The Internationalization of Higher Education in the Wake of COVID-19:

A Rigorous Review of the Literature on Short-Term Impacts

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FOREWORD

It is with great pleasure that we present this 20th issue of CIHE Perspectives, entitled "The Internationalization of Higher Education in the wake of COVID-19: A Rigorous Review of the Literature on Short-Term Impacts." While some parts of the world are steadily moving to a post-pandemic reality, it is very important for the field to preserve the lessons learned during this period, including reflecting critically about our scholarly responses to the pandemic, and the assumptions that lie behind such responses. The coming pages provide a valuable foundation for such critical reflection, by presenting a comprehensive view of the short-term impacts of the pandemic on internationalization, as reflected by the literature developed in its immediate aftermath.

This review is the culmination of the first year of a project funded by the Social Sciences and Humanities Research Council (SSHRC) in Canada, led by our esteemed colleague Dr. Elizabeth Buckner. We are very proud to partner with the talented team at the University of Toronto's Ontario Institute for Studies in Education (OISE), and to deepen our longstanding partnership with our colleagues from the International Association of Universities (IAU) in the development and dissemination of this project. In many respects, both the entire project and this particular output are illustrative of the way forward for CIHE. In line with our mission, we are committed to advancing critical analysis, presented in accessible ways to the most diverse audiences possible. CIHE is, above all, a global network of scholars and, therefore, collaboration is paramount. We plan to continue partnering with research centers and global higher education associations to advance our shared agendas.

We have many people to thank for their contributions to this publication. We wish to thank the amazing team of doctoral researchers involved with this project, who spent countless hours coding the literature and drafting sections of this report: Jessica Denenberg, Marianthi Kontelli, Adriana Marroquín Rodríguez, and You Zhang at OISE, along with Maia Gelashvili and Lizhou Wang at CIHE. We are very thankful to Dr. Elizabeth Buckner for her leadership and for selecting CIHE as a partner in this project. We are very grateful to Giorgio Marinoni for leading IAU's participation in this project and for his valuable insights, as well as to our very own Hans de Wit for his consulting role. Last but not least, we sincerely thank Taryn Aldrich for her outstanding copyediting and Salina Kopellas for her hard work on the layout and design.

The work for year two of the project is very much in progress, as the team is working on replicating and expanding this review, while also partnering with the IAU internationalization survey, coordinated by Giorgio Marinoni. We are looking forward to future outputs from this ongoing collaborative project.

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September 2022

EXECUTIVE SUMMARY

This report summarizes the academic and professional literature on how COVID-19 has affected the internationalization of higher education in the short term, specifically between March 2020 and August 2021. We first assemble a conceptual framework of major domains and activities involved in the internationalization of higher education. This framework reflects how COVID-19 may have influenced aspects of internationalization. To discern the impacts of COVID-19 on internationalization across countries and institutions, we next identify national characteristics as well as institutional and national supports (i.e., policies and practices) likely to moderate COVID-19's direct effects on related activities.

We then present a rigorous review[1] of the literature while using this framework to theorize impacts. Our aims in analyzing the literature were twofold: 1) to consider how COVID-19 has affected the internationalization of higher education worldwide based on available research; and 2) to identify gaps in the literature. In examining the short-term impacts of COVID-19 on internationalization, we identified 158 publications (e.g., magazine and newspaper articles, book chapters, and peer-reviewed academic articles) that met our inclusion criteria. We then coded each source based on publication type, country or region of interest, internationalization domain or activity, and emergent key themes.

Key findings are as follows:

1. The literature published on COVID-19 and internationalization was skewed: most coverage appeared in non-academic outlets and pertained to the United States and the United Kingdom. This pattern is not surprising; scholarly articles feature longer peer-review and publishing timelines than other types of publications. As such, more time is needed to assess COVID-19 impacts. Because our chosen time frame (March 2020–August 2021) co- incided with the early stages of the pandemic, our sample was understandably dominated by news items and reports rather than academic pieces.

