HIPs) leads to foundational student growth and development. By documenting what constitutes effective practice in each of the three components and showcasing the mutual and reinforcing benefits of interaction among them, the authors emphasize the ways in which the blending of these HIPs can produce a situated form of learning, inquiry, and relationship building that is greater than each of the constituent parts. These include increased skill development, opportunities for intercultural and civic learning, and democratic engagement essential to preparing students for success in work, citizenship, and life.

Building upon the results of evidence-based research, this pivotal report aims at advancing the profile and practice of mentored undergraduate research in global contexts (MUR-GC). In the process, it identifies and elucidates design principles that highlight the importance of full participation, positionality, ethical engagement, and relational accountability. Based on the core research values of reciprocity, interdependence, and trustworthiness, the analysis invites decentering the dominant norms around what constitutes knowledge, how it is produced, and the ways in which research and expertise are conceptualized. One result is that relationships formed through intentional, community-based scholarship; collaborative co-inquiry; and inclusive processes and practices are prioritized alongside the research results. And because community values, needs, and concerns necessarily inform the research design, the report contains suggestions for developing equity-minded programs that incorporate mentoring models and strategies, inclusive practices attentive to context and setting, and creating a culture of expectation and engagement. Achieving these objectives mandates faculty and staff professional development around mentoring in the global context, which includes immersion in the research experience, the identification of specific learning outcomes and mindsets tied to intercultural competence, knowledge of local contexts, and an understanding of the ways in which research is shaped by the communities in which it is taking place.

The models of MUR-GC showcased here make evident their potential for profoundly impacting students, faculty, and institutions. Taken together, they compose a guide for future action and inquiry that empowers students as agents within an integrated ecosystem of knowledge needed to create and thrive in a more inclusive, resilient, and sustainable future.

Lynn Pasquerella
President, American Association of Colleges and Universities

Acknowledgments

This publication would not be a reality without the initial collaboration among the American Association of Colleges and Universities (AAC&U), The Forum on Education Abroad, and Elon University's Center for Research on Global Engagement to begin this work on investigating the impact of integrating the practices of mentoring, undergraduate research, and global learning. This work would not have advanced without the involvement of Purdue University's Center for Intercultural Learning, Mentorship, Assessment and Research (CILMAR); the contributions of participants in the early think tanks on this topic; and the hard work of the members of the MUR-GC working groups.

We would like to extend a special thank you to Elizabeth Frohlich for her invaluable early contributions to this work and Jasmine Epps for her continuous support of this work. We also thank The Forum on Education Abroad, Elon University's Center for Research on Global Engagement, Purdue University's CILMAR, Grinnell College's Institute for Global Engagement, and AAC&U for supporting each of the authors throughout this project. This work could not have been done without this amazing team.



Introduction

Our increasingly interconnected world asks much, but also offers much. It places geopolitical concerns, global challenges, and the complexity of relationships across difference, front and center. At the same time, it offers the possibility of creating common purpose, understanding each other more deeply, addressing those challenges, and producing new insights through dialogue. Much depends on how we approach our interconnections. MUR-GC gains its power from and has a role to play in this landscape.

Why Focus on MUR-GC?

Programs fostering undergraduate research experiences were widely adopted across the United States and much of the rest of the world in the twentieth century (Kinkead 2012), with such programming expanding into US study abroad and off-campus settings in the twenty-first century (Comp 2020). Now, undergraduate research (UR), inclusive of scholarship and creativity activity, occurs across a range of global learning (GL) contexts[1] including basic, applied, and field-based projects conducted abroad; those involving intercultural, indigenous, and descendant communities within a student's home community/country; and those involving globally oriented organizations, businesses, and governmental initiatives. These activities come in a variety of forms (individual student projects, joining a research laboratory in another cultural context, completing an assignment within a larger capstone course, internships/practica, public design projects, community based participatory research, and more). Undergraduate research in global contexts (UR-GC) has spread to virtually every academic field, and has been embraced by higher education institutions far beyond the United States.

There is much to support this increased interest in UR-GC. There is also, however, much that requires our attention. Relatively little is known about what is happening, what works, and what does not when global learning and undergraduate research are blended together. What difference does blending these strategies have on student learning and student outcomes? And which students have access to and can most benefit from these experiences? Similarly, we know even less about the impact

1. Context here is understood as defined in *Merriam-Webster Dictionary*: "the interrelated conditions in which something exists or occurs." Context includes but is not limited to the physical setting. It also includes the cultural ideas, social relationships, economic and political forces, historical legacies, and positionalities of the individuals with whom students interact during UR. Global is also understood through its Merriam-Webster definition: "of, relating to, or involving the entire world." In this light, global contexts can occur on a student's home campus (as in a lab populated by individuals from around the world), a campus's surrounding community (as with multinational businesses or immigrant groups), a domestic community culturally different from the student's home, or in another country (where every interaction a student has resonates with global meaning).

such programs have on host partners and receiving communities. Patch and Berends (2020) have provided an invaluable overview of how undergraduates are conducting research abroad, and The Forum on Education Abroad has issued *Guidelines for Undergraduate Research, Field Studies, and Independent Study Projects Abroad* (2019), but the organization would agree that there is much more to be examined. In addition to clarifying the scope, goals, and interactions across a spectrum of UR-GC activities and programs, questions remain in terms of how educators and other mentors can support the intended outcomes of globally situated undergraduate research experiences. Like the interrelationships between undergraduate research and global learning experiences, significant work remains for research partners to identify effective mentoring practices at the intersection of UR-GC and to study the effects of these practices on students, mentors, and communities.

This volume takes a step in this direction by offering a focused analysis of mentoring in such research experiences. For ease of discussion, this topic is hereafter referred to as MUR-GC (mentored undergraduate research in global contexts). Given the importance of mentoring for successful undergraduate research in general (Behling et al. 2015), it is time to consider what such mentoring should look like when:

- The project involves individuals, groups, and organizations whose community memberships and cultural identities differ from those of participating students and/or faculty members.
- The project addresses thorny problems or issues whose scope transcends geographic boundaries, but for which the potential solutions are contextual—that is specific to local conditions as well as cultural, historical, political, and economic factors and processes.
- The goals of the research or creative activity invite students, faculty, and other research partners into problems, issues, and approaches to inquiry or action for which normative approaches to research mentoring do not.
- These developmental relationships are intentionally structured to remove barriers to participation in undergraduate research in global contexts among historically underrepresented students.
- MUR-GC activities are intentionally designed to nurture intended outcomes for all participants, and assessment is leveraged to help ensure those outcomes.

Additionally, it is time to address mentoring at the institutions, organizations, and offices that sponsor MUR-GC activities, including how they:

- support the learning and growth of mentors, through professional development opportunities;
- legitimize the value of mentors' commitments and contributions through faculty and staff rewards systems;
- recognize that a robust equity-minded MUR-GC attends to and accounts for receiving host communities [and/or stakeholders within those communities] as research partners; and
- alleviate equity barriers experienced by cultural mentors and research partners in receiving communities through fair compensation of their time, talent, and contributions to student learning and success.

To advance these ends, we pull together what is known about MUR-GC, report the results of a survey and a set of qualitative interviews that identify how MUR-GC is being conducted, and propose a conceptual framework for thinking about MUR-GC. This volume is the result of four years of conversation and investigation initially generated by two think tank events (2019, 2020) followed by the formation of a steering committee and three working groups sponsored by the American Association of Colleges and Universities (AAC&U), The Forum on Education Abroad, and Elon University's Center for Research on Global Engagement. Our intent is to provide guidance for those already engaged (or planning to be engaged) with MUR-GC while also identifying questions for further investigation.

Our Positionality

Engaging divergent ways of knowing and being are central to cultivating the developmental relationships within MUR-GC, as is the recognition that all knowledge is partial, situated, and emergent. Part of our accountability to these propositions lies in being transparent about our own positionalities. It is important to make visible the limits of our knowledge and lived experiences that, while intertwined, go beyond the topical or disciplinary expertise we bring to this project. In this space, the editors reflect on experiences that have shaped their worldviews.

Dawn Michele Whitehead, American Association of Colleges & Universities. As a Hoosier, by birth and education, my development as a global learning educator was shaped by many formative experiences in and facilitated by the great state of Indiana. Growing up in a neighborhood and learning in classroom environments where I was often one of a few Black people, I became accustomed to living and learning with individuals from racial backgrounds that were different from my own while maintaining a strong sense of who I was and what I brought to the table in these interactions. As I started to engage more globally, I noticed I was still one of a few Black participants in these spaces, too, even when the racial composition of neighborhoods, institutions, and programs became more diverse, and when there was much more cultural and ethnic diversity. These professional and personal experiences have guided my work in both international and comparative education (my concentration for my PhD) and global learning where I have been committed to exploring equitable and inclusive practices to facilitate full participation for all students. Strong mentors from diverse racial and cultural backgrounds have facilitated my professional development, and I am pleased that my personal and professional lives align with my commitment to facilitating high-impact learning experiences for all students, including mentored undergraduate research. I come to MUR-GC as a cis-gendered Black, Midwestern woman of faith, and as a global citizen.

Maureen Vandermaas-Peeler, Elon University. I am a professor of psychology and the founding director of the Center for Research on Global Engagement at Elon University. As a developmental psychologist, I study guided learning in early childhood and higher education contexts. A cis-gendered White woman who is half Dutch, I was raised by parents who offered enthusiastic, sustained support of my development as a feminist academic and global learner. These positionalities facilitated my journey through the education system and my agency in developing significant mentoring relationships with peers and faculty. I have been a teacher-scholar-mentor in undergraduate education for thirty years, and most of my experience is at Elon, a private comprehensive institution focused on engaged teaching and learning. Thus, I have the privileges of tenure and access to resources that facilitate the integration of my teaching, mentoring, and research. I have mentored well over one hundred students in undergraduate research, and blending this work with my teaching and research is my true passion. Through inclusive teaching and mentoring in diverse contexts, I engage in critical self-reflective practices and foster students' examination of their own and others' positionalities so that we may work together toward equity.

Susan Buck Sutton, emerita, Indiana University. A few years ago, I retired from my forty-year career as faculty and administrator in order to focus on what I see as a transformative force in higher education: global collaboration and dialogue. This new, self-scheduled part of my professional life has been transformative for me as well. As I consult and work with organizations and higher education institutions around the world, my conceptual frameworks have expanded and I have become even more aware of the need to reflect on the impact of even our most seemingly benign actions. I am particularly fascinated by the potential for partnerships across boundaries of all sorts to lead us forward together—and see MUR-GC, if done well, as just such a partnership. I also come to MUR-GC as a cis-gendered

White, older woman; a wife, mother, and now caregiver for my 104-year-old mother; and as a cultural anthropologist who loved learning from others long before I knew what anthropology was.

Mary F. Price, The Forum on Education Abroad. Early life experiences as an orphan and as a White first-generation college student have significantly shaped my calling to MUR-GC. When I was in college, the term "first-generation student" had yet to be coined. While I may have shared a skin tone with many of my fellow students, I discovered quickly that I lacked many of the mannerisms, vocabulary, and references, as well as the social networks and social support that many of my peers were able to call upon based on their prior educational experiences, exposure, and family and personal relationships. To my foster parents, study abroad and graduate school seemed irrelevant and impractical. In their minds, I needed to invest my limited resources in a life and career path that would blend well with the time commitments of being a wife and mother in the Florida panhandle. At the time, I did not have the words to describe what was happening, but I knew that I didn't fit "the mold." As an undergraduate, I was lucky to find a female faculty member who took an interest in me and not only encouraged me to study abroad in Puebla, Mexico, but also encouraged me to apply to graduate school, offering important emotional support and sponsorship that kept me going during my undergraduate experience. While a doctoral student in anthropology, I had more opportunities to engage in applied and experiential learning through field-based research. I also gained experience working alongside local residents, government agencies, and indigenous communities in cultural resource management and heritage projects in upstate New York and in northwest Mexico. I was fortunate to have mentors that modeled cultural humility, recognizing the limits of scientific knowledge and the complex power relationships inherent to community-university engagement. Together, over the past twenty-five years, these experiences drew me to seek academic positions where I could walk alongside students, faculty, staff, and partners to leverage university resources to imagine new possibilities as well as address pressing public problems drawing on principles of engaged teaching and research.

Kate Patch, Grinnell College. Growing up in central Iowa as a cis-gendered White woman from a working class family, my exposure to difference was limited. My epistemological origins in academia began with a sojourn to Ghana when, at age seventeen, I entered the Ghanaian landscapes ill-equipped to navigate the complexities of daily life. Through the mentoring of Peace Corps volunteers and my scholarly aunt who accompanied me, I began to understand and participate in the nuanced concepts of power and identity. For the past twenty-five years, I have continued to learn and engage in complex realities through living abroad, learning multiple languages, training as a cultural anthropologist, and most recently working in international education. At Grinnell College, a private liberal arts college, I am the senior international officer and lead a team of international educators who equally share a passion for advising and mentoring undergraduates from across the globe. After taking multiple trips back to Ghana, traveling to more than forty countries, earning three academic degrees, and becoming a wife and mother, I am back where I started, in central Iowa, surrounded by cultural homogeneity, except now I possess and utilize the multitude of skill sets learned through my various positionalities as a scholar, practitioner, educator, advisor, and mentor.

Kris Acheson, Purdue University. Raised in a military family, I identify as a third-culture kid from everywhere and nowhere. Now an empty nester, I am beginning to put down roots in central Indiana. I have been at Purdue University for seven years, which is longer than I have lived anywhere else in my life. I self-identify with many more labels: White woman from a working-class background and religious family, scholar, farmer, mother, artist, musician, and probably, above all, teacher and mentor. I come from a language teaching background, but my professional passion has always been intentionally fostering the lifelong work of intercultural competence development, transformative learning, and equity-mindedness for myself and others. The adjective "lifelong" is key—to me, it

captures the humility of acknowledging all we do not and cannot know that is so contrary to academia's emphasis on expertise, highlights the ever-present potential for discovery of contextualized knowledge as we enter new contexts, and reminds us of the need to be ever-vigilant in our attentiveness to positionality and subjectivity. As higher education prepares learners for this lifelong engagement with learning, I believe strongly that the mission of higher education is both deeper and wider than disciplinary content and that student success cannot be measured alone with simple statistics such as graduation and retention rates.

Aims of the Current Project

In pursuing the goals outlined earlier, this volume also aims to connect a broader range of stakeholders who can (and in some cases, should) be involved in MUR-GC. The complexity of UR-GC in global contexts asks for more than a single mentor (The Forum on Education Abroad, 2019). High-quality MUR-GC is more than a one-person, one-time activity. Depending on the focus of the project and its goals, the roles of "mentors" and foci of mentoring may include individuals from a range of backgrounds and experiences (e.g., career counselors, education abroad professionals, area studies experts, intercultural specialists, onsite professionals, community elders, and more). Indeed, the simple but profound fact that the research occurs in a global context, locally or internationally, challenges normative assumptions about the relevant domains of mentorship in MUR-GC experiences. For example, the place-based nature of MUR-GC invites, and among some proponents requires, the research process to account for host and receiver perspectives, not just as beneficiaries and/or sponsors but as active co-inquirers. Too often, the various individuals, groups, and perspectives that could strengthen MUR-GC may not receive sufficient consideration. This volume aims to describe ways to bring these stakeholders together to create intentional learning and practice environments that *integrate* and *amplify* the benefits of undergraduate research, global learning, and mentoring.

In working to move the conversation on MUR-GC forward, we hope to further unleash its transformative potential. If constructed in certain ways, MUR-GC can open global learning to students beyond those who would normally enroll in international programs, area studies, or education abroad. No matter their disciplinary or professional track, whether it is chemical engineering or physical therapy, MUR-GC can guide students not only in doing basic and applied research but also in placing that discipline in a global perspective, interrogating assumptions around difference, creating knowledge by working across such differences, and developing professional—and in some cases, civic—skills that match the multicultural and international settings in which they will work. Whether or not they become professional researchers, such insights will give students greater agency in their personal, professional, and civic lives as they navigate and address challenges locally as part of an interconnected world.

MUR-GC builds on an understanding of global research contexts that is not bound by traversing national borders. Rather, it is bound by the global nature of the work and the intercultural context for collaboration. From an emphasis on global challenges such as poverty reduction, access to clean water, quality schools, and health care, the work can take place in the international or students' own communities. The *global* in global contexts recognizes that all settings are bound up in complex flows of peoples, goods, ideas, and resources over time and space. At the same time, these flows are entangled with social, cultural, geopolitical, moral, and economic systems that variably enable and constrain these flows (e.g., Appadurai 2000; Slimbach 2020, 10). While all contexts may have inherent global dimensions, we characterize MUR-GC by its explicit engagement with, and leveraging of, these dimensions in research projects and mentorship relationships to enhance the outcomes of high-impact practices (HIPs). Put another way, the discussions in this document are relevant when mentors or students wish to be intentional about the global dimensions of the contexts in which they are working and/or when those dimensions surface in ways that require attention.

Being engaged in MUR-GC holds similar potential for shifting faculty—and even disciplinary—perspectives. Faculty conversations with other mentors, engagement with new communities and organizations, and reflective sessions with students may well move them further along the trajectory from unidirectional knowledge construction to the multiperspectival, transdisciplinary wisdom needed for the highest levels of research in the twenty-first century. Such shifts have the power to recast research problems, rework disciplines, and change the content of what is taught to the next generation of researchers, policymakers, and engaged citizens. This potential invites those of us involved in MUR-GC to work collectively to disrupt norms and structures that historically have excluded many voices on and off campus. These voices, which may be situated within receiving communities, come from the Global South and/or represent minoritized groups in academia. Their often overlooked contributions offer vital wisdom, legacies, and assets to a fully realized MUR-GC praxis.

MUR-GC may also bring value to the communities and organizations where the undergraduate research occurs. Members of these communities and organizations are understood not as research participants and subjects of inquiry, but rather as knowledge brokers, collaborators, co-researchers and co-mentors.

If developed as this volume suggests, MUR-GC may also bring value to the communities and organizations where the undergraduate research occurs. MUR-GC scholars understand members of these communities and organizations not as research participants and subjects of inquiry but rather as knowledge brokers, collaborators, co-researchers, and co-mentors. Students are guided in connecting their work to local, national, and organizational priorities. Human relationships of trust and responsibility are established, with the possibility of continuing once the project is finished.

Now is the time to activate such MUR-GC potentials. Our increasingly interconnected world asks much, but also offers much. It places geopolitical concerns, global challenges, and the complexity of relationships across difference front and center. At the same time, it offers the possibility of creating common purpose, understanding each other more deeply, addressing those challenges, and producing new insights through dialogue. Much depends on how we approach our interconnections. MUR-GC gains its power from and has a role to play in this landscape.

A Conceptual Framework for MUR-GC

After four years of research and discussion, the working group exploring MUR-GC knows there is still much more work to be done. This volume is just the first step. It presents the findings from a survey and series of qualitative interviews with MUR-GC practitioners. It also presents a conceptual framework for thinking about MUR-GC that derives not only from these findings but also what we have learned by bringing together the existing bodies of knowledge related to each domain within MUR-GC—knowledge that scholars have not regularly brought into conversation with each other.

The conceptual framework we propose identifies key elements for effective MUR-GC programs, divided into two intersecting groups: three high-impact practices that come together under MUR-GC and three principles for effective and ethical interaction that should thread themselves across these practices. Each high-impact practice and design principle receives further discussion in the pages to come. What follows here is an initial overview.

High-Impact Practices. High-impact practices (HIPs) are active learning practices that promote deep learning by fostering various forms of student engagement (Kinley 2019; Kuh 2008). By definition alone, MUR-GC promises to merge three such practices (mentoring, undergraduate research, and active forms of global learning). Each has been the subject of considerable study and theorization over the past few decades. Effective MUR-GC therefore asks practitioners to understand and use the insights of all three. Were this to happen, MUR-GC would be a fully integrated hybrid HIP, with

potential outcomes and benefits deepened and amplified beyond what any one component in isolation could achieve. First, however, practitioners must cross the silos that sometimes surround each of these HIPs and convene conversations to look for common threads, identify challenges, understand what each HIP has to offer, and discover what more they can do by working together.

Global Learning. Global contexts inherently create global learning opportunities, even if this is not an explicit goal. Whether doing ecological research in an education abroad program, surveying immigrant groups in the local community, designing prototypes in a robotics lab in virtual collaboration with researchers from across the globe, investigating global implications of a real-world problem with an NGO, or engaging in an ethnography on a domestic study away program, students will encounter varying perspectives on issues, different ways of approaching problems, and contrasting uses for the knowledge that is produced. They will process these differences, draw conclusions, and propose implications or steps for action. The depth, accuracy, and fairness of these conclusions, including the expectations for what follows, are strongly influenced by the interpretive frameworks available to them, the people with whom they interact, the focus and quality of those interactions, and the degree to which they are led to reflect (Sutton 2010). In this regard, the definition of global learning used in this volume underscores what mentors can point their students toward: learning that is "social, collaborative, and integrative, [and] involves exchange and synthesis, understanding of the local and global contexts, engagement with individuals from different backgrounds, and problem-solving for the common good" (Whitehead 2016).

Undergraduate Research. As discussed in much further detail below, those who advocate for undergraduate students to engage in research see this as a "pedagogical approach to teaching and learning," and more specifically "a mentored investigation or creative inquiry … that seeks to make a scholarly or artistic contribution to knowledge" (CUR 2022). This definition embraces a broad spectrum of endeavors, including conducting scientific experiments, developing new engineering models, making observations of the natural world, conducting interviews, creating new artistic representations, and more. It also emphasizes that student learning is as important an outcome as the research insights or artistic creations that are produced.

Mentoring. This volume favors the definition developed at Elon University, which sees mentoring as personalized, reciprocal relationships that "promote academic, social, personal, cultural, and career-focused learning and development in intentional, sustained, and integrative ways" (Vandermaas-Peeler and Moore 2022). Mentoring is important for all undergraduate research but takes on special significance in global contexts. Students cannot be left to wander alone through global complexities. This realization is affirmed by increasing development of "intercultural interventions" in study abroad, study away, and community-based learning—even for students, as well as faculty and staff, who are not doing research (Jackson and Oguru 2017; Mullen 2020; Murrell 2022; Niehaus et al. 2018; Vande Berg 2007). Those doing research can benefit from such programs and have special need for guidance in seeing their project as a personal as well as an academic learning experience, becoming self-reflexive about the impact of their actions on the receiving community, interrogating and reworking their research plans, deepening their understanding and practice of intellectual and cultural humility, understanding their own positionality and capacity, recognizing the need to engage with local community members and incorporate local wisdom, exploring their own and others' cultural identities, following through on commitments, and addressing similar issues.

MUR-GC Design Principles. Much recent discussion, both within and beyond the academy, has identified principles of thought and conduct that are distinctly appropriate to MUR-GC. They are design principles that aid individuals and groups to apprehend and (re)appraise their social positions

in relation to others, to enable students and mentors to develop mutual respect and advance together. These principles prompt educators to attend to crafting experiences in global contexts that, although not fully realized in every situation, are a source of value, insight, and affirmation to all. When intentionally leveraged, these principles call educators' attention to the workings of power and privilege inside and outside the classroom, including those that stem from intercultural and global systems. Making these structures visible is the opening needed to tap into the full educational potential of global learning opportunities to generate discernment, foster equity, and advance justice. These principles include:

Attending to one's positionality in knowledge production and use. Positionality refers to the social location individuals and groups occupy in relation to others with respect to such forces as ability, culture, gender, nationality, race/ethnicity, and role. Positionality influences access to wealth and authority. It also shapes the ways in which we understand and interact with the world around us. Attending to positionality in the context of research mentoring is not solely about appraising the individual positionality of the researcher and mentee in the context of their relationship; it also entails the consideration of the systems of knowledge production that shape the norms of conduct, including what constitutes *legitimate* knowledge and who can be considered sources of legitimate knowledge. Indigenous scholars, those from the Global South, and Black, feminist, and community-engaged scholars have all pointed to issues of *epistemic exclusion* and inequity in who is recognized as a "knower" and what sources of knowledge are viewed as legitimate in the production of academic knowledge (Andreotti et al. 2020; O'Meara 2016; Settles et al. 2020). Researchers, both qualitative and quantitative, increasingly recognize that "positionality does not undermine the truth of [a piece of] research; instead, it defines the boundaries within which the research was produced," thereby improving the research (Jafar 2018). Mentors should articulate their own positionality while guiding students to think about how theirs is affecting not only their research interests, methodology, and ability to interpret what they find but also their interactions with receiving communities and host organizations. This is particularly true in global contexts, which increasingly raise issues of positionality in the minds of students and receiving communities.

Full Participation. Justice, equity, diversity, and inclusion (JEDI) initiatives are a natural ally for MUR-GC. The quality of research and scholarship is strengthened by tapping many different perspectives. In addition, all students deserve the benefits that MUR-GC can provide. While there have been racial disparities in participation in HIPs, with White students participating at higher rates than their Black, Latino/Hispanic, and Asian counterparts, involvement in service learning/community-engaged learning has been an area where these groups participated at the same rate (NSSE 2013, as cited in AAC&U 2015, 20). While education abroad is currently the most visible form of global learning in the United States, such programs are pursued largely by White students and mentored by White faculty. This diminishes both their reach and their power. Intentional integration of global learning across curricular and cocurricular experiences among disciplines and majors helps increase participation by all students. Equity-minded attention to the processes, structures, programmatic foci, and outreach efforts that inform MUR-GC programs, as well as the location where they occur, is greatly needed. Additional attention should also focus on how MUR-GC programs gain by having more diverse student participation and what adjustments will be needed to support this wider range of students. Programs also benefit from greater diversity among faculty and staff who advise, inform, facilitate, and lead global learning experiences for students. More students can see themselves as global learners when the educators also reflect the diversity of those who have been underrepresented in global learning experiences, and all students have an opportunity to see that global learning is truly for all.

Ethical Engagement. The promise of MUR-GC draws attention to relational accountability in research represented by values such as trustworthiness, transparency, collaboration, reciprocity, mutuality, and interdependence. Ethical engagement is not a synonym for ethical standards and codes. This is not to say that standards and codes don't inform engagement. Rather, ethical engagement refers to the translation, negotiation, and critical analysis of values in the context of embodied experiences and relationships. Ethical codes and standards of research offer guideposts for adherence to requirements of safety and informed consent. Engagement, however, references sensemaking that integrates moral as well as professional values in research practice. Undergraduate research exposes everyone involved to moral encounters, competing value claims, and a plurality of standpoints and approaches to ethical situations. Neither participating students nor their mentors are disconnected actors floating above a given setting, making this a critical site for modeling and mentorship. Participating students, for the time they are involved in the research, play a role in shaping the conduct of the project. Mentoring student researchers to read contexts, check implicit biases, model behaviors that facilitate trust and trustworthiness, and learn skills of deliberation is as critical to the practice of research as mastering methods and analytical tools. These concerns become amplified when the project is conducted in cross-cultural settings, including places such as research labs, which are not traditionally viewed as intercultural. Ethical engagement raises questions about the nature and limits of "expertise" among researchers working alongside professionals and other members of receiving communities. Twenty-first-century critiques of the one-sidedness in university-based outreach such as including community-based research have been steadily moving toward a set of community-engaged, culturally responsive ethical frameworks to inform practice and reframe accountability (Chasi 2020; Hartman, Paris, and Blache Cohen 2014; George Mwangi 2017; Sutton 2016). These frameworks provide a foundation on which to strengthen mentoring relationships in MUR-GC.

MUR-GC has much to gain by integrating these HIPs and principles. Students may better see the interconnections among knowledge production, career preparation, civic participation, a deepening understanding of the world, and an enhanced sense of their place and responsibility within it. Faculty and other mentors may well cross boundaries, broaden perspectives, and rework their own research. Receiving communities and host organizations may be more fully engaged in such programs. Relationships may be established that outlast specific projects. More voices may be heard and more people involved. And the benefits and learning will flow in all directions.

Regardless of role or entry point into MUR-GC, we hope readers will find this volume a useful stimulus to future action and inquiry.



High-Impact Practices

HIPs can benefit all students, especially first-generation students, students of color, and students from low-income backgrounds.

Kuh (2008) identified a list of practices in higher education that have the potential to nurture student engagement and deep learning and promote student success. These high-impact practices (HIPs) include first-year seminars and learning communities, writing-intensive courses, and collaborative assignments and projects, among others. HIPs have not found universal acceptance, however. Johnson and Stage (2016) problematized the statistical relationship between HIPs and graduation rates, although persistence is only one aspect of student success as Kuh et al. (2017) define the construct. Some critics have also argued that HIPs only reach these outcomes when done well. In response, Kuh and O'Donnell (2013) identify eight dimensions to ensure that HIPs, including global learning, are high-impact. For example, students need to invest time and effort over an extended period of time; instructors or mentors need to provide frequent, timely, and constructive feedback on learning artifacts; and the learning needs to be assessed for experiences to be considered HIPs.

HIPs can benefit all students, especially first-generation students, students of color, and students from low-income backgrounds. Unfortunately, high-impact programs are generally boutique rather than large-scale because of their intensive nature and/or resource demand, and participation tends not to be equitably distributed across students from different demographic groups (Kuh and O'Donnell 2013; McNair and Finley 2013).

Global Learning

The movement of people, information, materials, and knowledge across social and geographic borders is a phenomenon that has occurred for thousands of years through a variety of mechanisms, including pilgrimages, trade, and knowledge quests. It is in this context that the field of international and comparative education developed. The work of Marc-Antoine Jullien and Cesar Auguste Bassett in the 1800s laid the foundation for the field. The three guiding principles are (1) improved theory by examining interactions between school systems and societies, (2) improved policy and practice to attain equity in schools and society, and (3) contributions to attain global peace and justice (Arnove and Torres 1993). The field of international and comparative education became more institutionalized during the post-World War II period, similar to other practices that are related to global learning. This concept of "global learning" used in higher education, however, is a product of more recent geopolitical processes that began just after World War I (University of Delaware 2023) when veterans and educators believed the need to understand cultural difference through the learning of language and culture was an ever

more important goal for peace. Global learning mobility resumed again in the post-World War II era when the leaders of nation-states came back together in the formation of economic development and shared knowledge through the creation of the United Nations in 1945.

In the decades that followed, college and university students (mostly White, affluent, and female) often studied abroad in Europe for their junior year. While mobility-focused activities have been the most visible dimensions of global learning experiences, they are so much more than education abroad. Global learning, as a concept, has its origins in the United Nations University (UNU). Its charter defined the UNU as "an international community of scholars engaged in research, training, and dissemination of knowledge" on "pressing global problems of human survival, development, and welfare" (Soedjatmoko and Newland 1987, 215). When the UNU coined the term "global learning," it "meant to convey both the sense of learning as a global process that must involve all levels of society and the sense of learning to think globally, in recognition that the world is a finite, closely interconnected, single system" (Soedjatmoko and Newland 1987, 221). In its framing, the UNU also noted the integrative and collaborative dimensions of global learning experiences resulting in the application of knowledge (221).

While Florida International University cites the UNU framing in its institutional global learning story (Landorf et al. 2018), many other institutions appear to be guided by global learning as conceptualized by the UNU. In reviewing institutional definitions from a range of colleges and universities, global learning is social, collaborative, and integrative, and involves exchange and synthesis, understanding of the local and global contexts, engagement with individuals from different backgrounds, and problem-solving for the common good (Alamo Colleges District, the Hague University of Applied Sciences, Kennesaw State University, University College London, and the University of California, Davis). Global learning was elevated when it was named a HIP. It is now part of broader institutional conversations and initiatives.

During the 1990s, globalization became an important concept in theory and practice and resulted in a proliferation of college and university students studying abroad for a semester when more borders opened up and transnational information sharing became the norm. Terminology changed from study away, study abroad, and education abroad to international education to reflect the ever-growing opportunities available to students, such as semester programs (including direct enroll, exchanges, and hybrid programs with a provider); internship opportunities abroad; short-term, faculty led programs (consisting of two to eight weeks); and community-based learning.

Global learning experiences are not discipline-specific. Rather, they can be integrated into all areas of study and can be considered an essential practice for work, life, and citizenship.

While education abroad most often is associated with global learning, global learning as an instructional strategy manifests through an array of other practices including collaborative online international learning (COIL), service learning and community-based global learning, intercultural and globally focused internships, capstones, undergraduate research, integration of global perspectives, meaningful engagement with international students, and opportunities for language study where students are engaged in experiences beyond their primary culture and communities (Altbach and Knight 2007; Carter, Latz, and Thornton 2010; Whitehead 2016). Global learning experiences are not discipline-specific. Rather, they can be integrated into all areas of study and can be considered an essential practice for work, life, and citizenship.

High-Impact Global Learning. For global learning experiences to be effective, they must be integrated, intentional, and linked to learning outcomes. Many institutions have institutional learning outcomes, including those connected to global learning outcomes. These include engagement with diverse communities and cultures, demonstration of cultural humility, cultural understanding, and personal and social responsibility. Global learning experiences should be connected to these learning outcomes (Center for Engaged Learning 2017; Hovland 2014) and integrated into general education and the majors. This

connection shifts the focus from having global learning experiences to what students learn and can do as a result of engagement. Moreover, students should have a significant investment of time and effort over an extended time. For example, an effective global learning experience will involve engagement with a global issue and/or community members before and after a specific experience.

Equity-Focused Global Learning. Finally, global learning must be available to all students, not just the select students who opt into area studies or education abroad. Data on participation in education abroad is collected annually. While the number had been increasing before the COVID-19 pandemic, only about 10 percent of students at US-based institutions of higher education participated in education abroad (IIE 2021) at its height. Participation by students of color remained much lower than their White counterparts. There are also disparities in participation by major. To ensure experiences for all students, it is critical to embed global learning within curricular and cocurricular initiatives on or near campus. It is equally essential to provide the academic and financial resources necessary to support all students in these experiences.

Undergraduate Research

Undergraduate research (UR) is considered a HIP because of the potential impact the experiences can have on students' learning and development (Kuh et al. 2017; Kuh et al. 2008). Later in this volume, we highlight a number of benefits that students, faculty, the institution, and local communities can gain through participation in undergraduate research. However, first it is important to understand what we mean by UR. The language to describe UR can include various terms such as "student as scholar" and "research-based education," among many others utilized in international institutions and disciplinary communities (Healy and Jenkins 2022, xx). Related approaches that focus on research processes include critical thinking, lifelong learning, inquiry- or problem-based learning, and community-engaged learning (Mieg and Haberstroh 2022; Pedaste 2022; Strand 2000). Regardless of the specific terminology or approach, UR has become a global endeavor in teaching and learning and is implemented around the world (Mieg and Haberstroh 2022).

The Council on Undergraduate Research (CUR)states:

> "Undergraduate research, scholarship, and creative inquiry is fundamentally a pedagogical approach to teaching and learning. With an emphasis on process, CUR defines undergraduate research as: A mentored investigation or creative inquiry conducted by undergraduates that seeks to make a scholarly or artistic contribution to knowledge (Council on Undergraduate Research 2022)."

Similarly, Campbell (2022) has identified four key features of undergraduate research, scholarship, and creative activities: mentorship, originality, acceptability, and dissemination. Of course, each of these features is culturally constructed in terms of both conceptualization (what it constitutes) and implementation (how it is practiced), and often varies by discipline. As an example, acceptability is a value-laden term that could encompass everything from relevance of research questions to rigor, fit, and ethics of research methods. As such, it cannot escape the following questions: acceptable to whom, based on whose criteria, and for what purposes?

The definitions and features convey that undergraduate research should be able to happen in all academic fields. Indeed, in the recent *Cambridge Handbook of Undergraduate Research* (Mieg et al. 2022), multiple authors describe undergraduate research in an array of disciplines, including STEM, health, social sciences, humanities, arts and design, business, education, and legal studies, in international contexts representing over twenty-seven countries (Lehman 2022; Mieg 2022). Across many contexts and approaches, research-based learning places the focus on students (however, for contrasting

views that call for a balance between student and community interests and outcomes, see Strand et al. 2003; MacMillan and Stanton 2014).

Student Benefits. There is a rich literature on student benefits associated with undergraduate research experiences (UREs). Most early research on student learning from UREs is from STEM disciplines, and STEM student learning gains associated with participating in UREs include achieving a deeper understanding of the field and the process of scientific research, gaining increased confidence in the ability to practice and understand science, and learning how science knowledge is constructed (Lopatto 2004; Nagda et al. 1998; Russell et al. 2007; Seymour et al. 2004). Additionally, development of transferable professional skills, such as communication skills, is a commonly reported outcome of URE participation (Carter et al. 2016; Seymour et al. 2004), as are socio-emotional development and personal growth (Osborn and Karukstis 2009). Thiry et al. (2012) investigated gains in three categories related to students' developmental trajectories, including "thinking and working like a scientist, personal/professional gains, and becoming a scientist/professional" (265). In addition, Thiry et al. (2012) identified differences due to students' level of experience with research. Novice researchers reported basic gains in research skills and confidence in conducting research, whereas more experienced students reported development of higher order scientific reasoning skills such as analytical thinking and problem-solving, as well as confidence in their ability to become scientists.

Some recent work shows that students participating in undergraduate research in humanities and social sciences report similar learning gains as STEM students. Self-reported student data collected at a research university over a twelve-year period suggest that both STEM and non-STEM students made gains in understanding what everyday research work is like, ability to work independently, communicating their research (within and outside of their field), and comfort in discussing concepts related to their field of interest with others (Stanford et al. 2017). Similarly, in another multiyear study, Craney et al. (2011) found that students in humanities, social sciences, and STEM majors did not differ in their most frequently reported gains (knowledge about the research topic, improving a resume, learning how to do research, and preparation for graduate school). However, some outcomes reported by students did differ by disciplinary area in terms of the strength of effect. For example, formulating research questions, providing an opportunity to publish, and providing a realistic career option showed greater effects for STEM majors than for humanities majors.

Participation in UREs has also been associated with student outcomes such as increased academic performance (Jones et al. 2010), increased likelihood of graduation (Jones et al. 2010; Stanford et al. 2017), increased retention in a career pathway (Chemers et al. 2011; Estrada et al. 2018; Jones et al. 2010; Hurtado et al. 2007; Schultz et al. 2011), and the likelihood of pursuing graduate and professional education (Eagan et al. 2013; Hathaway et al. 2002; Lopatto 2004). Several studies have found that underrepresented minority students realize strong benefits for learning and developmental gains as well as the outcomes listed above (Lopatto 2007, 2004; Nagda et al. 1998; Russell et al. 2007; Schultz et al. 2011), and UREs have been identified as a pathway for diversifying STEM disciplines in particular (Chemers et al. 2011; Jones et al. 2010).

One caveat associated with the literature on student benefits related to UREs is that some reported outcomes may be an artifact of selection bias. Undergraduate research participants tend to be high-achieving, have parents from higher economic and educational levels, and are more likely to interact with faculty members (Boylan 2009). Furthermore, student decisions about majors and intention to pursue undergraduate research are often made prior to beginning college (Lopatto 2010). However, some of the work reviewed here has accounted for selection bias through modeling (Jones et al. 2010; Schultz et al. 2011), using matched samples (Schultz et al. 2011), and randomly assigning students to research experiences (Nagda et al. 1998). The findings show that, even when controlling for selection bias, student participation in UREs is associated with benefits including increased academic performance, retention to graduation, and persistence in career path.

Faculty Benefits. While the focus is often on the student benefits derived from undergraduate research, the faculty members also report numerous benefits from mentoring students in undergraduate research (Campbell 2022; Hall et al. 2018; Laursen et al. 2010; Osborn and Karukstis 2009). Osborn and Karukstis (2009) identify five key benefits: 1) enhancing mentoring and teaching (e.g., being an academic role model); 2) achieving research, scholarly, and creative outcomes (e.g., remaining current in the field); 3) integrating scholarship and teaching (e.g., research activity leads to new content for courses); 4) increasing job satisfaction and personal development (e.g., intellectual stimulation); and 5) broadening the impact and benefits to the faculty (e.g., engaging underrepresented students). It is easy to see that faculty who identify benefits recognize the importance of mentoring undergraduate research and how it blends with their typical roles (e.g., teaching, scholarship, and service). However, these benefits do not necessarily accrue equitably across all faculty involved in undergraduate research, particularly women and those from racially underrepresented groups. For all the benefits to accrue to the full breadth of faculty active in undergraduate research, faculty peers and institutional leaders need to concretely demonstrate how they value these to help achieve the benefits outlined (Hall et al. 2018). This includes being explicit about how undergraduate research mentoring and professional development related to mentoring are valued in workloads, mentoring, and faculty review processes (King and Upadhyay 2022).