2. Studies overwhelmingly focused on aspects of internationalization related to mobility, both inbound and outbound. Publications from core Anglophone countries that are major recruiters of international students discussed people mobility more than publications from other countries. These publications from Anglophone countries expressed substantial concerns about whether institutions in recruiting countries such as the United States, the United Kingdom, Australia, and Canada would maintain international student enrollments throughout the pandemic and how circumstances may affect revenues. Other aspects of internationalization, such as its role in research collaboration or provider mobility, received scant attention.

3. The suspension of in-person events due to COVID-19 led numerous internationalization activities to shift to online and digital formats. Many studies documented advantages and disadvantages of this digital transition. Sources also outlined best practices.

4. We identified common themes across studies in various domains, including students' experiences with discrimination and isolation that affected mental health and well-being. A large body of work described how international students' and faculty members' status as non-nationals created distinct pressures given their visa status, employment limitations, and inability to travel home. Much of the literature centered on undergraduate international students studying in North America.

[1] Similar to other types of knowledge syntheses such as systematic reviews, this rigorous review seeks to integrate what is known about a topic through comprehensive, transparent, and replicable methods. The task differs from a systematic review. We followed Oketch et al.'s (2014) approach to rigorous review by including studies that may not meet the more stringent standards of systematic review. For example, we did not evaluate the quality of research evidence or exclude publications based on data or methods.

This concentration may limit our understanding of the scope of international students' experiences.

5. The pandemic's impacts have been uneven across countries and institutions. Numerous sources indicated that long-standing global inequalities have changed. Specifically, digital tools have rendered certain types of collaboration possible in ways that were previously infeasible due to visa requirements and cost barriers.

6. Finally, several studies pointed out that COVID-19 has catalyzed persistent geopolitical concerns, particularly between the West and China. New inequalities are believed to have emerged, mapped onto access to fast and affordable Internet that is free from censorship.

INTRODUCTION

In today's increasingly interconnected world, higher education institutions (HEIs) play a critical part in educating students for global understanding and awareness. These institutions are also crucial in addressing worldwide development challenges such as poverty and climate change. Although international academic mobility and collaboration are established traditions in higher education, starting in the 1990s, universities became involved in more extensive forms of international engagement. With the end of the Cold War, the presence of Europeanization and other forms of regionalization, and a global shift towards a knowledge economy, universities began to respond and became international actors. National and regional programs—Fulbright and Title VI programs in the United States, and Europe-based research grant programs such as Horizon 2020 and the European Commission's ERASMUS+ mobility scheme—inspired and supported HEIs as they sought to implement more strategic internationalization (de Wit, 2002). At the same time, the 1990s saw a shift towards emphasizing economic competitiveness as a basis for internationalization. Van der Wende (2001) characterized this move as a paradigmatic change from cooperation to competition, although not completely at the expense of the conventional approach to international collaboration in higher education.

Given its rising importance, internationalization in higher education has transformed from a marginal and ad hoc range of activities to a more comprehensive and centralized process. It is now a major strategic priority for universities worldwide; it features an array of motivations, diverse organizational and program-based strategies, and broad stakeholder involvement (de Wit et al., 2015; Hudzik, 2011).

Internationalization is a multifaceted phenomenon that has been defined in numerous ways (Rumbley et al., 2022). In a critical overview and analysis of internationalization in higher education, Hunter et al. (2022) noted that "the concept of internationalization continues to be refined and revised, and theories and definitions adjusted to match new and evolving under-standings" (p. 70). Knight (2004) described internationalization as the "process of integrating international and intercultural dimensions of knowledge into all aspects of higher education, including core teaching, research, and service functions" (p. 11). This conceptualization is one of many to stress internationalization as a set of interrelated organizational activities. In a study for the European Parliament, de Wit et al. (2015) offered an updated definition that adds intentionality and normative elements, which we have adopted in this report:

> "[Internationalization in higher education is the] intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff and to make a meaningful contribution to society" (p. 29).