Institutional Benefits. Many institutions value undergraduate research, as it is one of the HIPs that lead to student success (Kuh 2008). For many institutions, it also aligns well with their mission related to experiential education or student-centered learning. Lopatto (2006) has stated that "the undergraduate research experience may be the epitome of engaged learning" (22). Osborn and Karukstis (2009) identified six ways in which mentoring undergraduate research benefits institutions. These include 1) building a community of scholars (e.g., enhancing a sense of belonging); 2) deepening relationships with alumni (e.g., giving back time and other resources to the institution); 3) fostering innovation and cross-talk (e.g., inclusion of a constellation of mentors); 4) sharing a sense of purpose and achievement (e.g., emphasis on the importance of learning through research); 5) enriching an institution's curriculum (e.g., development of course-embedded research); and 6) providing opportunities to engage with the local community (e.g., community-based participatory research). Collectively, these benefits enhance relationships with alumni, students, and faculty and generate a culture of innovation and inquiry. However, it is important to note that the benefits to students, faculty and staff, institutions, and the community are not guaranteed by participation alone. They require intentional design and thoughtful implementation, as described elsewhere in this publication.

Mentoring

Mentoring is increasingly recognized as a critical component of student success during and after college. However, despite more than four decades of research on mentoring, no universally accepted definition exists (Clutterbuck et al. 2017; Mullen and Klimaitis 2021). Internationally, mentoring undergraduate research is also termed "supervision," but the roles of mentor and supervisor are often similar and involve guiding a student through inquiry processes in an academic context (Walkington et al. 2022). Mentoring reflects a holistic approach to supporting students' learning and development. In foundational work on developmental relationships in the workplace, Kram (1988) conceptualized two primary mentor functions: *instrumental*, focused on goal-directed activities, skill mastery, and career development, and *psychosocial*, supporting socio-emotional, personal, and identity development (Johnson et al. 2010; Keller 2010). This framework is often applied to mentoring relationships in higher education. After reviewing more than fifty definitions of mentoring, Crisp and Cruz (2009) categorized four types of support: psychological and emotional support, support for setting goals and

choosing a career path, advanced academic subject knowledge in one or more fields, and identification of a role model. In a comprehensive review of mentoring in undergraduate education, Crisp et al. (2017) identified four areas of consensus in definitions of mentoring: 1) mentoring relationships are focused on students' growth and development; 2) mentoring includes professional, career, and personal/emotional supports; 3) mentoring relationships are individualized and reciprocal; and 4) within the educational environment, mentors have more experience, influence, and/or achievement compared with their students (p. 19). Because mentors are intentionally committed to supporting growth and development in their students, mentoring relationships are "rooted in long-term caring" (Crisp et al., 19).

Mentoring relationships are also influenced by the contexts in which they occur. Based on hundreds of interviews from a large, multi-institutional study, Felton and Lambert (2020) describe the importance of a supportive, relationship-rich environment in which students can create "webs of relationships that will sustain them through, and beyond, college" (6). In a relationship-rich environment, mentoring relationships are an important component of the campus ecology, and the specific institutional contexts and programs are drivers of definitions of mentoring (Crisp et al. 2017). As one example, Elon University recently participated in "Mentoring for Learner Success," the inaugural cohort of the American Council on Education's Learner Success Lab. In the course of this eighteen-month comprehensive self-study of mentoring relationships, a definition of mentoring relationships in Elon's institutional context was developed and tested through an iterative process described in detail by Vandermaas-Peeler and Moore (2022). At Elon University, mentoring is defined as follows:

> Mentoring relationships are fundamentally developmental and learner-centered. Within Elon's relationship-rich campus environment, mentoring relationships are distinct from other meaningful relationships in that they:
>
> - promote academic, social, personal, cultural, and career-focused learning and development in intentional, sustained, and integrative ways;
> - evolve over time, becoming more reciprocal and mutually beneficial; and
> - are individualized, attending to mentees' developing strengths and shifting needs, mentors' expertise, and all members' identities.
>
> Although mentoring sometimes is conceptualized as a one-to-one hierarchical relationship, mentoring relationships function within a broader set of relationships known as a mentoring constellation. The number and nature of specific relationships within these mentoring constellations vary across individuals, time, and contexts, with different mentors and peer mentors offering varied forms of support and expertise.[2] As a result, mentors play significant roles serving one or more mentoring functions, although few mentors will serve all mentoring functions.

Benefits of mentoring relationships include enhanced personal and professional learning and development, as well as greater engagement at work and increased well-being post-graduation (Gallup Inc. 2014; Vandermaas-Peeler et al. 2018a). The role of effective, high-quality mentoring has received significant attention with the growing emphasis on students' participation in HIPs designed to facilitate integrative learning and engagement, such as undergraduate research and global learning (e.g., Allocco et al. 2022; Cruz et al. 2022; Giovanangeli et al. 2017; Mieg et al. 2022; Vandermaas-Peeler et al. 2018b). Mentoring has been linked to a variety of academic outcomes such as persistence and academic achievement, as well as developmental outcomes contributing to students' academic success, such as college adjustment (Crisp et al. 2017; Mullen and Klimaitis 2021). Likewise, mentors in higher education also experience benefits, including personal satisfaction and fulfillment, professional rejuvenation, and networking opportunities (Johnson 2016; Vandermaas-Peeler et al. 2015). To understand the

2. The mentoring constellation model is described in subsequent sections of this report.

full breadth of mentoring benefits, Eby et al. (2008, 2010) introduced a developmental lifespan approach to the study of why mentoring matters.

It is well established that mentoring relationships are sustained, promote holistic growth through guided reflection, and shift over time to adapt to new contexts, skills, and identities (Irby 2013; Johnson 2016; Mullen and Klimaitis 2021; Vandermaas-Peeler and Moore 2022). Because of these dynamic interpersonal and contextual dimensions, mentoring relationships are complex and can be challenging to identify, interpret, and assess. Designating someone as a mentor does not guarantee that an authentic mentoring relationship that is tailored to members' expertise, identities, and needs will evolve. Given that a mentoring relationship "emerges from a series of interdependent, reciprocal interactions over time" (Keller 2010, 31), both the mentors' and the mentees' contributions to the relationships are critical (Mullen and Klimaitis 2021).

Although it is clear that mentoring opportunities are not consistently inclusive of, or responsive to, all identities, particularly in predominantly White institutions, it is imperative that models of mentoring consider the salience of racial, ethnic, cultural, gendered, and sexual identities for both mentors' and mentees' experiences and well-being in higher educational contexts (Harris and Lee 2019). For traditionally underrepresented and marginalized students, the frequency of interaction with faculty and peer mentors is particularly effective in improving academic performance and psychosocial factors (e.g., Eby et al. 2012; Jacobi, 1991; Miller et al. 2013; Santos and Reigadas 2005). Faculty and peer support, as well as encouragement, validates the students' presence on campus and creates a family-like environment, both of which have been shown to buffer issues of retention/persistence in underrepresented students (Campbell and Campbell, 1997; Hu and Ma 2010; Kuh 2008; London, 1996; Terenzini et al. 1994; Tinto, 1975, 1987; Wallace et al. 2000). However, these benefits are often not realized, as underrepresented and marginalized students interact with faculty less often than traditional students (e.g., Kim and Sax 2009) in both the classroom and the laboratory. Ultimately, although underrepresented students disproportionately benefit from mentorship, many do not reap these benefits (Crisp et al. 2017).

Longmire-Avital (2020a, 2020b) explores the need to tailor mentoring to minoritized students—whom Longmire-Avital (2022) prefers to call "historically *excluded* minority students" to highlight the role of systemic oppression and educational inequities—noting that "critical mentoring" is most transformative when it recognizes and nurtures students' existing capital (2019) and centers the identity-related needs, experiences, and strengths of learners. High-quality mentoring requires significant commitment, open communication, mutual respect, and acknowledgment of privileges and limitations (Phillips and Adams 2019). Indeed, mentoring approaches that are not calibrated to these dynamics can be seen as "unresponsive to dynamics of privilege and oppression in excluding historically underserved populations from purposeful mentoring" (Mullen and Klimaitis 2021, 21).

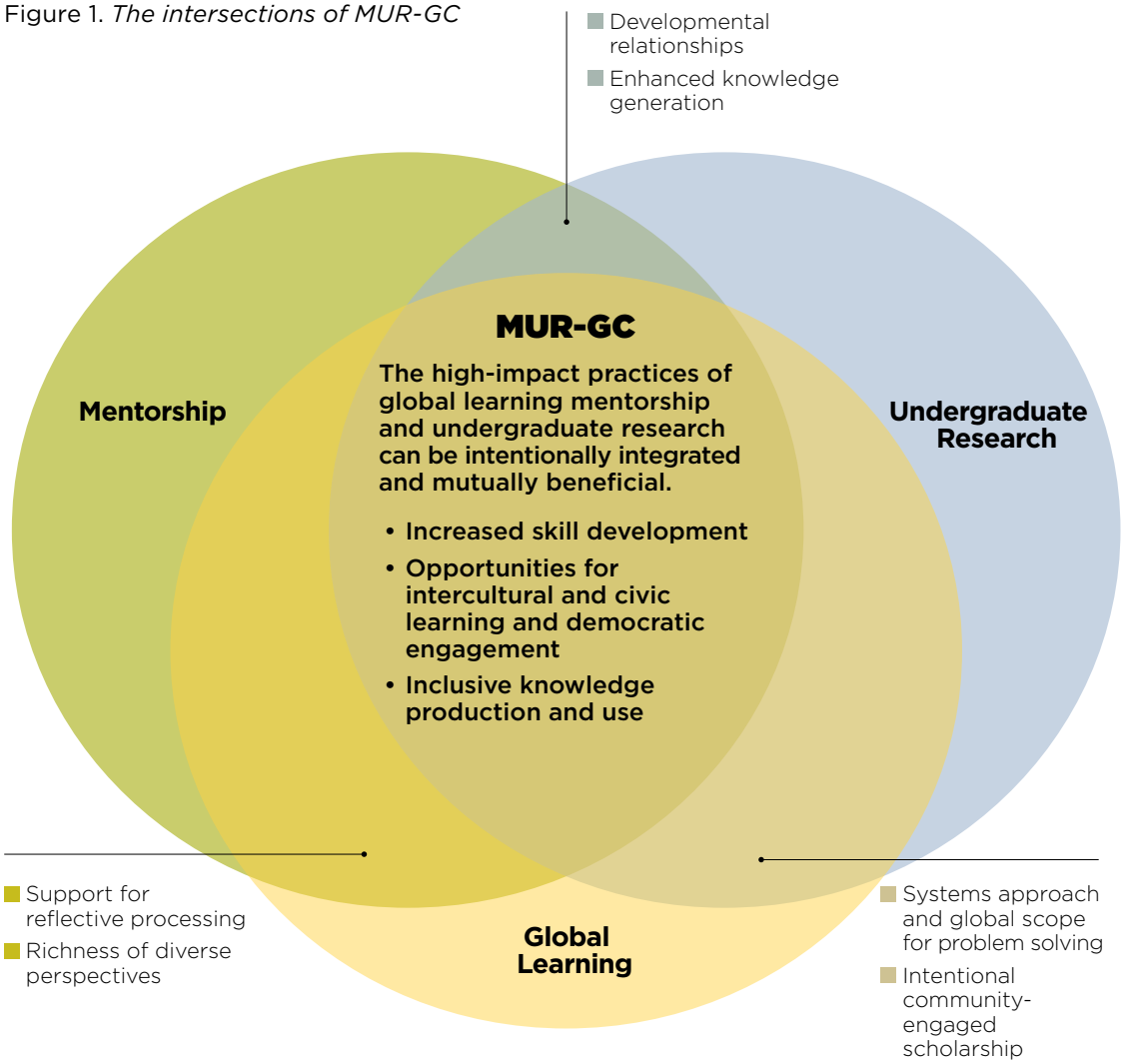
Intersections of MUR-GC

While a list of HIPs implies that each is discrete and unique, we concur with others (Bringle 2017) that HIPs can be effectively intertwined, creating impacts that are mutually reinforcing. Figure 1 on page 18 depicts an integration of undergraduate research, mentorship, and global learning in a tryptic Venn diagram, detailing some of the synergistic benefits that emerge between each of the three components as well as holistically from MUR-GC.

The Venn diagram approach in Figure 1 highlights that while each HIP involved in MUR-GC brings the potential for integrative, applied, and deep learning, additional benefits are fostered in the interaction between these modes of learning. Perhaps the best researched of these interstitial spaces is the connection between mentorship and undergraduate research. Many scholars have noted that mentored undergraduate research can lead to increased skill development, enhanced knowledge production, and broadened access to full participation for mentees and mentors alike. High-quality

mentoring is thought to be an essential component of undergraduate research for realizing student (and possibly faculty) benefits, especially for students identifying as belonging to underrepresented minorities (Auchincloss et al. 2014; Ishiyama 2007; Linn et al. 2015; Patch and Berends 2020; Vandermaas-Peeler et al. 2018).

Figure 1. *The intersections of MUR-GC*



We have advocated for the use of the salient practices framework of undergraduate research mentoring (Shanahan et al. 2015; Walkington et al. 2018, 2020) as one intentional way to ensure high-quality mentoring. This framework was based on practices that have been historically utilized in a wide variety of disciplines and across contexts and has since been implemented in many contexts and disciplines. This framework can be viewed not only as a pedagogical tool to help student success but also for mentor learning and development. For more details on this framework, see the section below on salient mentoring practices in the Key Strategies for MUR-GC Practice section as well as as well as the "Ten Salient Mentoring Practices" linked from the Additional MUR-GC Resources section on page 59.

Likewise, recent research has illuminated the importance of mentorship for global learning and intercultural development. The Georgetown Consortium project meta-analysis demonstrated, for example,

that without structured and guided reflection opportunities, most study abroad students do not move the needle on the Intercultural Development Inventory—and this predictive relationship holds true regardless of gender, race/ethnicity, length and location of program, and many other individual variables (Vande Berg et al. 2012). Jones and colleagues (2019) also provided evidence that the modality of mentorship (group or one-to-one) and the experience of mentors make a difference for student learning outcomes in study abroad. Students should have periodic, structured opportunities to reflect on and integrate their learning (Kuh and O'Donnell 2013). Students participating in global learning curricular or cocurricular experiences must have time to make sense of and generate learning from their practical and intellectual experiences through reflection activities. Students should also have substantive conversations about their global learning experiences with educators and peers (Kuh and O'Donnell 2013), both from the home institution and within the local and global communities. These conversations are critical to ensure students' understanding and application of their global learning experiences. Although research documenting the impact of mentorship on global learning is more prevalent, we also know that cultural diversity in mentoring relationships can provide richer opportunities for personal and professional development for those involved (Kochan et al. 2014; White-Lewis et al. 2022).

In recent years, increasing attention has also been paid to the powerful potential synergies between UR and global community-based learning, particularly in creating opportunities for students to learn *with* and *from* community partners through collaborative co-inquiry in both local and international global contexts (Fisher-Yoshida and Lopez 2021; Hoffman and Rosing 2007). The COVID-19 pandemic further fueled interest in campus-community partnerships, particularly as constraints on mobility prompted campuses to rethink global engagement and refocus energy on global learning opportunities closer to home (Motley et al. 2021). Research has shown that there are significant opportunities to advance students' intercultural and civic learning in research collaborations that emphasize active engagement and immersive experiences as students undertake research, pursue partnerships, and develop relationships within diverse communities both locally and globally (Banks and Gutiérrez 2017; Deardorff 2009; Engberg 2013; Hovland 2014). Student learning is not, however, the sole desideratum; educators are increasingly focused on fostering inclusive relationships with community partners that are reciprocal, ethically sound, and equitable. Such relationships prepare the ground for collaborative exchange where community values, needs, and concerns inform research design and mutual benefit features among the study's goals (Ryser et al. 2013; Wells et al. 2011). Hartman et al. (2014) have articulated a vision for educational exchange that they call Fair Trade Learning. This vision "prioritizes reciprocity in relationships through cooperative, cross-cultural participation in learning, service, and civil society effort" and "foregrounds the goals of economic equity, equal partnership, mutual learning, cooperative and positive social change, transparency, and sustainability," with the goal of fostering a more just, equitable, and sustainable world (110). (See also Keith 2005.) Related scholarship has extended global citizenship, service learning, and internationalization models to integrate ethical community engagement, solidarity, and interdependence in community-based global learning and underscore reciprocity and collaboration in post-colonial frameworks grounded in shared authority, reciprocity, and cooperation (Agnew and Kahn 2014; Caruana 2014; Gendle and Tapler 2022, Hartman 2020; Hartman et al. 2018; Larsen 2016).

Together, all three HIPs yield opportunities to curate integrated best practices, foster inclusion of more diverse participants, address gaps between mentoring theory and practice, and share tools that support intercultural and research mentoring skills. These actions will result in higher impacts for students by promoting experiential learning that enables mentors and mentees to develop and hone essential skills related to critical thinking, relationship building, creativity, problem solving, conflict management, knowledge production, and integrative global learning. MUR-GC also contributes to a culture of innovation where a wider range of epistemologies are valued; diverse teams of researchers capitalize on the different perspectives, bodies of knowledge, and life experiences they bring; and research methods are brought to bear on real-world problems.

Global Perspectives on MUR-GC

Success in developing, supporting, and mentoring undergraduate research in a global context often relies on the commitment of dedicated partners. In other words, in projects that involve diverse researchers and mentors, the engagement and enthusiasm of the researchers and community members from all partners are critical. Since most of this MUR-GC analysis has been centered on how institutions and academics support US students in this context, it is essential to consider the perspectives and contributions of the non-US administrators, researchers, and partners as well as non-US students in these settings. Extended interviews and conversations with faculty, university administrators, and program provider staff who had developed or managed MUR-GC projects in Colombia, Chile, Russia, Ghana, and other locations around the world have yielded insights into the valuable contributions, challenges, and best practices of international collaborators. The sections below discuss international conceptualizations of intercultural outcomes of MUR-GC, the challenges of being the international partner to US higher education institutions, and some practices that have proven successful in international contexts. A more detailed presentation of the findings of this interview study can be found later in this volume, under Presentation of Research: Interview Project.

In projects that involve diverse researchers and mentors, the engagement and enthusiasm of the researchers and community members from all partners are critical.

Conceptualizations of intercultural learning in/outcomes of MUR-GC. In the interview sample, across the board, both US and non-US facilitators of MUR-GC seemed to agree that the greatest general value of these experiences is the opportunity to build intercultural competence and immersion in a research experience. Many, however, did not always have precise or specific requirements for outcomes. Most of the non-US partners admitted that they did not have a formal assessment process for determining if students participating in their programs gained measurable global competence over the course of the experience. Non-US administrators also conceptualized values and outcomes that varied to some degree from that of administrators of US-based programs.

For interviewees Juan Diego Velasquez and Silvia Caro Spinel, involved in research exchange programs between Colombian universities and Purdue University, one of the key values was the development of professional opportunities for Colombian students, many of whom come from rural backgrounds and are first-generation students. Often, these students have not had prior research opportunities, may not see themselves as scientists, and would not otherwise have graduate school or research-related career opportunities. As Velasquez noted, "Mentoring required in my case goes beyond the technical area. It actually has now moved into a sort of professional development as these students are now exposed to a place like Purdue and are now given opportunities that are maybe not afforded commonly in Colombia." Mark Sinclair, a director of SIT Chile, expressed that a large part of his effort is "to build students' understanding of the juxtaposition between the Global South and Global North, to engage [students] with community research and, even more generally, to help them understand that the process [of research] may be more important than the product." Pyotr Petrov, a MUR-GC collaborator in Russia, suggested that a critical goal was to dispel the notion that US and Russian citizens were enemies of each other, noting that academics don't have these monolithic views. He added, "I don't think any of us, people who dealt with American students, saw it as us versus them."

In essence, most non-US administrators hoped to provide greater professional opportunities and possibilities to students, expand their awareness of different regions in the world, and dispel inaccurate assumptions about relations between those communities and the United States.

Challenges of being the "international" or non-US partner. In pursuit of successful international collaborations and projects, non-US partners acknowledged some ongoing challenges, many of which may also resonate with domestic MUR-GC partners located within the United States. A recurring theme that

emerged in most of the conversations, regardless of project or location, was determining how to fully educate US students and faculty about the historical, cultural, or social context of the communities in which they were pursuing research. Silvia Caro Spinel, faculty at Universidad de los Andes, explained that US administrators and students were not always aware of the significant differences in socio-economic status among Colombian students, and that this was defined by an urban-rural split in the population. Increasingly, Colombian universities were recruiting poor students from rural Colombia, but these students were often as unfamiliar with the urban university culture as any visiting international student. In some ways, these first-generation Colombian students face some of the same challenges with which such students often struggle in the United States, but to an even greater degree. Spinel noted that many rural Colombian students come from families in which neither parent can read or write.

The struggle to provide sufficient historical context, cultural background, and ethical interpersonal connections to visiting US students persisted in various situations. Sinclair worked with a student who wanted to do research on healthcare access for those who had suffered torture under the Pinochet regime, and he had to advise her that it would be inappropriate and possibly traumatic to ask individuals about such personal experiences. In other situations, US students resisted the admonitions about where and with whom they could visit in regions that were potentially risky locations for them. Rofela Combey, a faculty member at University of Cape Coast, Ghana, described US students pushing back when told there were places "you can't go without a kind of attire." She also shared that some students insisted on cooking for themselves, but, lacking sufficient knowledge of local produce market practices, ended up with food poisoning.

Nicole Webster, a Penn State faculty member with research experiences in the Caribbean, Latin America, and Francophone West Africa, noted that the challenge of accepting and engaging with a different culture could be particularly difficult for female US students as they confronted gendered roles that differed dramatically from their sense of their "rights" as defined in the United States. She described having to explain to students that at the chief's palace, "it's the males that go ahead of us. It doesn't matter that I am faculty, their [principal investigator], or not. It is the males that go ahead of the females." Other dimensions of student identity also had the potential for generating intersubjective tensions for students. This included the intersectional lenses through which individuals and groups onsite viewed a student's race, ethnicity, mental health, or sexual identity. Webster talked at length about how traveling to West Africa as an African American student challenged both students' expectations of the receiving community and their sense of self. She noted how important it was to prepare students for this destabilization and cognitive dissonance and then support them through the experience by articulating her own journeys of self-discovery and multicultural identity formation.

A related challenge for many of the non-US and US partners was dealing with faculty who felt they did not need any particular preparation or intercultural training for work in a specific region. Some, in particular STEM faculty, simply did not see the cultural context as critical to their research efforts. They understood their work to be culture-neutral or "objective" in nature. International partners struggled to relay the importance of the local contexts to students when their US mentors did not share this value. Perhaps equally problematic, other US faculty reportedly believed they were already well-versed in the culture because they had been there before, even if only on vacation, on study abroad as students themselves, or as Peace Corps volunteers many years prior. Non-US partners resisted this conceptualization of culture as simplistic, monolithic, and unchanging and argued for faculty to be vulnerable in their lack of knowledge of the local context, relying on their non-US counterparts to lead in this area.

Parental assumptions about the political danger of a country to which US students were traveling often permeated discussions that involved non-US partners. Pyotr Petrov, a Moscow State University partner, felt compelled to remind students (who were expected to share information with their parents) that "we don't have a problematic relationship with the United States of America. Maybe some of our politicians do, but we don't." Aware of negative stereotypes and fears associated with their nation or world region in the general US population, non-US partners seemed to want to be seen as individuals

with whom it was worth developing relationships rather than as faceless representatives of where they were from. Petrov described the deep satisfaction non-US faculty gained from working with scholars and students from the United States in collaborations that involved mutual learning and respect.

Parental assumptions about safety are also a part of the conversations for domestic placements. As part of a global exchange program between Historically Black Colleges and Universities (HBCUs) and Appalachian colleges, parents on both sides of the exchange were concerned about their children's safety. Some parents of students at institutions in rural settings had concerns about their children spending time in Atlanta, Georgia, due to stories about crime and challenges associated with "big cities," while some of the HBCU parents had concerns about their children spending time in rural communities that were relatively homogenous and didn't have much racial and ethnic diversity.

Challenges around language and fluency when students are on location for global research could manifest in interesting ways. Notably, many US students, who are often monolingual, tend to choose locations where the English language is prevalent. This might bring more US students to Ghana, for example, rather than Francophone West Africa. Students in Spanish-dominant locations, even those who had studied Spanish extensively in a formal classroom environment, contended with not having sufficient conversational fluency to collaborate effectively with their fellow researchers, engage with locals in the community, or make scholarly contributions. Sinclair noted that the opposite could also be true, however. US students who are heritage speakers with advanced Spanish skills and familiarity with another Latin American culture sometimes assumed they would be fully familiar and comfortable in a Chilean community. As a result, "they have really committed some important errors in their way of behaving there," he said.

Recommended practices. The MUR-GC strategies suggested by non-US partners all centered around successful and ethical partnering practices. Many of the non-US partners defined equitable and intentional partnerships as the best means for ensuring a successful, safe, and fulfilling MUR-GC experience. Below are several illustrations of what this kind of partnering could look like, from their perspectives:

> ***One-on-one student partnerships***—In terms of building language and cultural familiarity for student researchers, a faculty member at the University of Bogotá developed a program with one-on-one partnerships between Colombian and US students so each group can learn about the other's culture. This has been particularly popular for Colombian students, and the program has not been able to meet the demand from that constituency. The host students are expected to share not just language skills, but also provide social and community engagement. Kofi Adu, a professor at Penn State, insisted on pairing students to be partners specifically for research projects. They were expected to rely on each other to develop and share data and publicly present findings.
>
> ***Faculty partnerships***—Another example of critical partnerships involves selection of faculty to be involved with international projects. Characteristics seen as favorable in faculty partners include an interest in participating in the intercultural preparation process. Non-US partners suggested that faculty participants who were bicultural, perhaps with deep capital in both the US and the non-US location, were particularly helpful.
>
> ***Partnerships with members of the local community***—Along with recruiting partners who have bicultural identities, a corollary value that interviewees emphasized was developing strong partnerships with local community members, whether they are part of the research project or not. These stakeholders help define local expectations and conditions for students for both safety and success in the region. These partners can help reinforce the community standards to students or be "that voice of reason," as Nicole Webster defined it. In one particular scenario, she invited someone from the Nicaraguan news industry to explain the political

circumstances to US students so they would be more mindful of travel risks. As part of this partnership, the local community should also have a voice in the application and dissemination of any research conducted in their spaces and with their members.

Mentoring as a "whole person" partnership—Finally, a number of non-US partners reinforced the value of the faculty mentors being willing and committed to working closely with students, but not just in the research setting. Adu strongly emphasized the importance of introducing and engaging students with the culture and society of the community in which their research is based, outside of just the research aspect. He also noted that "getting to know the students, knowing their background and where they are from," was essential as well. Many of the non-US administrators affirmed that bringing mentors who have a counseling background can be helpful in these settings.



MUR-GC Design Principles

We discovered the threads of positionality, full participation, and ethical engagement woven throughout our project. We view these threads as guiding principles when designing MUR-GC experiences.

We set upon the initial task of documenting what constitutes effective practice in each of the three MUR-GC components (mentoring, undergraduate research, and global learning). Then we gathered evidence that would generate insight into how the integration of these three practices into MUR-GC can produce a situated form of learning, inquiry, practice, and relationship that is unique from its constituent parts. Along the way, we discovered the threads of positionality, full participation, and ethical engagement woven throughout our project. We view these threads as guiding principles when designing MUR-GC experiences.

Attending to one's positionality in knowledge production and use

We must acknowledge that the promise of developing a robust practice of MUR-GC, which embraces principles of equity and justice in process and seeks to contribute to equity and justice in outcome, challenges us to question fundamental assumptions that lie at the heart of the academic research enterprise. We cannot consider MUR-GC as *only* a teaching and learning practice; rather, it is also part of an integrated ecosystem of knowledge-making practices (Boyer 1999). The promise of MUR-GC challenges us to see teaching and learning not just as the *transfer* of knowledge but as a process of *knowledge creation, transformation, and mobilization* (Trowler and Kreber 2009). When research mentoring brings together members of dominant and marginalized identities, there is an inherent risk that mentors can contribute to epistemic injustice (cf. Fricker) in which a person's credibility and capacity as a knower is denied. This pattern has been documented for faculty from underrepresented groups. We can see the echoes of these patterns in undergraduate research literature, where dominant discourse in undergraduate research focuses on STEM and on a Western conception of science and expertise. In the undergraduate research space, the literature that incorporates alternative knowledge systems such as Indigenous, feminist, and democratic frameworks is limited or is nested in the scholarship from other fields. By contrast, an equity- and justice-driven MUR-GC challenges us to:

> ***Recognize and decenter dominant norms of what constitutes "knowledge" and "expertise," how both are produced, and the nature and ways of being "researchers."*** Power, privilege, unconscious bias, and bigotry are part of the legacy of the conduct of research and how individuals come to understand their roles in research and their authority to speak and act as experts (Boyte 2009). MUR-GC challenges all involved to look at existing scholarship and

practice with new eyes to ensure that they don't reproduce epistemic forms of injustice (cf. Fricker 2007) in our well-intentioned efforts to expand access to research experiences in global contexts.

Leave our comfort zones to engage with ways of knowing that prioritize relationships and process as much as results and to center our research and mentoring practices rooted in cultural humility. Indigenous, feminist, and democratic frameworks offer us entry points but too often remain at the margins of practice, and in HIPs-related scholarship.

Resist generalizing mentoring frameworks that fail to embrace the complexities of intragroup and intergroup differences among students grouped into the normative categories of under-represented groups. Rather, MUR-GC calls us to respond to and build upon intersectional mentoring frameworks (for example, see Nkrumah and Scott 2022).

Full Participation

Enrollment in higher education has become more equitable and reflective of the American population over the past twenty years, but it is important to go beyond enrollment and look at participation in higher education activities. It is essential that all students, including those whose participation has been historically underrepresented, have opportunities to fully engage, participate, and succeed throughout their educational experiences. This goal includes MUR-GC opportunities. MUR-GC integrates HIPs, which benefit all students, but particularly students from historically underserved groups. Participation in HIPs by faculty and staff, as MUR-GC mentors and facilitators, and by students of color has lagged behind their White counterparts. There has also been disproportionate participation along disciplinary lines, faculty rank, gender, and abilities. While not all faculty may be drawn to MUR-GC, as the examples presented thus far illustrate, many are. And it is vital that institutions provide clear guidance and support to MUR-GC faculty to encourage innovation and sustain engagement. To be effective, such institutional and disciplinary peer support should be multifaceted and focused on supporting faculty to demonstrate how their boundary-spanning contributions are constitutive of their integrative excellence, spanning multiple domains for faculty work (cf. Boyer, 1990). This includes embedding guidance in formal faculty review policies, legitimizing and celebrating it in reward systems, and nurturing faculty through professional development and mentoring. To foster these systemic changes, institutions will need to review and adjust their structures and practices to encourage full participation, equitable access, and engagement, and to address identified inequities.

As institutions seek to expand participation and encourage full engagement in MUR-GC and other HIPs to all students, reflection, transparency, and intentionality must guide the process.researchers and mentors, the engagement and enthusiasm of the researchers and community members from all partners are critical.

As institutions seek to expand participation and encourage full engagement in MUR-GC and other HIPs to all students, it is critical that individual and institutional reflection, transparency, and intentionality guide the process. Practitioners and leaders should draw from the literature on equity-mindedness and full participation as they seek to broaden participation in MUR-GC. For example, institutions can use insights from equity-minded practice to examine patterns of inequity in student outcomes that often have links to historically exclusionary practices. With an intentional examination of assumptions and structures, institutions could identify and recognize stereotypes, and then reassess practices to create change that encourages participation and success for all students (USC Center for Urban Education 2016). By contrast, full participation is "an affirmative value focused on creating institutions that enable people, whatever their identity, background, or institutional position, to thrive, realize their capabilities, engage meaningfully in institutional life, and contribute to the flourishing of others" (Strum et al. 2011, 3). Embracing full participation as a guiding institutional value also invites an examination of participation, how authority

and decision-making are distributed, and the impacts this has not only on students but also faculty, staff, and the communities colleges and universities serve. In addition, using the lens of full participation to guide institutional reflection and action calls attention to the extent to which our institutions cultivate feelings of respect and value for key constituents, and the ways work is conducted and valued, followed by an assessment of obstacles that shape inclusion and advancement (Strum et al. 2011). Both frameworks are instructive for ensuring equitable engagement for all in institutional practices, including MUR-GC. Together, they encourage an interrogation of participation, including a thorough analysis of who is eligible yet doesn't participate and historical participation patterns by race, ethnicity, gender, majors and minors, faculty rank, faculty and/or staff designation, and/or ability (Clayton-Pedersen et al. 2022; Witham et al. 2009). In addition to using these frameworks as touchstones for reflection and deliberation, they can, and in our view should, guide institutions toward action after inequitable patterns have been identified. It is not enough to simply identify the patterns and bottlenecks; the next step is to dismantle inequitable structures and policies and identify new pathways for full participation.

America's Unmet Promise (Witham et al. 2015) identifies five principles to create equity by design. As institutions seek to offer MUR-GC opportunities for all students, they will find relevance in the five principles:

1. Clarity in language, goals, and measures is vital to effective equitable practices.
2. Equity-mindedness should be the guiding paradigm for language and action.
3. Equitable practices and policies are designed to accommodate differences in the contexts of students' learning—not to treat all students the same.
4. Enacting equity requires a continual process of learning, disaggregating data, and questioning assumptions about relevance and effectiveness.
5. Equity must be enacted as a pervasive, institution- and system-wide principle.

Clayton-Pedersen et al. (2022, 25) argue that "the persistent underrepresentation of students of color, first-generation students, and other marginalized groups in education abroad programs represents a failure of higher education to engage the full educational benefits of its diverse campus communities. Education abroad experiences themselves . . . are diminished because participants are missing the contributions and perspectives of broadly diverse cohorts." While their emphasis is on one mode of MUR-GC practice, their argument is also true for other global learning experiences and mentored undergraduate research in global contexts. Students, faculty, and staff benefit from participation by diverse campus community members, and other students miss out when they are not learning with all their peers. Those excluded from these experiences also miss out, and institutions must be intentional about putting structures, programs, and practices in place to ensure access and opportunities for success in MUR-GC and other HIPs.

Ethical Engagement

UR can be considered a part of the socialization process for how students develop a sense of themselves, evolving from novice to expert in a field of study, in relationship to an area of study or the communities and populations that are the focus of inquiry. Undergraduate research experiences are also a space where students should receive an orientation to and practice with research ethics in principle and in practice. While institutional review is required for some classes of faculty-led research initiated in the United States, including those involving human subjects, institutional review is not required for student research projects. However, some students and mentors do publish their research, so they do complete the Institutional Review Board (IRB) process for their MUR-GC. Others do not because their MUR-GC experiences are viewed principally as teaching and learning activities. If not mandated

at the institutional level, research ethics are left up to the faculty mentor to address and model. Additionally, ethical engagement covers a broader terrain than what is spelled out in institutional review processes and ethical codes. Ethical engagement is about how ethics are practiced.

Because MUR-GC presumes that the research is conducted in an intercultural setting, all research experiences have a community-based dimension to them. The situated nature of MUR-GC experiences extends the range of ethical considerations beyond values of fairness, trustworthiness, quality, informed consent, and safety, to include reciprocity, mutuality, and interdependence, among others (e.g., Patch and Berends 2020, 124; Hartman et al. 2018). These values are a consistent dynamic influencing relationships and outcomes among research mentors, mentees, and collaborators as well as the quality of research or creative activity. This is true whether the values are explicitly attended to or remain a tacit dimension of the project.

Proponents of UR and global learning frequently claim that these experiences not only benefit students but also produce benefits for society, including positive results for the receiving communities. However, the evidence supporting these latter claims is mixed and far less studied for both global learning and undergraduate research than impacts on students, even when the work has a civic or community focus (e.g., Larsen 2016). Further, values such as trustworthiness, partnership, and reciprocity are variably understood cross-culturally, across disciplinary communities, and among individual members of those communities. In the case of reciprocity, for example, Dostilio et al. (2012) conducted a concept review and identified three orientations. Their review surveyed literature spanning service learning and community engagement, philosophy, evolutionary biology, feminist scholarship, Indigenous ways of knowing, and leadership studies. Their research identified three orientations to reciprocity that were present across this sample of scholarship. The orientations included reciprocity a) as a relationship of *exchange* (we each get something of value out of our relationship), b) as a relationship of *mutual influence* (how we work and set goals evolves iteratively over time in tandem with and as a condition of interpersonal interactions), or c) as a relationship of *generativity* (where we have or develop identities as co-researchers or co-creators that result in our producing something that would not have been produced outside the relationship and/or results in a shift in our understanding of who we are as part of the relationship). Each orientation to reciprocity conceptualizes motivations, expectations, interests, and rewards differently.

As an element of MUR-GC design, we recognize that grappling with values such as reciprocity, interdependence, and trustworthiness is integral to learning what constitutes a situated moral, professional, and scholarly accountability in research practice and part of developing a scholarly identity. By "grappling with values," we include:

- the work invested to hold space not only for "training on ethics" but also for deliberation related to values salient to the project and context, as well as what accountability among members of the research team and receiving communities means;
- the individual metacognitive work to discern and examine values and their meanings from different cultural and role-based standpoints in specific research settings and apply them to practice;
- the work to express value commitments and navigate conflicts in values during practice, individually and in relationship with others (e.g., mentors/mentees, researchers/collaborators/participants, researchers/hosts/sponsors); and
- efforts over time to gather feedback to enable planning for and taking stock of successes and attending gaps/missteps between what we claim our values to be, what actually transpires, and how we hold ourselves accountable to those involved, including onsite partners, hosts, participants, and some would argue, to place.

The partner perspective examples outlined in the previous section illustrate both the importance of situating understanding of local contexts, intercultural skill development, and relational accountability as part of both research ethics and the technical preparation for and actual conduct of research. The

relevance and value that faculty mentors give to intercultural preparation and to unpacking values such as reciprocity, trustworthiness, dignity, and respect set a tone as well as frame expectations for what students should pay attention to. Too often, as noted in partner interviews, faculty discount the need for this work for themselves, perhaps encouraged in the belief that their practice of science is objective and culturally neutral by the prevailing Western scientific epistemology. Undergraduate student researchers aren't blank canvases; rather, like faculty, each comes with their own cultural epistemology (Patch and Berends 2020).

Supporting student researchers to attend to their own positioning is a step toward preparing them for ethical engagement. However, this work is impeded when faculty mentors fail to prioritize this preparation and subsequent work with mentees and partners. The partner interviews noted earlier, such as the case involving the student wanting to conduct health access research among torture survivors under the Pinochet regime, illustrate the problematic situations that can arise onsite. Student researchers may encounter tensions between values, interests, and authority when there is not ongoing communication and collaboration among onsite and offsite mentors to guide students. Examples Nicole Webster provided earlier in this volume illustrate that scaffolding, feedback, and reflection related to ethical engagement may require different tools, types of facilitation, and preparation for students, mentors, and partners. For example, she pointed to the difficulties US female students faced in cultural settings where they perceived their sense of "rights" were violated because cultural norms related to gender differed from their expectations. In another example, she pointed to unique forms of intersectional dissonance that African American students experienced while in West Africa in relation to their expectations of the receiving community and their own self concepts, and the steps she took to prepare and support them, including opening up and being vulnerable to share her own journey. Developing repertoires of culturally responsive mentoring practices and building capacity within the structure of the project that balance psychological safety with opportunities for learning and inquiry are areas that need critical attention. MUR-GC programs that are designed to be positionally aware integrate ongoing planning and reflective processes through the conceptualization, design, implementation, and assessment of the project (Bandy et al. 2018). This focus on process is part of the relational infrastructure that expands opportunities for co-mentoring relationships to develop and for an ethos of multidirectional accountability to be cultivated in the practices, structures, outcomes, and products of research.