The strategic benefits of internationalization include increased revenue, enhanced prestige, and improved student learning (Altbach & Knight, 2007; Knight, 2004). According to the 5th Global Survey of Internationalization of Higher Education by the International Association of Universities (IAU), conducted in 2018, more than 90% of institutions mentioned internationalization in their mission or strategic plan (Marinoni, 2019). The most frequently cited benefits of internationalization were "enhanced international cooperation and capacity building" and "improved quality of teaching and learning."

Yet internationalization also raises numerous concerns. Related topics have become points of debate in political spheres, the media, and the higher education community. Common foci include the use of internationalization for revenue generation; competition for international students; the dominance of the English language in international activities at the expense of local languages; and international student recruitment at the expense of access, quality education, and services (e.g., housing) for local students.

These critiques are not unfounded: the internationalization process typically spotlights the mobility of a small minority of students, staff, programs, and institutions. Many associated activities tend to be exclusive and only benefit a subset of actors, particularly in the Global North (Marinoni & de Wit, 2019). de Wit et al. (2022) argued that "international student mobility might well contribute to increased global inequality between sending and receiving countries and institutions, as well as between students who have access to these opportunities and students who don't" (p. 299). These findings echo the 5th Global Survey on Internationalization, which cited the most common risk to internationalization as "international opportunities accessible only to students with financial resources" followed by "difficulty to assess/recognize the quality of courses/ programs offered by foreign institutions" and "excessive competition with other higher education institutions" (Marinoni, 2019).

In response to this focus on mobility, movements such as internationalization at home (IaH) (Beelen & Jones, 2015), internationalization of the curriculum (Leask, 2015), and comprehensive internationalization (Hudzik, 2011) emerged around the turn of the century. These initiatives were meant to shed light on internationalization for all students rather than the slight percentage of mobile ones. Also, the rather narrow focus on one of three missions of universities—teaching—has been countered with an appeal to attend to the internationalization of research (Woldegiyorgis et al., 2018). Criticism of internationalization as a Western paradigm has also come to the fore (de Wit, 2020; Jones & de Wit, 2014) along with a call to decolonize the curriculum (Stein & de Andreotti, 2016). Jones et al. (2021) appealed for "internationalization for society," urging reflection on how internationalization benefits society overall instead of particular students or faculty. In short, the internationalization of higher education occupied a complicated and contested space even before the COVID-19 pandemic.

ASSESSING THE IMPACTS OF COVID-19

Internationalization projects were severely disrupted in the wake of COVID-19. Immediately following, professional associations and the media reported decreased international student mobility together with restrictions on international fieldwork and short-term mobility for faculty and scholars (Rumbley, 2020). These issues sparked anxiety about upsetting students' lives and faculty members' research. Longer-term worries centered on institutional budgets and fiscal security. Scholars have since called on institutions to rethink fundamental approaches and assumptions related to pre-COVID-19 norms. In the early days of the pandemic, many news articles and think pieces tended towards hyperbole, framing COVID-19 as having possibly catastrophic impacts on internationalization. In fact, over the past two years, the pandemic has exerted nuanced effects on HEIs and their internationalization activities. Many universities have come to recognize the great potential of virtual collaboration and mobility. Some of the more dire conjectures about international student mobility are proving to be over-

stated. Nonetheless, institutions' and individuals' experiences have varied tremendously based on national and local contexts as well as institutional decisions, policies, and supports. Indeed, we expect the pandemic to have resulted in divergent higher education impacts, responses, and practices.

The IAU's second edition of the global survey on the impact of COVID-19 on higher education indicated HEIs' resilience during the pandemic. Institutions crafted innovative solutions and invested additional time and energy into minimizing disruption amid partial or complete campus closures in most countries. The picture of higher education emerging from COVID-19 is nevertheless concerning: declining financial means, students unable to benefit from remote teaching and learning, delayed research activities, increased staff workloads, and slower recruitment. Most importantly, these challenges affect regions, countries, and HEIs differently and with a tendency to exacerbate pre-existing inequalities. International activities were among those most compromised by the pandemic.