On the preparation side, guidelines and toolkits can provide springboards to support mentors and mentees in building their capacity for ethical engagement. Some of these include the Interdependence Toolkit (Hartman and Brandauer 2022) developed by the Community-Based Global Learning Collaborative, The Forum on Education Abroad's *Guidelines for Undergraduate Research, Field Studies, and Independent Study Projects Abroad* (2019), as well as *Guidelines for Community-Engaged Learning Abroad* (2022). Relatedly, the Center for the Improvement of Mentored Experiences in Research (CIMER) has updated a mentoring curriculum (Branchaw et al. 2020) to include culturally aware mentoring practices for supporting undergraduate researchers in STEM. While each of these resources is an important contribution to practice, each has limitations when it comes to scaffolding ethical engagement when considering each of the three arms of MUR-GC practice. More concerted attention is warranted.



Presentation of Research

The three working group projects summarized offer both interesting thematic commonalities and unique contributions. With regard to common themes, the intersection of MUR-GC was central.

We turn now to a report of the research projects initiated by this think tank. The report is divided into three sections, each of which describes a different project's methodology and findings, followed by a final section that discusses all three projects together.

Survey Project

Survey Methodology. During spring and summer 2021, members of the research working group created and distributed a survey to nearly 15,000 participants (via a snowball sample using professional listservs, social media, and personal connections) to capture the current landscape of MUR-GC practices. The purpose of the survey was an environmental scan, seeking information about the range of current practices, an examination of stakeholder beliefs and values, and a needs assessment, with the shared goal of advancing the profile and practice of MUR-GC at the national level (Cruz et al. 2022).

To capture and benchmark current MUR-GC practices and models, the working group developed a survey to determine how institutions model and implement the intersections of global learning, mentorship, and undergraduate research; how faculty and staff engage in MUR-GC on their campuses and among their students; the stakeholders' beliefs and values; and an overall assessment of needs related to engagement in MUR-GC.

In fall 2021, the survey was distributed to over fifteen thousand participants via a snowball sample within professional listservs, social media, and email groups of organizations such as AAC&U and The Forum on Education Abroad. The intended targets were administrators, faculty, and staff who are engaged in MUR-GC within their college or university. The survey design included three main categories: *demographics* such as institutional type (by Carnegie classification), institutional size (by FTE), primary role (e.g., tenured faculty, professional staff), and primary discipline (e.g., arts, STEM); *quantitative questions* querying respondent's experiences with teaching global undergraduate research, intercultural learning, and mentorship, as well as the characteristics of students participating on these endeavors; and *qualitative questions* including three open-ended questions on greatest strengths, weaknesses, and opportunities in MUR-GC. The research group gave participants approximately four weeks from September to October of 2021 to complete the survey. When the survey was closed, 144 responses had been recorded.

A team of seven members of the MUR-GC research group had the task of analyzing the survey results through both a quantitative and a qualitative approach. The data overview consisted of:

- a demographic panel, including Carnegie classification;
- institutional type, role, and discipline of the participant;
- types of undergraduate research programs described;
- characteristics of students participating in MUR-GC programs;
- mentoring questions including:
  - student participation information,
  - use of mentoring constellations, and
  - ratio of mentors/mentees;
- evidence-based practice questions related to:
  - the importance of strategies used and challenges faced in mentored undergraduate research in global contexts;
  - type of training/professional development received and/or participated in;
  - intercultural learning questions including:
    - ways participants integrate intercultural learning into their programs,
    - whether they have intercultural learning training/what kinds of intercultural learning training they received, and
    - how they understand their responsibility in promoting intercultural learning in their programs; and
- questions of how respondents assess MUR-GC including:
  - whether student learning outcomes are assessed as part of their MUR-GC program or practice and
  - which tools and/or methods are used in assessing MUR-GC; and
  - three open-ended questions addressing the participant's strengths, weaknesses, and challenges related to their work in MUR-GC.

Survey Demographic Findings

The survey asked about quantitative demographics that included Carnegie classifications, types of undergraduate research programs at each institution, the characteristics of students participating in MUR-GC programs, the discipline categories of student participants, and the role of each survey respondent (see Table 1).

Table 1. *Survey respondent demographic information.*

Carnegie Classification	Count
Doctoral Institutions	25
Master's Institutions	8
Bachelor's Institutions	7
Associate's Institutions	5
Other	4
Institutional Size	
5,000 Students	18
5,001–10,000 Students	16
10,000+ Students	14

Types of UR Programs	Count
Credit-Bearing on Campus	22
Courses Embedded (one to many)	22
Lab-Style or Research Group Format (one to many)	10
Short-Term Study Abroad/Away in Situ	26
Virtual or Digital Research	13
Semester or Full-Year Study Abroad/Away	17
Community-Based Global Learning	12
Other	8

Table 1. *Survey respondent demographic information (continued).*

Role of Participants	Count
Full-Time Faculty (non-tenure)	8
Full-Time Faculty (tenure-track)	8
Full-Time Faculty (tenured)	13
Part-Time Faculty	4
Senior Administrator	8
Staff	6
Student/Other	3
Discipline	
Arts & Humanities	15
Social Sciences	14
STEM	13
Other	8

Characteristics of Students	Count
First-Generation College Students	24
Honors Students	34
Students of Color	28
International Students	22
Women	40
Students in Art Majors	15
Students in Humanities Majors	26
Students in Professional Studies	21
Students in Social Science Majors	31
Students in STEM Majors	29
Other	4

Survey Assessment Findings. Participants' responses to survey items that asked them to rate their confidence in assessment ability, knowledge about assessment practices, and regular assessment of student learning outcomes were generally high and did not vary according to institutional size, institutional type, participant role, or discipline (see Table 2).

However, participant responses about whether their institutions value assessment differed according to institutional size (chi-square = 11.10, df = 3, $P = 0.011$). Participants at smaller institutions (fewer than five thousand students) indicated stronger agreement with this statement than those at institutions of other sizes (5,001–10,000 or 10,000+ students).

Table 2. *Summary of survey responses relating to participant perceptions of their confidence and knowledge about assessment of student learning outcomes (SLOs), the frequency with which they assess SLOs, and the valuation of such assessment by their institution.*

Please indicate the extent to which you agree or disagree with the following statements about assessing undergraduate research in global contexts.	Mean ± SD
I am confident in my ability to assess student learning outcomes in mentored undergraduate research in global (domestic and international) contexts.	9.1 ± 1.1
I am knowledgeable about evidence-based assessment practices in mentored undergraduate research in global contexts.	8.7 ± 1.1
I regularly assess student learning outcomes associated with my practice in mentored undergraduate research in global contexts.	8.7 ±1.3
I believe that the work of assessing mentored undergraduate research in global contexts is valued at my institution.	8.5 ± 1.3

Most participants assess student learning outcomes (SLOs); only 4 percent of participants responded that they do not assess SLOs (see Table 3). Across institutional sizes, types, participant roles, and disciplines, some SLOs were more frequently assessed than others. Participants reported that technical skills were the most frequently assessed SLO, and career orientation was the least frequently assessed SLO. Disciplinary knowledge, intercultural competence, knowledge of world/other cultures, and integration of global perspective in research and practice were all frequently reported, with 30 percent to 58 percent of participants assessing each.

Table 3. *Summary of survey responses relating to types of student learning outcomes (SLOs) assessed by participants.*

Which of the following student learning outcomes do you assess as part of mentored undergraduate research in global contexts?	% (number of respondents)
Technical skills	74% (37)
Disciplinary knowledge	60% (30)
Intercultural competence	60% (30)
Knowledge of world/other cultures	58% (29)
Integration of global perspective in research and practice	56% (28)
Confidence in ability to do research	50% (25)
Motivation toward achieving academic goals	46% (23)
Interpersonal skills	46% (23)
Metacognition	32% (16)
Confidence in ability to effect change	26% (13)
Confidence in personal abilities	24% (12)
Career orientation	20% (10)
I do not assess SLOs in global undergraduate research.	12% (6)
Other	4% (2)

Across institutional sizes, types, participant roles, and disciplines, some assessment tools were more frequently used than others (see Table 4). Direct measures (e.g., assignments) were the most frequently reported form of assessment (72 percent), followed by self-created surveys and focus groups/interviews (32 percent and 34 percent, respectively). Validated surveys and learning analytics were less frequently reported (16 percent and 14 percent, respectively).

Table 4. *Summary of survey responses relating to tools or methods used by participants to assess global undergraduate research.*

Which of the following tools or methods do you regularly use to assess global undergraduate research?	% (number of respondents)
Direct measures (e.g., assignments)	72% (36)
Focus groups/interviews	34% (17)
Self-created surveys	32% (16)
Community partner assessment	26% (13)
Peer assessment	24% (12)
Portfolios	20% (10)
Other	18% (9)
Validated surveys	16% (8)
I do not assess global undergraduate research.	16% (8)
Learning analytics	14% (7)

Survey Training Findings. More survey participants reported receiving training in intercultural learning (61 percent) than in mentoring undergraduate research in global contexts (41 percent). For both mentoring undergraduate research and intercultural learning, the most frequently reported types of training included training at professional meetings, colleagues/networking, and experiential practice/learning by doing (see Table 5). Off-campus workshops were frequently reported as a type of training for intercultural learning but not for mentoring undergraduate research in global contexts.

Table 5. *Summary of survey responses relating to training reported by participants in intercultural learning and mentoring undergraduate research in global contexts.*

What kind of training/professional development have you participated in?	Intercultural learning	Mentoring undergraduate research in global contexts
Professional meetings	45% (22)	32% (16)
Colleagues/networking	45% (22)	28% (14)
Experiential practice/learning by doing	43% (21)	32% (16)
Readings	41% (20)	28% (14)
Short courses/workshops—on campus	35% (17)	24% (12)
Short courses/workshops—off campus	29% (14)	6% (3)
Communities of practice	24% (12)	24% (12)
Other (describe)	4% (2)	4% (2)
No training	29% (14)	38% (19)
N/A	10% (5)	22% (11)

For training in intercultural learning, "other" included the respondent holding an advanced degree in a related field. For training in mentoring undergraduate research in global contexts, "other" included using an "apprenticeship" approach in which new advisors partnered with an experienced advisor.

Most (44/50) survey participants reported using at least one modality to integrate intercultural learning in their global undergraduate research activities (Table 6), and several modalities were reported by greater than 70 percent of survey participants, suggesting that many faculty/staff mentors are using multiple activities to embed intercultural learning in global undergraduate research.

Table 6. *Summary of survey responses relating to integrating intercultural learning and mentoring undergraduate research in global contexts.*

How do you integrate intercultural learning in your global undergraduate research activities?	
Readings	88% (44)
Student reflections	78% (39)
Field experiences	74% (37)
Experiential activities	72% (36)
Peer discussions	72% (36)
Speakers	68% (34)
Journaling	42% (21)
Videos	38% (19)
Other (please describe)	14% (7)

For integrating intercultural learning in global undergraduate research, "other" approaches included a variety of learning activities such as final projects; role plays, games, and debates; discussions with faculty guides and resident directors; and interviews with community members during the fieldwork experience.

Most survey participants (88 percent) self-identified their own diversity, equity, and inclusion (DEI)-related responsibilities in at least one type of activity (see Table 7). Most activity types were reported by greater than 60 percent of survey participants, suggesting that many mentors are using multiple activities to promote DEI.

Table 7. *Summary of survey responses relating to promoting diversity, equity, and inclusion as a mentor of undergraduate research in global contexts.*

How do you define your responsibilities in terms of promoting diversity, inclusion, and equity as a mentor of undergraduate research in global contexts?	
Preparing students for intercultural competence or cultural differences	88% (43)
Teaching intercultural competence or cultural differences	73% (36)
Recruiting diverse students	69% (34)
Reading best practices on inclusive mentoring in the literature	65% (32)
Promoting discussion of allyship among colleagues and/or research mentees	61% (30)
Participating in professional development programs on inclusive mentoring	59% (29)
Other	10% (5)

Survey Qualitative Findings. Survey participants were asked three open-ended questions to solicit personal perceptions of their own attributes and their understanding of MUR-GC. The first question asked individuals to consider their greatest strength (personal, pedagogical, or institutional) or aspects they felt they did particularly well. The second question asked the respondents to identify their greatest weakness (personal, pedagogical, or institutional) or what they felt they didn't do well and would like to improve. The last question asked participants to consider their greatest opportunity (personal, institutional, or both) or where they would like to see their program or practice go next and why.

A smaller team analyzed the qualitative data using institutionally licensed MAXQDA software. Coding occurred in three rounds, resulting in the creation of a code book that included four overarching themes: mentoring practice, institutional culture, individual positionality, and intercultural context, with seventeen subthemes. The four themes below, more fully explored in Cruz and colleagues (2022), highlight the most prevalent themes our colleagues grapple with when engaged in MUR-GC.

Mentoring Practices. The data illuminated three types of mentoring practices as relevant and valued by our respondents: psychosocial, instrumental, and relational. Psychosocial mentoring includes motivating and encouraging students to meet challenges, manage expectations, and process emotions. One respondent stated: *"I think that my strengths in mentoring are creating self-confident, motivated, and ethical and culturally sensitive students by changing their negative mindset into a positive one."* Another reflected that they are engaged in *"personal mentorship. I work with students to design individual experiences that reflect the students' interests and opportunities."*

Instrumental mentoring includes a focus on project development, disciplinary methodologies, and achievements related to sharing results. Another respondent said: *"I would like to transform what so far is a research semester scheme based on students' personal interests (one or two mentors maximum) into a steady research elective in which students are mentored toward a common collective project that might end up in a collective outcome as a book or a common publication."*

Relational mentoring highlights a community-based approach to mentoring in the forms of project teams, peer mentoring networks, and mentoring constellations. Yet another respondent said:

"I deeply care about my students and our community partners and have become adept at 1) listening to community partners and helping craft projects that advance their creative inclinations and the things they are concerned about; and 2) mentoring students to work hard and to stay positive as they seek concordance between their desires for experience in making positive change in the world and their partners' inclinations, ways of working, strategies, limitations, and so forth."

Institutional Culture. Survey participants identified several areas that needed attention, primarily with institutional structures and support (e.g., not enough time to fully engage in MUR-GC, the need for professional development for faculty, a better understanding of ethical considerations with and among receiving communities, and a need for best practices). One participant stated they struggle with *"finding time for individual mentoring."* Another common theme within the qualitative data centered on institutional support. One participant said: *"I feel quite unprepared for this work since my institution offers no faculty development to support it. Our faculty development often seems to be designed by people with degrees in education who know very little about actual learning or the practical experience of working with students. Our faculty development often fails to meet our actual needs, and we are never consulted about what sort of faculty development we need or want."*

Another colleague mentioned the need for senior stakeholders to consider ethical factors when creating programs: *"There is a general lack of understanding at the institutional level regarding the ethical issues of global undergraduate research. Projects that require the 'buy in' of local stakeholders are often approved without evidence that [they are] desired, needed, or supported in the community of interest."*

Individual Positionality. The positionality of our participants varied when analyzed through the lens of their *weaknesses.* Some mentioned their own perceived shortcomings while others identified their own frustrations related to working on MUR-GC. One respondent said: *"My greatest weakness is defining/upselling the importance of undergraduate research to institutional higher-ups. I believe that I am unable to ask/request adequate resources to support undergraduate researchers in terms of assistantships and travel funding for presenting their research."*

Others acknowledged their own assumptions. One respondent said: *"I need to work on making assumptions about my students based on superficial traits or circumstances often beyond their control, like punctuality."* Another pointed out, *"I am monolingual, and I have a very difficult time picking up on sounds associated with different languages."*

Intercultural Context. Some respondents included their goals to strengthen DEI work among themselves and their students. One participant stated, *"I feel that I have been very lucky to have the opportunity to mentor the students where we also can learn from them about ourselves, our own cultural values. I would like to be able to provide students with a better understanding about the world in general [and to encourage them] to be inclusive and respect diversity and tolerance."*

Other participants were focused on access and inclusion. One said: *"I would like to see more opportunities like mine for students across my institution and to reduce barriers to student participation, securing access for more students."*

Interview Project

Interview Methods. The authors of this publication had numerous reasons for wanting to interview faculty who have mentored undergraduate students in global contexts. As a starting point, there is a dearth of resources currently available for scholars or practitioners to help guide mentors, particularly in the important areas and intersection surrounding intercultural competence and conducting research in other cultural settings. The idea to explore and showcase faculty mentors who have led student

undergraduate research abroad was appealing in many aspects. We decided to develop a series of interviews that could provide resources for mentors to learn from others in various contexts.

The authors created a semi-structured interview protocol with main prompts and potential follow-up questions to guide a qualitative approach to learning more about challenges and opportunities from the perspective of faculty mentors (Magaldi and Berler 2020):

1. *Briefly tell us about your experience in MUR-GC.* How intentionally was this program designed (and designed for what)? What was the genesis of your interest in MUR-GC? How and why did you get involved? Did you receive any formal training in mentorship? Do you support peers in developing mentoring skills?
2. *Can you tell us about one of your meaningful mentoring relationships?* What is mentoring to you? What does good mentoring look like? How do you think that your understanding and practice of mentoring might be different from what happens in other contexts/types of institutions/parts of the world?
3. *How do you define intercultural/global learning in your setting?* What do you see as the three most important elements of intercultural/global learning in MUR-GC? In your context, how much are intercultural learning and global learning (ICL/GL) equated with international mobility (as opposed to encompassing local diversity)? Why is ICL/GL important in MUR-GC? How do you see MUR-GC actually supporting this learning?
4. *What practices and strategies for supporting intercultural learning in MUR-GC would you recommend?* What do you find most challenging about supporting intercultural learning in MUR-GC? What lessons have you learned? What would "now you" tell "past you" if they could?
5. *Do you formally assess intercultural development of those involved in your MUR-GC programs?* If so, how do you assess? If not, what are the barriers to assessment? Do you assess outcomes other than ICL/GL? Do you focus at all on transfer of knowledge/skill for participants?
6. *What kinds of students do you most like to work with?* How do you find good mentees? How successful are these methods in reaching and attracting diverse students? How is "diversity" conceptualized in your context? What makes a good mentee? What mentee characteristics seem to support student success in MUR-GC?
7. *What else should we know?* Is there any question you wish we would have asked? What do you think it would be important to share with a new colleague about MUR-GC?

We were able to draw from a number of faculty and program administrators within our own personal networks to make a call for interested people who have conducted research with students from the United States. These mentors volunteered their time to engage in discussions with our team. Through the authors' collective network, an array of individuals with experience in the area of MUR-GC were contacted. It was important to have differing perspectives that represented various institutional, geographic, and thematic contexts. Therefore, the authors cast a wide net to diversify faculty representation. In total, twelve mentors agreed to be interviewed about their experiences and lessons learned. Some joined in groups or with partners rather than interviewing alone. The protocol above was provided ahead of time and then shared again with individuals during the virtual conversations. Each hour-long interview was conducted via Zoom and recorded with permission from the interviewees.

Our research team transcribed each recording. After all transcriptions were complete, we began an iterative grounded theory coding process, individually reading through the data and making notes on what themes began to emerge, meeting as a group to talk through themes shared across recordings, revising coding structures, recoding transcripts, and discussing themes again as a team. For each theme, we identified sample quotations from the transcripts that could serve as illustrations. We also isolated several video clips from the recordings and contacted the interview participants for their permission to share those clips more widely, for example in conference presentations or as training resources.

Interview Findings. Readers will note many of the same themes described above in the analysis of the interviews conducted by the intercultural working group. That analysis yielded eight themes: differences in context, identity/positionality/awareness, reciprocity, equity/access, ethics, long-term processes, support for mentors, and expected student outcomes. The section below details these eight themes with quotations from interviewees representing each.

Differences in Context. This theme discusses how varying circumstances, settings, events, and other ideas impact MUR-GC in various ways. The interviewees discussed how and why context mattered, but each emphasized different aspects of context, such as a) institution type, b) disciplines, c) different spaces/places/cultures, d) internal social issues of diversity, and e) histories and power dynamics of international relations. The quotations below illustrate the importance interviewees placed on their context in MUR-GC work.

> *"Again, I'm at Cornell now. I'm on a committee to try to enact some more international experiences for undergraduates. At this point, it's not anything that's fast moving. It's a very big machine. It's not like the little place I was at where I could do what I needed to do when I wanted to do it just by getting the right permissions, which was just fantastic. It's a very different environment, but it is my dear, dearest hope to bring some of this kind of work and maybe even these things somewhere into that curriculum."—C.*

> *"But in countries that have gone through historical trauma, political changes, dictatorships, that sometimes means when students go to places, they have to understand that they can't just ask, they can't just go everywhere. They don't have American privilege to stick your nose in everything, and they have to understand those questions that you can't ask. And yet there also is that curiosity to know. How do you balance that general interest the student might have with understanding their boundaries, if you will, and respecting those?"—M.*

Identity/Positionality/Awareness. This theme captures interviewee self-awareness as cultural beings and their understanding of who they and the others involved in MUR-GC are as cultural beings. This awareness also entails how people with different identities may experience MUR-GC differently, and how MUR-GC experiences can impact who participants perceive themselves to be. Complexity is an important part of this theme, as illustrated in the quotations below.

> *"And the one thing that I really hated because it happened to me quite a bit, is to be reduced to a couple of dimensions. I'm male. I'm White. I'm a football player. I am poor, I'm rich. Educated or not. I'm Christian or not. You know, like we don't want to embrace uncertainty. And we're uncomfortable with embracing uncertainty rather than going with the ride or the flow: 'Oh, I want them in this box so I understand clearly in that box.'"—B.*

> *"I think sometimes for our Black students who are going to Africa, it's a homecoming: 'I'm going home.' And for them, sometimes it is an eye opener and a reality check when they get to a particular place and it's not what they thought it was going to be. But it's helping them to also think about their Blackness in different ways."—N.*

Reciprocity. Reciprocity is the theme that addresses partnership, which is discussed both in terms of how to construct relationships and how to behave within them. In this theme, there is an interesting juxtaposition between listening and co-constructing meaning. While collaborating to arrive at meaning exhibits an understanding of shared power between partners that reflects feminist ideals, listening does not necessarily follow that same collaborative model. It is possible, for instance, to listen and then passively let the other person make decisions, or to listen and then decide for/by oneself.

"And in Nicaragua, we actually had a relationship [with locals] with the project we are working on. It was a service project with the local government, with the local community, with buy-in from a lot of different locals. So that aspect of it, I think, is absolutely key if you're going to be in an international context. You just can't come in and do something. You have to work with the locals. And just so you know what we were doing, there are two parts of the project. One part was working with the local government on helping enlarge its cistern for drinking water. And then we hired five Nicaraguan physicians to come in and staff medical clinics on the islands that [we] were at. And we brought a bunch of supplies and things like that for two weeks as part of the project. And students got to work with the physicians in the clinics as well."—J.

"And more importantly, I wanted to develop a way to be respectful to all my international partners and partners outside the university, to be respectful to them before I launched undergraduates at them."—B.

Equity/Access. Equity/access was a thread that ran through nearly all of the interviews, even though the questions in the protocol did not explicitly prompt discussion of this theme. Two equity/access subthemes emerged: (a) how some students more easily gain access to the MUR-GC experiences than other students, and (b) how some students experience equity issues (such as linguistic access) within their receiving communities or among their cohort once involved. These subthemes echo the earlier section on full participation, making clear the need for more than simple nose-count approaches to diversity.

"So it [accepting rural students] is a challenge, even internally for us as a university, and it has been a terrific and interesting experience. Mentoring has changed completely. These students . . . don't have the same academic level. They don't have [the] same family support. . . . Our students require our attention, and we need them to adapt."—S.

"And she came in with a really low level of Spanish and also was the only African American student in the group. There were two Latinos of Mexican descent who were fluent in Spanish, and so it was easier for them. I think it was really a challenge for her on this level, both doing research in terms of her language skills and all the ways she felt she was being perceived and also just being in a [new] culture."—M.

Ethics. This theme reflects interviewee emphasis on the needs of those involved and mentor responsibility for ensuring the needs everyone (not just students) are met. The quotations below illustrate their concern for ethical treatment of others.

". . . thinking about legal versus non-legal citizen status [of community members engaging with students in research] and how that impacts the willingness of someone to be able to give information."—M.

"So we talk about it all the time, just to help the students feel very comfortable with each other. And another thing that I do when I'm doing the research is that I purposely pair them. So I pair students of different backgrounds to do particular research. I always want two students working on a project. So if someone is not there, the other person will always be able to step in, but I always pair them so that they will sort of be able to learn from each other."—N.

Long-Term Processes. Interviewees also emphasized the process-oriented nature of mentoring over time. This theme is not only about supporting students from the initial stages of a research project to the end, but also about engaging with students at all stages of their academic careers. Mentor-mentee relationships can commence from the first meeting or during contact at a later time and may be initiated by either party, but the focus of this theme makes it clear that to be effective, mentoring

should evolve and continue over time. One example in MUR-GC might include support for undergraduate students who are traveling internationally at pre-departure, while researching abroad, and after they return.

> *"So basically, I started to get students at the introductory level because I realized one of the things that universities love to do, especially some of my peers, is only wanting the stars."—B.*

> *"And so I think you just have to be aware where students are and how you bring those conversations within the context of the training, the pre-orientation, the orientation, the daily reflection, all of those things that we know need to happen in order for this to be successful."—N.*

Support for Mentors. A second theme connected to the nature of mentoring dealt with the need to support mentors in their work. This important theme arose in the data when interviewees lamented the lack of training, peer community, or institutional value for mentors. Different suggestions for how support can and should happen included a) meetings with mentors as issues arise, b) workshops to prepare mentors to engage in MUR-GC, and c) manuals or publications sharing best practices and models.

> *"With undergraduate research workshop[s], I usually run [a case study] out in front of them. I give them some handouts and some references as well as some ideas about how to deal with these kinds of things. . . . Then once they land on campus as well, the faculty and the students go through some series of orientation. And it is there that the expectation is that the information they received at home is played back. And then the faculty who are going to be involved in the mentorship program training are also there, so we all contribute to it."—J.*

> *"So we start from day one [with faculty] . . . deconstructing those terms. And I think that the other piece to that is I've built out an entire training manual for individuals who are going [to do research internationally]. So I may not necessarily be going with those groups, but this is how I work and train the faculty or staff who are taking their students [abroad]. So it really does begin to move into defining these terms, but also helping them to understand how we co-construct knowledge with our partners, how we respect the ways of and being unknowing with our partners, and how to check your own biases."—N.*

Expected Student Outcomes. This final theme focuses on how students are intended to grow and develop as a result of engaging in MUR-GC. Interviewees mentioned a great number of outcomes. Although some were career-oriented (e.g., research skills) or could be described as having general life skills (e.g., confidence, self-efficacy), many outcomes discussed in the interviews clustered around the global nature of MUR-GC: intercultural competence development, global learning, global relationship development, awareness of one's own and others' cultural identity and positionality, and the like. Interestingly, interviewees noted both the need to assess outcomes for the sake of accountability and the importance of engaging students in dialogue about their outcomes.

> *"And so I tried to highlight the objectives that are most related to cultural awareness to improve global awareness in these students [on] really important issues—history, governance—[to] build tolerance and understanding through cultural immersion."—C.*

> *"And I still got students from Colombia who followed up with me after the semester was over, which is hard, right? Because they're going to a new [country], wanting to continue talking about their intercultural competence, seeing their [assessment] results, thinking of a plan for how to continue developing these things—talking about grad school, doing more research, questions like that."—H.*

Case Study Project

Case Study Methodology. During the fall 2021, the members of the inclusive working group discussed what models of inclusive MUR-GC could look like, and we tried to find models of inclusive MUR-GC based on initial keyword Google searches of college, university, and provider organizations that offered programs involving MUR-GC, with an emphasis on inclusion. By including *global* and *international* in the search, the group hoped to find examples of MUR-GC offered in the students' home countries, too.

The group also invited Elizabeth Lyons, program director of the Office of International Science and Engineering at the National Science Foundation (NSF), to a meeting where she shared NSF programs that had an emphasis on undergraduate research in international contexts for historically underrepresented groups. Despite the emphasis on the international context, excluding domestic research programs, the working group felt the strategies and practices for these programs could apply to domestic programs in global contexts, so this information could contribute to the group's work on inclusive practices in MUR-GC. Following Lyons's presentation, we searched for more information and contact information for institutions that had participated in International Research Experiences for Students (IRES). One of the goals was diversifying the US STEM workforce, the international sites for the Research Experiences for Undergraduates (REU) Program, and the Louis Stokes Alliance for Minority Participation—National Science Foundation International Center of Excellence. This partnership between a tribal college, a Hispanic-Serving Institution (HSI), and an HBCU is focused on the promotion of underrepresented minority students in international research.

Seeking a few models of inclusive practices for MUR-GC, the working group created a survey with questions about inclusive practices for MUR-GC. We also used these questions as a semi-structured interview protocol, with the addition of potential follow-up questions. Based on the publicly available list of participating institutions in the previously identified NSF programs and the organizations and institutes we discovered during our Google search, we sent email invitations to complete the survey or contact us for a 20-minute Zoom or phone interview.

There were three responses to the survey, and three interviews were conducted, including one from a representative of an institution that had already completed the survey. The survey questions included:

1. How have you created, or do you use, language to help break down barriers for students who might not see research as something "for" or available to them?
2. What strategies have helped increase participation by historically underrepresented students? By "historically underrepresented students," we mean students of color, women in STEM, students from lower-income backgrounds, and/or students from majors that aren't often represented in undergraduate research.
3. How did you arrive at effective strategies for greater participation by historically underrepresented students? What was the process?
4. What percentage of students at your institution participate in undergraduate research in global contexts?
5. Do these percentages match student demographics across your institution?
6. Is there peer advising for research, or is it all faculty-driven? Describe this.
7. What majors participate in undergraduate research in global contexts? Which are overrepresented or underrepresented?
8. Do you know of other programs or institutions that have found success engaging historically underrepresented students?
9. List other units on campus that you collaborate with for this work. Please describe the benefits.

Case Study Findings. The survey data and interview responses (a total of five) highlighted similar results to increase participation in MUR-GC for underrepresented students. Intentionality, integration, and collaboration were key in offering inclusive MUR-GC experiences and often resulted in more participation by students from historically underrepresented backgrounds.

Programs that had intentionally communicated directly to students from historically underrepresented backgrounds and considered their needs had greater success recruiting and engaging students successfully in MUR-GC opportunities. These programs also encouraged peer recruitment and conversation among historically underrepresented groups to share experiences and encourage participation. Programs that had MUR-GC integrated into the curriculum were also more inclusive because students did not have the option to participate. The experiences were required as part of course experiences. Finally, programs that collaborated with a number of offices, units, and departments across campus also had higher participation by students from underrepresented backgrounds.

The working group organized the findings from the case study analysis into a chart that highlights the key information gathered from the institutions that responded and/or from institutions that participated in NSF programs for inclusive practices for MUR-GC. Readers can find and download the Matrix of Inclusive Practices in the Additional MUR-GC Resources section on page 59.

Discussion of Research Findings and Implications

The three working group projects summarized here offer both interesting thematic commonalities and unique contributions. With regard to common themes, the intersection of MUR-GC was central. Respondents in all the studies expressed benefitting from deeply meaningful work with students through various mentorship approaches and practices with undergraduate research in global contexts. However, the three components of MUR-GC were not necessarily in perfect balance, with global learning or mentorship at times underemphasized in UR programs. While the survey data confirm MUR-GC is widespread, each study illuminated many areas of growth or improvement, such as the need for comprehensive assessment that addressed all three HIP practices; the need for stronger institutional support in the form of time, models, and senior administration support; and a culture of expectations that helps create best practices for MUR-GC. One survey participant summed it up well:

> *"I believe that creating a network among mentors, faculty, and staff working in undergraduate research in global contexts may be an enriching experience for all the stakeholders. Having venues to exchange ideas about best practices and challenges in the form of workshops—or even chat groups—will improve the quality and outcomes of undergraduate research abroad."*

Among shared themes, inclusion and intercultural learning emerged strongly in nuanced ways across the projects. On the one hand, deficiencies in full participation among students were commonly noted; on the other, exemplar strategies and structures for inclusion were also prevalent. Likewise, emphasizing the challenges of working across cultural difference, survey respondents and the interviewees noted the inherent threads of diversity present among participants (students, faculty, staff, and partners) as well as the comparative and applied setting of research as factors demanding further investment in guided intercultural mentoring practices in MUR-GC experiences. Dialogue on this challenge was often coupled by opportunity-oriented discussion of the rich potential for intercultural development that MUR-GC offers participants. A critical gap that remains even in our own research design in these three projects is the inclusion of receiving communities and onsite partner voices, not just as beneficiaries of research but as collaborators, co-mentors, and co-creators.

The three projects were not neatly divided into discrete topics but took different approaches (i.e., survey, interview, and case study) to gathering and analyzing data related to MUR-GC. The working groups not only asked distinct questions but also involved participants from different contexts. Each

therefore yielded unique insights. The survey study, for example, paints a bird's-eye portrait of the lay of the land for MUR-GC: what is and is not happening across a range of institutions. For instance, technical skills are the most often assessed student learning outcome of MUR-GC experiences, and roughly two-thirds of respondents indicated they viewed intentional inclusion efforts as key to their roles and responsibilities in MUR-GC. In contrast, the interview and case study projects get in the weeds with more detailed perspectives on concepts and behaviors related to MUR-GC. The interviews offer in-depth discussion of intercultural learning constructs, values, and behaviors by practitioners in MUR-GC, while the case study collates effective strategies for inclusion from exemplar institutions. These projects also intentionally spotlight some less typically visible voices (individual as well as institutional) in scholarship about these HIPs. The output of the studies, presented one by one with artificial separation in the section above, also informs the integrated discussion on implications for practice, which we address in the following section.



Living a MUR-GC Ethos: Implications for Practice

In this section, we distill what we view as some preliminary implications for practice. We offer them as guideposts to individuals and institutions seeking to expand access to high-quality MUR-GC experiences. MUR-GC is not a value-free endeavor. It calls all involved to begin with a concern for equity, inclusion, cultural humility, and reciprocity. Further, it invites a broad consideration of what constitutes quality experiences and outcomes, not only for student researchers but also for the broader set of individuals and groups involved in the project. These starting points lead us to conclude that the work of MUR-GC is both a socio-technical practice and a moral one; we suggest that the first implication for developing MUR-GC is to recognize it not as a series of interactions but as part of an ethos. By framing MUR-GC in terms of ethos, we intend to disrupt the tendency to position ethics as something that is reduced to a checklist or a module. Blending undergraduate research, global learning, and mentoring calls into question traditional norms of how we prepare students for the work of research, the relationship between global learning and technical knowledge, and the content and work of mentoring. It further problematizes questions of voice, access, and authority. In the subsections that follow, we reflect on elements of this ethos, identifying specific implications for practice. In addition, we pose questions for further consideration, both to trigger our own thoughts and to prompt reflection on the part of individual practitioners, scholars, and institutions.

Attention to Context and Setting

By definition, attention to context is inherent in MUR-GC. Context, particularly the part of context that is global, is what distinguishes MUR-GC from other research mentoring. MUR-GC occurs when mentors and students become intentional about the ways in which global contextual elements frame the research students do, the learning they experience, and the social interactions they have—as they also do for faculty and other mentors. Even though researchers sometimes believe their work is not context-dependent, all research is shaped by situational expectations and forces, whether recognized or not—from how work is done in a laboratory to who is participating in the research in the first place. All participants benefit from guidance in understanding and navigating this context, as well as understanding its relationship to the contexts with which they are more familiar.

The research reported in this volume suggests some fruitful strategies in this regard.

Engage the full constellation of mentors and community partners in illuminating the context. All global contexts are complex, standing as they do at the intersection of worldwide forces and events. All are subject to interpretation. There is much to learn, and this learning is deeper if it also reveals

how different perspectives might understand the same action in different ways. As Nicole Webster did with US students in Nicaragua, local experts can be invited to shed light on issues that students are encountering. In programs like the Purdue-Colombia partnership, traveling students can be paired with local students to better understand the multiple perspectives and contexts that are shaping their interaction. Understanding context is a multidisciplinary, multiperspectival endeavor that benefits from recognizing change as well as tradition, experience as well as theory, intersectionality, intra-group variation, and the ways in which societies are shaped by their interactions with other societies. Students also need to be guided in interrogating the stereotypes and images they may have of the context in which they are working. No single individual can provide all this; the more students learn how to learn from a range of perspectives, the better.

Prepare students for their roles and responsibilities as guests and co-creators. It is essential that students conduct their research in concert with the fundamental ethics of community-based research. It is also essential that they understand the guest role they will play, regardless of their research project. As Mark Sinclair noted earlier in this report, for example, US students need to understand that interviewing Chileans who have been tortured by a previous political regime might reactivate their trauma. Or, as Rofela Combey has experienced, even though they often find it difficult at first, US students in Ghana benefit from understanding what is proper attire in certain places. All such topics bear discussion. Working together, mentors, institutional research boards, community partners, and students may want to develop a set of principles and processes to follow.

Assist students in navigating the ways their experiences may alter their understanding of their own identities and positionalities. This can be challenging, even destabilizing, for students and faculty alike. Student beliefs concerning gender, race, ethnicity, sexual preference, nationality, and other key identifiers can be thrown into question as students encounter other ways of thinking about these traits. As discussed earlier, Webster supported students through such experiences by articulating her own journeys of self-discovery and multicultural identity formation. Education abroad, student affairs, and diversity offices can be valuable allies in guiding students on these matters (see https://www.washington.edu/studyabroad/students/resources/identity-abroad/ and https://www.iesabroad.org/identity-resources/social-identity for two very useful guides).

Develop long-standing relationships with the contexts to which students are going. Few, if any, global contexts—whether at home or abroad—can be understood in a single visit. And even when students gain significant knowledge during a first visit, the nuances and implications of this knowledge deepen if visits and conversations are repeated, over time, with periods for reflection in between. Long-term relationships also enable students to understand a particular context not just as a site to extract data but as a place for long-term collaboration and commitment. Mentors deepen their understanding of how to guide students in that context.

Prepare students to manage difficulties that arise from the intersection of viewpoints and backgrounds. Global contexts create connections across cultural difference. While this can have profoundly positive—even transcendental—results, it can also be a source for disagreements, cultural clashes, and moral dilemmas. The more students and mentors are prepared to work through the latter, the better. Research on culture shock and conflict has identified several key principles for dealing with such situations: 1) reflect, discuss, and research before acting; 2) dive into what is behind the action that has caused difficulty (what it means to the person who has done it, how they would explain it, whether it is an individual quirk or a cultural norm, how it is regarded by others, the extent to which your own behavior triggered it, and so forth); 3) assess the degree of harm, if any, to yourself and others in that context; 4) learn whether there are any groups attempting to change or challenge such actions; 5) reflect on what your intervention would mean; and 6) if you feel it is necessary, explore what solutions or

middle ground you can reach with the individual(s) behind the action. In many cases, the process of working through these steps will be sufficient to clear the air and improve future interactions.

Permit students to research contextual topics of their own choosing. As their projects proceed, students inevitably encounter puzzling behaviors, objects, or situations. Whether or not these are directly a part of their research, make unraveling these puzzles a part of their learning. Empower students to engage such contextual differences by collecting information, analyzing it from different perspectives, and reaching interculturally informed understandings. Give them the skills and viewpoints of social research as well as whatever discipline they are pursuing.

Make the living, breathing, dynamic dimensions of the context visible. Too many manuals on how to do business abroad limit themselves to rituals of politeness and negotiation. Too many discussions of culture see it as monolithic, uniform, and operating on a different plane from economics and politics. Students need a more realistic—that is to say, dynamic—view of the contexts in which they are doing their work. They need to see the variations and subgroups within them; the ways in which they have been shaped by their interaction with other contexts (including the students' own); the shifting economic, environmental, and political forces at play; the waves of migration that have built the present population; and the disputes and discussions now animating public life. Matters of race, ethnicity, religion, and language bear discussion, as do power, privilege, stratification, and inequity. Of particular relevance to the students themselves is developing an understanding of how education and research intersect with the context in which they are working—who has access to higher education, who gets to do research, how research is understood, and what the local impact of their own project might be.

Questions to think about:

- To what extent are students at your institution being guided in understanding and interacting with the global contexts in which they will work? How does this vary from program to program?
- What sources of expertise in these contexts are available at your institution and in the contexts where students will work? How can you go about engaging with them?
- What have been the historical relationships between your institution (and the area/nation where it is located) and the various contexts in which students will work? How might these intersect with the projects the students pursue?
- Are there some sites/organizations with which your institution has developed long-term partnerships for undergraduate research? What has enabled these partnerships to last over time?

Equity-Mindedness in Action

MUR-GC is a practice that should be available to all students. While historically, the individual HIPs associated with MUR-GC have had different, usually lower levels of participation by historically underrepresented students, this first step of disaggregating the data on participation is essential for an equity-minded approach to MUR-GC. Disaggregation of data can also lead institutions to identify equity gaps in participation along racial/ethnic, gender, discipline, and other dimensions that are part of underrepresentation. This emphasis on equity shifts the focus to the creation of opportunities for access and full participation for students from groups that historically have been underrepresented in MUR-GC experiences. Drawing from the work of the USC Race and Equity Center at the University

of Southern California (USC) Center for Urban Education, equity-mindedness "refers to perspectives or modes of thinking exhibited by practitioners who call attention to patterns of inequity in student outcomes" (USC Center for Urban Education 2020) and take institutional responsibility for student success through a reassessment of institutional practices that are conscious of social and historical exclusionary practices.

This framing encourages MUR-GC practitioners to examine participation patterns in MUR-GC, determine who is missing and why, and develop strategies to increase participation by these specific groups. By using the five indicators of equity-mindedness, institutions can begin the process of addressing equity gaps of participation in MUR-GC and explore strategies to include students that have not participated historically.

1. *Institutionally Focused:* Focus on remediating the institution's actions rather than students' actions alone.
2. *Critically Race Conscious:* Pay attention to whether or not students from historically underrepresented racial/ethnic groups participate, feel welcome, and succeed.
3. *Systemically Aware:* Recognize and counteract institutional and structural racism.
4. *Evidence-Based:* Are informed by disaggregated data and/or qualitative inquiry findings.
5. *Action-Orientated:* Take action to eliminate inequity (USC Center for Urban Education 2016).

With a focus on the actions of the institution instead of the students, the onus is on the institution to identify practices that may hinder participation by some students, and the emphasis is on how the institution can make MUR-GC opportunities available to those who have not historically participated. Instead of examining the background of the students, the examination is focused on the institutional practices for recruitment, retention, and full participation of all students. For MUR-GC, our work has focused on exploring participation by students from historically underrepresented racial and ethnic groups along with gender, disciplines, and other student groups where participation historically has been underrepresented (AAC&U 2013). This includes women in STEM undergraduate research and men in education abroad, but it is critical that institutions look at their own participation rates to determine the focus and areas for critical reflection and change. When institutions acknowledge structural and institutional racism, sexism, ableism, and classism, this also changes the ways in which MUR-GC is presented to students, how the experiences are framed, and who has access to these experiences. Institutions must examine the barriers to participation along with the reasons for successful participation by some students from historically underrepresented groups. By identifying the barriers, institutions can also develop and revise existing pathways to participation in MUR-GC.

When institutions acknowledge structural and institutional racism, sexism, ableism, and classism, this also changes the ways in which MUR-GC is presented to students, how the experiencesare framed, and who has access to these experiences.

This is also true for faculty, staff, and other educators who work with students. Do students from historically underrepresented groups see themselves in their mentors, faculty, and advisors? Institutions should examine participation of faculty, staff, and other educators and identify any gaps in participation along racial/ethnic, gender, discipline, and other dimensions that historically have been underrepresented at the institution. To grow participation in high-quality MUR-GC experiences as well as encourage and engage more faculty, staff, and other educators to become mentors, institutions should develop professional development to support engagement and full participation of all students and refine systems to legitimize and reward mentor contributions.

Guiding Questions:

- What are the participation rates for historically underrepresented students in MUR-GC at your institution?
- What are the participation rates for historically underrepresented faculty, staff, and other educators in MUR-GC at your institution?
- What are the factors that contribute to historically underrepresented students, faculty, staff, and other educators participating in MUR-GC working at or with your institution?
- What other departments, units, and/or campus units are engaged in MUR-GC, and what others could be engaged to create equity-minded MUR-GC experiences for students?
- What professional development is needed to create and implement equity-minded MUR-GC?

Inclusive Practices

In *A House Where All Belong: Redesigning Education Abroad for Inclusive Excellence,* Contreras and colleagues (2023, 50) argue that "a centerpiece of global learning, inclusive excellence direct[s] post-secondary institutions to commit to students' substantive engagement with difference . . . in global learning." This is what MUR-GC seeks to intentionally do through the types of experiences students have, the mentors with whom they work, and the foundation of their research context and content. While Contreras et al. (2023) also encourage increasing the number of students who participate in education abroad, they realize increasing numbers does not guarantee close interracial relationships among students. The types of experiences that students have must be intentional and embedded in inclusive pedagogy, which includes greater diversity among educators who work with students in education abroad and other global learning experiences. This recommendation is applicable for inclusive practices in global learning in a domestic context, too.

Through the case study interviews, survey results, and initial research on inclusive practices on MUR-GC, the authors of this publication have identified a number of strategies as inclusive practices for MUR-GC:

- Integrating MUR-GC experiences into curricular and credit-bearing experiences
- Offering interdisciplinary projects
- Connecting students with peer mentors before, during, and after the MUR-GC experience and offering virtual opportunities

By integrating MUR-GC experiences into curricular and credit-bearing experiences, students do not have the option to "opt out" of the MUR-GC experience. Rather, it is part of course experience, and active work time is typically offered during course time, which allows participation by students who may work, have familial responsibilities, and/or do not have the resources to participate in this type of experience. With the connection to a course, the cost of the experiences is embedded into tuition, and students at many US-based institutions have access to financial aid. The interdisciplinary nature of some MUR-GC experiences also offers students more opportunities for participation.

Hearing from peers about MUR-GC experiences is a powerful recruiting tool because students receive information from someone who looks like them or who has experienced what they could experience. Also important is that promotional material and presentations about the MUR-GC experience allow students to see themselves, which encourages realistic inclusion of individuals from diverse gender, racial, ethnic, and cultural backgrounds. In addition, it is helpful for students to hear about MUR-GC

experiences from faculty, advisors, and other educators, including those from offices and campus units that may be outside the MUR-GC experience. Messaging from multiple sources, including those that contribute to student belonging, is critical.

During the height of the COVID-19 pandemic, institutions transitioned to emergency, remote learning, but over time, many honed their techniques and offered high-quality virtual experiences for their students. This included collaborative online international learning (COIL) as a more equitable global learning practice. COIL facilitates student collaboration on projects with international partners as part of a class experience, and there are now multiple opportunities for research and internships. This has opened up MUR-GC to more students.

Guiding Questions:

- What inclusive practices could you expand to increase participation by underrepresented students, faculty, staff, and other educators working at or with your institution?
- What departments, units, or offices could you engage to promote MUR-GC opportunities for all students?
- What type of professional development could increase the number of faculty who offer MUR-GC experiences for students?
- How does MUR-GC fit within your institution's reward systems and review processes, including but not limited to promotion and tenure?
- How have students, alumni, and community stakeholders been engaged in recruitment activities for programs at your institution?
- How could these models be used to enhance recruitment for MUR-GC?

Mentoring Strategies

As described throughout this report, high-quality mentoring is of utmost importance for learners to derive the benefits of HIPs such as undergraduate research and global learning. In an investigation of the specific nature of mentoring practices, Shanahan and colleagues (2015) performed a literature review of related research published in the previous twenty years and identified ten salient practices of undergraduate research mentoring that could be applied across disciplines and contexts. In a subsequent investigation, Walkington and colleagues (2020) found that award-winning mentors identified these practices in their work. The ten practices begin with strategic pre-planning and may culminate with dissemination of results, but these practices do not necessarily need to occur in a linear manner, and different practices may need to be emphasized at different stages of the research project (see Table 1 at https://www.centerforengagedlearning.org/salientpractices/). Additionally, these practices don't necessarily need to happen as individual practices. For example, many mentors use learning contracts or syllabi that typically include strategic pre-planning (salient practice 1), setting clear expectations (salient practice 2), and teaching technical skills and ethics (salient practice 3). These practices can also be instrumental in the context of mentor development and training and pedagogy. They are not meant to be prescriptive; rather, mentors can utilize their individual strengths to implement these practices in ways that acknowledge the individualized, dynamic nature of mentoring relationships.

Salient mentoring practices have been found to be useful in many disciplines and contexts. The implementation of the Salient Practices Framework has been discussed in writing studies (Moore et al. 2020, 2022), teacher development (Walkington and Rushton 2019), theater and dance (Shawyer et al.

2019), and interreligious studies (Allocco and Pennington 2022). Others have discussed the importance of the Salient Practices Framework when mentoring in a virtual context (Hall et al. 2021), co-mentoring (Ketcham et al. 2017, 2018), and taking student mental health and well-being into account (Hall and Ketcham 2022; Walkington and Ommering 2022).

The Salient Practices Framework is particularly useful in MUR-GC (Allocco et al. 2022; Hall et al. 2018; Idris and Dahal 2021). Hall and colleagues (2018) discussed the importance of strategic pre-planning (salient practice 1) when designing these experiences and the usefulness of the framework as a whole to overcome challenges experienced while mentoring and to enhance student learning. Note that the table below is also available for separate download from the Additional MUR-GC Resources section on page 59.

Table 8. *Salient practices of undergraduate research mentoring.*

Salient Practice	Description of the Salient Practice
1	Strategic pre-planning to support students' varying needs and abilities during the research process
2	Setting clear and well-scaffolded expectations
3	Teaching the technical skills, methods, and techniques of conducting research in the discipline
4	Balancing rigorous expectations with appropriate emotional support
5	Building community among groups of students or a research team
6	Dedicating time to one-on-one mentoring
7	Increasing student ownership over time
8	Supporting students' professional development
9	Creating intentional, laddered opportunities for peers/near-peers to learn mentoring skills
10	Encouraging students to disseminate their findings

Two commonly mentioned challenges in mentoring undergraduate research in the global context include building community (salient practice 5) and increasing student ownership over time (salient practice 7). (See Hall et al. 2018; Hamel et al. 2021.) Further discussion about the implementation of the salient practices in MUR-GC is also documented in a paper by Allocco and colleagues (2022), with multiple case studies as exemplars. Another insightful addition to this list of salient practices comes from an interview study of minoritized mentees that articulates what kinds of support they most need from their mentors (Robertson et al. 2023). Key among the study's contributions is the category of protective behaviors—mentees from underrepresented and stigmatized identities look to their mentors to help protect them from the disproportional workloads, reputational harm, and other negative impacts they might otherwise suffer without the support of an equity-minded mentor. For the full typology resulting from the Robertson et al. (2023) study, see the "Inclusive Mentoring Strategies" linked from the Additional MUR-GC Resources section on page 59.

In MUR-GC, multiple mentors can utilize the Salient Practices Framework to support high-quality mentoring, and, as noted above, the framework has been applied to many different disciplines and contexts. Some critical questions related to the application of this model to MUR-GC include the following:

Guiding Questions:

- How do mentors in different roles and disciplines conceptualize and operationalize their mentoring practices at your institution, and does this framework fit the needs of all involved?
- Are there supplementary subpractices to highlight, or are any mentoring practices missing from this framework, particularly when it comes to the needs of mentees and mentors from different backgrounds (e.g., scaffolding and legitimizing mentoring relationships with community mentors, particularly when those knowledge systems differ from traditional norms within the field(s) of study)?
- How can the Salient Practices Framework foster inclusive mentoring practices? What adjustments do mentors make to the ten practices to accommodate individualized, developmental mentoring relationships with students with diverse identities?
- Do near-peer, faculty, staff, and community mentors strengthen their mentoring relationships by working together, or co-mentoring, to utilize each practice in dynamic ways throughout the project? For example, at the inception, mentors in various roles can collaboratively address critical issues such as strategic pre-planning, setting expectations, and teaching and learning technical skills needed to conduct the project. How often does this happen in your context?
- What professional development do mentors need to engage in high-quality mentoring practices such as those included in this framework (e.g., when working to address questions that involve transdisciplinary and/or place-based forms of inquiry)? Are these opportunities available through your institution?

Mentoring Models

Traditionally, mentoring has been conceptualized as a hierarchical relationship between an older, more experienced mentor and a younger, less experienced mentee or protégé (Johnson 2016; Mullen and Klimaitis 2021). However, there are multiple models of mentoring undergraduate research that move beyond this structure to include near-peer mentors (e.g., undergraduate and graduate students), professional staff (e.g., librarians, global education advisors), faculty, and community members (local and international), depending on the cultural, societal, institutional, and project contexts (Walkington et al. 2022). For cases that illustrate a variety of mentoring models, see the Additional MUR-GC Resources section on page 59. Adaptive, inclusive mentoring attends to the relationships between all members of the research team and recognizes that distinctive types of support are needed from different mentors (Thurman and Vandermaas-Peeler 2023). Robertson et al. (2023) suggest that inclusive mentoring consists of three dimensions, including professional integration (e.g., inviting the mentees to meetings); personal integration (e.g., talking about personal lives); and protection (e.g., providing information about resources). See Appendix E for a full typology of these dimensions.

Relational models of mentoring have emphasized the interdependent, mutually beneficial relationships between mentors and mentees and include a broader range of processes, mechanisms, and outcomes (Allocco et al. 2022; Allocco and Fredsell 2018; Fletcher and Ragins 2007; Ketcham et al. 2018; Walkington et al. 2022). Relational qualities of mentoring relationships include *mutual engagement*, defined as shared involvement and commitment; *authenticity*, developing self-knowledge and feeling the relationship is genuine; and *empowerment*, feeling personally encouraged to take action (Liang et al. 2002). In relational models, mentoring relationships are often conceptualized within developmental networks or constellations (Johnson et al. 2016; Sorcinelli and Yun 2007; Vandermaas-Peeler 2021a; 2021b; Vandermaas-Peeler et al. 2023). Research on mentoring constellations and developmental networks supports the utility and benefits of multiple mentors for personal and professional development

(Felten and Lambert 2021; Higgins and Thomas 2001; McCabe 2016; Vandermaas-Peeler and Moore, in press; Yip and Kram 2017). Higgins and Kram (2001) developed a typology of mentoring networks based on the diversity of social systems represented within the network and the strength of the relationship. Mentors in networks with greater diversity and strength facilitate access to a broad range of information, often resulting in significant personal learning for the mentee. Culturally responsive mentorship is one specific relational model (Lindsay-Dennis et al. 2011) that is highly applicable to undergraduate research in global contexts and supportive of MUR-GC full participation goals.

A constellation model, in which students have multiple meaningful relationships with peers, staff, faculty, and community partners, among others who provide multifaceted support and guidance, acknowledges the complex realities of developmental relationships and the continuum along which mentoring occurs (Vandermaas-Peeler 2021a, 2021b; Vandermaas-Peeler et al. 2023; Vandermaas-Peeler and Moore 2022, in press). For example, studies on peer and near-peer mentoring suggest that mentors may serve in a diverse range of roles for their mentees and that these relationships can advance student learning and identity development as well as personal, educational, and professional growth for both parties (Akinla et al. 2018; Egege and Kutieleh 2015; Holt and Fifer 2018; Tenenbaum et al. 2014). Peer mentoring initiatives are an effective way to engage traditionally underrepresented students (e.g., Rieske and Benjamin 2015); peer mentors are often viewed as more approachable and can serve many different mentor roles (e.g., Cuseo 2010a, 2010b; McKinsey 2016). Furthermore, research has found that these relationships are reciprocal, as peer mentors also benefit from mentoring in the form of higher GPA and persistence (e.g., Good 2000) and the development of critical leadership skills and integrative learning (Calma 2013; Gunn et al. 2017).

Overall, significantly more research is needed to understand the ways high-quality mentoring models, such as the constellation model, can be applied in MUR-GC. The following are among the critical areas for further exploration using the lens of your institution.

Guiding Questions:

- How can *all* students be supported to develop multiple mentoring relationships?
- What models can be utilized to support high-quality MUR-GC within and across institutional and cultural contexts, particularly attending to mentors' and mentees' capacities for time-intensive, sustained, relational engagement?
- How can relational mentoring models decenter power across settings? What best practices can be shared?
- What are the benefits to students of mentoring constellation models?
- What challenges are encountered and what are the strategies to address them?
- Which mentoring models facilitate co-mentoring such that multiple mentors work together to share responsibilities and learn from each other?
- What benefits do faculty, staff, and community mentors derive from participating in a constellation model of mentoring? Do the mentors form meaningful and productive connections with peers? Do they develop relationships that transcend the student mentoring relationships and contribute to their own well-being and retention?
- What are the primary challenges and barriers for mentors in different roles (e.g., community mentors, peer mentors), and how might various mentoring models address them?
- What resources do peers, faculty, staff, and community partners need to support and enhance their work as mentors in MUR-GC?
- What benefits do institutions and host and sending communities derive from sponsoring and expanding access to the constellation model of mentoring? How do these relationships build trust,

repair past harms, seed future shared work, or foster social and cultural capital that eases institutions of higher education and communities working together toward improving our shared futures? How might work contracts and expectations be reimagined to further explore this potential?

Culture of Expectations of Engagement

Scholars and practitioners of MUR-GC have emphasized the need for an institutional culture that is supportive of the practice for students, faculty/professional staff, and the communities in which they are working (Allocco et al. 2022; Hall et al. 2018). Using an ecological framework, Allocco and colleagues highlight multiple interactive systems that support four multidisciplinary research programs, acknowledging the significant resources required to sustain a holistic ecology of MUR-GC. Indeed, the lack of institutional support is frequently cited as a significant obstacle in the wider dissemination of the practice. Numerous research studies identify structural, transactional, and attitudinal barriers to adoption for individual HIPs, including undergraduate research and global learning, in which institutional factors loom large (Cruz et al. 2021).

Structural factors relate to which university offices do (or do not) support MUR-GC practices. Brew and Mantai (2017), for example, suggest that the lack of a centralized office can significantly impede the dissemination of undergraduate research practice across disciplines. Such offices, they argue, could provide greater central coordination across degree programs, which would enable more effective and efficient matching of mentors, programs, and students, a challenge that also persists in global education (Reardon et al. 2022). The integrated practice inherent in MUR-GC may require an additional layer of coordination between and among already existing support units.

The Center for Intercultural Learning, Mentorship, Assessment and Research (CILMAR) at Purdue University is an example of integrated institutional support for innovative scholarship and teaching and learning practices related to intercultural learning. One of the keys to CILMAR's effectiveness has been partnering across campus at both university and college levels. Cost-sharing new initiatives, contributing labor to ongoing collaborative projects, building grassroots buy-in for top-down changes, and networking to disseminate information are advantages to this type of interinstitutional cooperation. One example is a joint project with Purdue's Honors College to involve undergraduate students in paid CILMAR intercultural summer research internships in which they are mentored by both graduate students and faculty. Another is CILMAR's collaboration with various mentor communities of practice across campus, including those led by the Center for Experiential Education and the Colleges of Science, Engineering, and Agriculture.

Elon University recently developed the Center for Research on Global Engagement (CRGE) to foster high-quality scholarship on global engagement in order to establish and share best practices in global learning. Supporting student, faculty, and staff development related to all facets of MUR-GC is a sustained, comprehensive CRGE goal, including grants for students and mentors, and multiple opportunities to discuss, study, present, and publish related work on campus and beyond. Widespread institutional support for engaged learning in research and practice affords multiple opportunities for intentional collaboration with other units on campus, including initiatives with the Undergraduate Research Program (e.g., workshops for mentors), the Center for Engaged Learning and the Center for the Advancement of Teaching and Learning (e.g., book clubs and showcasing scholarship of teaching and learning in an annual campus-wide event), and the Kernodle Center for Civic Life and the Isabella Cannon Global Education Center (e.g., co-leading communities of practice), as well as with myriad global partners.

Study abroad, which carries considerable administrative overhead associated with international travel, especially emphasizes *transactional factors* relating to processes or interactions. For both global learning and undergraduate research, however, the lack of alignment between student engagement and the curriculum,

especially in the timing and integration of HIPs within degree programs, remains a persistent issue at many institutions (Doyle et al. 2010; Wayment and Dickson 2008). For MUR-GC, this may be especially complicated as the global learning and undergraduate research components may cross over degree programs.

Perhaps the most salient challenges, however, lie in the domain of *attitudinal factors*, which focus on institutional beliefs and values. Scholars and practitioners alike have highlighted persistent inconsistencies in values and practice (Gore 2010), such as the conflict between the desire for greater faculty-student interaction (e.g., mentoring) while increasing class sizes (Wayment and Dickson 2008) or urging greater access to HIPs without providing higher levels of financial or administrative support (Perella et al. 2020). Similar tensions may occur at the level of mission, as an investment in global learning may be challenging for institutions that give precedence to the local or regional community in which the university is embedded.

Resolving these tensions between belief and practice is not a straightforward process, but the research literature has identified emerging practices for setting a culture of expectations for engagement in MUR-GC. There is considerable evidence for the value of articulating clear alignment between HIPs and institutional recognition and reward structures, including tenure and promotion for faculty, performance management for professional staff, and persistence and success for students. Developing and maintaining effective MUR-GC programs takes a considerable investment of time and effort, for which appropriate compensation, as well as accountability, is expected.

Perhaps most importantly, MUR-GC practices flourish when the institution has a strong foundation for community-building. This can take the form of formal or semi-formal structures, such as communities of practice, peer mentoring circles, or students-as-partners programs, but informal, everyday practices that embody and recognize values such as respect, curiosity, and collaboration have the potential to be even more effective.

As noted previously, participants in the national survey of MUR-GC identified a number of persistent challenges related to institutional structures and support. The following questions include topics that respondents mentioned and may be applicable across institutions.

Guiding Questions:

- To what extent (and how) does your institution foster a culture of expectation for mentoring in undergraduate research and global learning?
- How is MUR-GC valued and assessed in your institutional culture?
- What structures can support *all* students' participation in MUR-GC? As suggested earlier in this report, an interrogation of participation is needed to identify inequitable structures and policies and create new pathways for full participation.
- Is everyone at your institution expected to support DEI efforts such as mentoring minoritized students in undergraduate research, or do minoritized faculty and staff disproportionately perform that labor?
- One of the most pervasive challenges reported by mentors is a lack of capacity to fully engage in MUR-GC. What integrated structures and support practices can undergird institutional expectations and mentors' aspirations to participate in MUR-GC?
- What institutional structures, processes, and relationships are needed to foster better understanding of the ethical considerations with and among receiving communities locally and abroad? Do these projects and relationships lead to actionable changes in communities? How does your institution know? Based on what sources of evidence and from whom?
- What are high-quality models of professional development for mutual mentoring relationships, and how can institutions create integrative ecologies in which mentors learn from and support each other?

Professional Development and MUR-GC

Mentoring is different from classroom teaching and requires distinct knowledge, skills, and dispositions. For this reason, professional development has long been recognized as a critical factor in successfully enabling faculty and professional staff to engage in mentoring in general (Holloway 2001) as well as specifically for both undergraduate research (e.g., McDonald et al. 2019; Mickley Steinmetz and Reid 2019; Parent et al. 2016; Walkington and Rushton 2019) and global learning initiatives (Hovland 2009; Giedt et al. 2015; Osakwe 2017). Conversely, the lack of professional development opportunities frequently has been cited as a barrier to broader, and perhaps more effective, implementation (Kuh and Harper 2022). In the 2021 MUR-GC survey, for example, respondents indicated fairly high engagement in professional development for both undergraduate research and global learning, respectively, but identified both "learning by doing" and "informal peer interactions" as prominent modalities. The majority of respondents indicated the need for more time and opportunity for formal professional development related to MUR-GC, and the responses overall suggest a need for new, integrated models (Cruz et al. 2022). Vandermaas-Peeler and Moore (in press) explore the potential of a constellation model for academic development that fosters connections among mentors and expands our understanding of mentoring roles and functions. Using evidence from an institutional self-study of mentoring relationships, they suggest that academic developers build communities of support that encompass knowledge and skill development, attend to gaps and challenges in the experiences of students and mentors with historically marginalized identities, and encourage respectful engagement across difference.

There are well-known, evidence-based models for developing faculty as research mentors (especially in STEM fields) as well as for fostering intercultural or multicultural learning. Historically, however, faculty development and intercultural development domains have had limited interaction, with the notable exceptions of nursing (Devido et al. 2020) and teacher training (Gorski 2016). This may reflect the organizational culture of higher education, in which disciplines are largely separated from one another, but so are support units, such as study abroad and student engagement offices. It is also likely to be a result of assuming that mentorship practices and skills are universally applicable rather than culturally contextualized, and believing that both mentorship skills and intercultural learning automatically occur when people participate in related activities. Yet the research noted earlier directly contradicts these assumptions and makes clear that mentors do indeed need intentional training and support in order to be effective in mentorship, particularly in global contexts.

Centers for teaching and learning (CTLs) can serve as integrative spaces for faculty development (Wright et al. 2018), but the historical relationship between CTLs and student support offices (and the staff who work there) varies considerably by local context (Kelley et al. 2017). Similarly, because undergraduate research is linked to faculty research, and in some cases civic and community engagement, campus research and civic/community engagement offices may also be fruitful partners in supporting integrative faculty development for MUR-GC. A growing number of campuses have research development professionals who not only support faculty in grant development work but also offer professional development opportunities related to mentoring and advancing equity in research (for example, see resources from the Center for the Improvement of Mentored Experiences in Research. Similarly, programs and supports dedicated to promoting community-engaged research and scholarship have sparked models and programs that address the intersection of research mentorship and global contexts (e.g., Allen et al. 2014; Arnold et al. 2021; Beckett, et al. 2022; LePore et al. 2020). The administrative home for these programs varies depending on the campus. Future professional development for MUR-GC will require building bridges between disciplinary and professional stakeholders who may have had limited opportunities to work closely together in the past.

MUR-GC advocates call for the creation of integrated professional development models that do not simply combine best practices in research mentoring and intercultural learning but also recognize that there are distinctive practices that emerge from their integration. While these professional development models are still in the early stages of development, scholars have identified the fostering of humility (intellectual and

cultural), engagement in creative problem-solving, and community-building as potential foci (Cruz et al. 2022). In addition, these authors contend that engagement in MUR-GC may require development beyond practice, extending into shifting epistemologies of the role of faculty and staff in higher education.

Acknowledging that mentoring requires distinct knowledge, skills, and dispositions, the following are critical questions regarding professional development for high-quality MUR-GC.

Guiding Questions:

- Attending to mentors' expertise and experiences and to the diverse contexts in which they are working, how can professional development foster mutual learning and respect, and continuous critical self-reflection across professional roles and career stages?
- At your institution, what models of professional development foster intentional integration of global learning across curricular and cocurricular experiences?
- How can professional development help to dismantle traditional academic silos and encourage multidisciplinary and interdisciplinary systems of inquiry? Are such models in practice or development at your institution?
- What models of professional development enable mentors and mentees to develop and hone essential skills related to, among others, critical thinking, relationship building, creativity, problem solving, conflict management, knowledge production, and integrative global learning?
- What models, if any, does your institution have in place to recognize and compensate community mentors for the time and expertise they contribute to global learning experiences, including MUR-GC? What access do community mentors have and what assets might they bring to enhance professional development for MUR-GC at your institution?

Assessment

Assessment is not a popular word in higher education, carrying connotations of feeling judged as inadequate (for those assessed) and trudging through mandated tasks (for those charged to assess). For these reasons as well as the logistical challenges that assessment often poses, which will be discussed in further detail later in this volume, assessment is not as prevalent in MUR-GC as it arguably should be. But we cannot stress enough how beneficial assessment can be for MUR-GC. Formative assessment, undertaken at the beginning of a mentoring relationship and/or an undergraduate research project, can provide invaluable information (Athanases and Achinstein 2003). For instance, establishing a baseline of skills can help motivate undergraduate students to set goals for their own learning of research skills and/or global learning constructs such as diversity awareness or perspective-taking. In addition, mentors can gain a better sense of the background knowledge, values, and learning preferences of students to better meet their needs, can establish a baseline for intended learning outcomes to compare with later assessments for evidence of development, and can identify their own growth areas to target in professional development (Andrade and Cizek 2010). In keeping with our emphasis, throughout this volume, on the relationality of MUR-GC, assessment is not just about gathering information but in the end is a way of being in relation with one another—for example, formative assessment can assist researchers, mentors, and community partners in undergraduate research to come to consensus on values, goals, and methods of knowledge production in the process of co-designing projects (Bandy et al. 2018). This use of assessment supports dialogue with receiving communities and other partners regarding shared expectations and decision-making.

Just as formative assessment offers many benefits at the outset of MUR-GC experiences, later summative assessment is advantageous in a number of ways. Perhaps most obviously, collecting and analyzing assessment

data is a way to hold MUR-GC programs and providers accountable for HIP outcomes, documenting (or not) evidence of effectiveness and relevance (Ewell 2009). But assessment does not need to be done only for the sake of external stakeholders. There is great value in summative assessment for those participating in MUR-GC. Assessment can help students articulate their takeaways from MUR-GC experiences and can inform mentor innovations and program improvements. It is also a way to ensure transparency of impacts on communities involved in research projects as well as follow through with a commitment to reciprocity.

Of course, gaining these benefits requires overcoming various obstacles to assessment. The first of these challenges regards constructs for measurement. In many cases—global learning, for example—consensus on definitions or outcomes may be hard to find. Moreover, once defined, constructs may not have integrated, holistic instruments readily available for use. Measures may be proprietary rather than open-access, may require training to use effectively, could be discipline-specific, or may not have been scientifically validated. And then there are the various logistical challenges—for example, the time, resources, and expertise required to design and conduct assessment effectively. With MUR-GC, we can add specific logistical difficulties to this general list because not all those involved in global research projects are inhabiting the same physical spaces, and not all participants may understand or value assessment similarly.

It might be helpful to briefly examine a few examples of assessment in MUR-GC. We know from the survey project (described in detail in the Presentation of Research section) that the student learning outcome constructs assessed in MUR-GC range across affective, behavioral, and cognitive domains, including cultural knowledge of self and others as well as disciplinary knowledge; research, career, and life skills; and attitudes such as motivation and confidence. On the mentor assessment side, contemporary scholarly literature provides useful cases, many from the medical field, of instruments and methods for identifying professional development needs of mentors (Fleming et al. 2013), assessing mentorship cultures (Sheridan et al. 2015), and improving mentorship programs based on assessment evidence (Keyser et al. 2008). When it comes to assessment and community partners, impact assessment (Donovan 2011) is evident but still underrepresented compared with other uses of assessment that emphasize process and relationality (however, see projects devoted to assessing and evaluating partnership relationships and community-academic partnerships that are germane to this work; e.g., Bandy et al. 2018; Duarte 2016; Kniffin et al. 2020; Pillard Reynolds 2014). As a final example, assessment of undergraduate research programs, including MUR-GC experiences, using diversity, equity, and inclusion measures is becoming more prevalent in institutions focused on these goals (Hanauer et al. 2017; Malotky et al. 2020; Nonnemacher and Sokhey 2022).

Given the importance of assessment to quality experiences for all involved in MUR-GC and the difficulties of designing and implementing assessment well, the following questions may be helpful.

Guiding Questions:

- What constructs or outcomes are most important to assess in any given specific MUR-GC context, and in MUR-GC more broadly?
- To what extent is assessment part of the culture of mentorship in your institutional and community contexts?
- How much agency do MUR-GC participants other than faculty and program administrators have when it comes to assessment?
- How can collaborations with other stakeholders (e.g., institutional data offices, scholars investigating mentorship models and practices, inclusion-focused entities such as task forces and funding agencies) enhance the assessment practices of MUR-GC mentors and program administrators?
- What professional development might MUR-GC participants need related to assessment data collection, analysis, and reporting, and what resources may be available to develop these skills?
- How equitable and inclusive are the assessments we are using or considering, and how might assessment be leveraged to support full participation in MUR-GC?

ADDITIONAL MUR-GC RESOURCES

Visualizations

Linked below are a framework and a model that are useful for MUR-GC training and scholarship. Each can be downloaded or hyperlinked separately and is available for Creative Commons use for educational purposes with attribution—that is, the expectation is that use or derivatives of these materials will be used for non-commercial purposes and will give appropriate credit to the authors of this volume.

- **MUR-GC Conceptual Framework**
  A tryptic Venn diagram that describes the interrelationships between three high impact practices (mentorship, undergraduate research, and global learning) and highlights their mutually reinforcing outcomes.
- **MUR-GC Process Model** (available as an infographic and in a table format)
  A synthesis of the theoretical and practical insights from this volume that organizes constructs and practice related to MUR-GC into a process model. Users can access the information in an interactive graphic format or as text in a table.

Practices

Linked below are examples of MUR-GC practices. They can be downloaded or hyperlinked separately if the intended use is for educational purposes. Some were extracted from other published work, and others are original to this volume. For excerpts of larger projects, please be sure to attribute the work to its original authors, who were not involved in this MUR-GC project.

- Ten Salient Mentoring Practices (Shanahan et al. 2015)
  Concisely presents ten mentor practices salient to supporting undergraduate researchers.
- Inclusive Mentoring Practices (Robertson et al. 2023)
  Reports on a study of mentored students from historically marginalized groups and makes recommendations about meeting needs specific to students from similar backgrounds.
- Resources and Funding for Identity-Group Populations
  These are links to resources to support different aspects of participation in mentored undergraduate research in global contexts for different identity and affinity groups.

Case Exemplars

Linked below are five cases that exemplify various approaches to MUR-GC. These brief program overviews showcase a range of successful strategies and models that might suggest adaptations to other contexts.

- International Interdisciplinary Mentoring Constellation Model
  Contributed by Elon University, this case illustrates how mentorship can occur in group clusters rather than in one-to-one mentor-mentee relationships.
- Vertically Integrated Projects (VIP) Global
  Contributed by Purdue University, this case describes an engineering project model that involves faculty, graduate students, and undergraduates in virtual international team-based research on global grand challenges with intercultural learning and teamwork skill-building support.
- Multifaith Scholars
  Contributed by Elon University, this case presents a MUR-GC mentorship model that has proven successful longitudinally in an interfaith program.
- SIT Study Abroad Chile: Cultural Identity, Social Justice, and Community Development
  Contributed by the education abroad program provider SIT, this case depicts an "island" model for mentorship that immerses students in research and cultural experiences in another country.
- Undergraduate Research Experience Purdue–Colombia
  Contributed by Purdue University, this case shows how undergraduate visiting scholars can be integrated into research at the host institution at scale, with support for cultural adjustment and connection in the local community.

History

In this section we provide background information on the MUR-GC think tank that produced this volume, including its impetus, leadership, events, working group themes, and all those who have contributed to the effort since its inception.

- MUR-GC History and Think Tank Participant List
  A description of the MUR-GC think tank's purpose, timeline, and participants

About the Editors and Authors

Editors



Dawn Michele Whitehead earned a PhD in education policy studies with a concentration in African studies and a minor in international and comparative education from Indiana University Bloomington (2007). She currently serves as the vice president of the Office of Global Citizenship for Campus, Community, and Careers at the American Association of Colleges and Universities (AAC&U). Her work focuses on advancing practices and strategies to integrate global, civic, and experiential learning across curricular and cocurricular initiatives and practices that advance equitable participation in global and community-based learning for all. Whitehead has written and presented nationally and internationally on global learning, community-based learning, equity-minded experiential learning, interfaith cooperation, and curricular change. Prior to joining AAC&U, she served as the director of curriculum internationalization with teaching responsibilities at Indiana University–Purdue University Indianapolis (IUPUI) and as faculty director for community-based global learning programs in Costa Rica, Ghana, and Kenya.



Maureen Vandermaas-Peeler completed a BA in psychology and French from Wake Forest University (1985) and a PhD in developmental psychology from North Carolina State University (1990). She served as an assistant professor at the University of Hawai'i at Hilo and the University of the South before coming to Elon University in 1995, and she is now a full professor and the founding director of the university's Center for Research on Global Engagement. Previous institutional leadership roles include directing the Honors Program and serving as interim associate provost of academic excellence. Vandermaas-Peeler studies early childhood learning in sociocultural contexts and global learning and mentoring in higher education. In addition to her work as a teacher-scholar-mentor at Elon, she has taught off-campus short-term courses and semesters abroad for over twenty years, including in London, Florence, Copenhagen, and Hawai'i. She has mentored over one hundred students in undergraduate research, including MUR-GC. Vandermaas-Peeler has been recognized with university-wide awards for scholarship and mentoring.



Susan Buck Sutton brings forty years of experience as a faculty member and administrator to her work on global learning and engagement in higher education. Recently retired as the senior advisor for international initiatives at Bryn Mawr College, Sutton is also emerita associate vice president of international Affairs and emerita chancellor's professor of anthropology at Indiana University (IU). Now an independent consultant, she is a fellow at the Institute of International Education (IIE) and senior associate at the American Council on Education. At IU, Sutton led the internationalization of its urban campus, IUPUI, through a philosophy of international collaboration, and was honored with the Andrew Heiskell Award from IIE and the Senator Paul Simon Award from NAFSA: Association of International Educators. Throughout this work, Sutton has become a strong advocate for experiential and engaged learning as essential for global understanding. She holds a PhD from the University of North Carolina at Chapel Hill and a BA from Bryn Mawr College, both in anthropology.



Mary F. Price earned a BA in interdisciplinary humanities and a minor in international studies from the University of West Florida (1985), an MA in Latin American studies at the University of Florida (1992), and a PhD in anthropology from Binghamton University, SUNY (2012). Price works with scholar-practitioners, students, and community members to strengthen practice, deepen learning, and co-create actionable knowledge. She has over twenty-five years of experience working with high-impact educational practices, including service learning, study abroad, learning communities, and faculty-mentored undergraduate research. Currently, she serves as the founding director of teaching and learning at The Forum on Education Abroad. Prior to joining The Forum in 2022, Price spent sixteen years leading faculty engagement initiatives at the IUPUI Center for Service & Learning. Her current scholarly interests emphasize the influence of community-academic partnership relationships on learning and community outcomes; the socialization, mentoring, and success of publicly engaged faculty as part of campus equity, civic, and student success agendas; and the use of program planning theory to strengthen learning and community-academic partnerships in local and global contexts.



Kate Patch earned a BS in anthropology from Iowa State University and an MA and a PhD in anthropology from Michigan State University with concentrations in African studies and international development. She is the senior international officer and the senior director of global initiatives at Grinnell College where she currently directs the Institute for Global Engagement. She is a trained cultural anthropologist who developed and taught faculty-led study abroad programs in Ghana and Malawi. She also facilitates and leads a peer-mentored, global research program for undergraduate students. She previously held administrative and teaching positions at private liberal arts colleges and large research universities.



Kris Acheson earned an interdisciplinary PhD in intercultural communication at Arizona State University in 2008. She is a former faculty member at Georgia State University and a Fulbright Scholar to Honduras. At Purdue University, she directs the Center for Intercultural Learning, Mentorship, Assessment and Research (CILMAR), where the staff supports intercultural development for the entire campus community (and beyond) by training mentors and building scalable learning resources. Much of her published research focuses on the development of and assessment of intercultural competence, especially with innovative learning technologies such as virtual reality. One of her current projects is a culturally responsive mentorship training program in partnership with Chicago State University, funded by the Alfred P. Sloan foundation.

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