However, COVID-19 has not yet altered internationalization approaches at the majority of HEIs. At institutions where the pandemic has inspired strategic changes, several activities have been given high priority—virtual exchanges, collaborative online learning, and internationalization of the curriculum/IaH. These efforts could help alleviate inequality in internationalization by reaching a greater number of students. More uneven impacts have been observed for student and staff mobility, with the importance of certain activities rising at some institutions but remaining the same or decreasing at others. Inequality could therefore also increase if student and staff mobility remains important at some HEIs and accessible to a select few across the sector (Jensen et al., 2022).

Two years into the pandemic, it is time to take stock of what we have learned about how COVID-19 has affected internationalization. Empirically grounded research is time-intensive. This review is hence limited to short-term impacts (March 2020–August 2021) and is primarily based on non-academic sources. Our rigorous review is intended to systematically consider the academic and grey literature on how COVID-19 has affected internationalization in higher education. Doing so enables reflections on what we know and have yet to discover. A broader aim of this research is to identify core assumptions about internationalization and its future in order to contemplate new directions in research, policy, and practice.

Accordingly, our review was guided by the following questions:

1) What are the foci of initial research and reporting on COVID-19's impacts on internationalization, and what knowledge gaps appear?

2) What do we know about how the pandemic has affected internationalization activities in different contexts?

3) What does the state of the initial literature suggest about how internationalization is currently understood, practiced, and studied?

CONCEPTUAL FRAMEWORK

In response to the rapid spread of COVID-19, HEIs and governments quickly took steps to control the virus. The two primary policies, border closures and the suspension of in-person activities, were accompanied by a shift to virtual interaction. Both of these large-scale changes had direct and far-reaching effects on internationalization but potentially differential impacts on specific activities. To document these nuanced consequences and in turn describe how the pandemic has affected internationalization in higher education, we first needed to define "internationalization" and conceptualize how COVID-19 might have affected each domain. We consulted an extensive body of academic literature, as well as reports and guidance documents published by university-based professional associations worldwide, to determine which activities were included in their definitions of the term.

- International Association of Universities (IAU)—Strategic Internationalization Framework

- American Council for Education (ACE)—Model for Comprehensive Internationalization

- Organization for Economic Co-operation and Development (OECD)—Approaches to Internationalisation and their Implications for Strategic Management and Institutional Practice

- European Commission (EC)—Indicator Projects on Internationalisation

- German Academic Exchange Service (DAAD)—Internationalisation in Higher Education for Society Matrix

- The African Network for Internationalization of Education (ANIE)—Activities

- Unión de Universidades de América Latina y el Caribe (UDUAL)—Activities

- Asian University Alliance (AUA)—Framework

Organizational Activities

Although many activities associated with internationalization do not take place on physical campuses, they are nonetheless considered part of HEIs' internationalization efforts when individuals affiliated with the institution—including students, faculty, and staff—are involved. Our major foci included HEIs, key stakeholders, and activities undertaken on their behalf. We relied on the comprehensive internationalization model to conceptualize which activities fall under institutional internationalization. Scholars and professional associations put forward this model to define a broad scope of internationalization that encompasses all aspects of organizational operations including leadership and governance; institutional policy; funding; student recruitment and support services; and the more traditional domains of teaching and learning, research, and community engagement. We drew on these studies in accentuating five domains of internationalization: people mobility; international program and provider mobility (IPPM); international research; international partnerships and networks; and campus-based curricular and extracurricular activities, typically labeled "IaH." We then identified and classified activities associated with internationalization as they occurred within each domain.

Table 1: Internationalization Domains

Primary Domain	Definition
People Mobility	The outward and inward physical movement of people (students, faculty, and staff) with the purpose of engaging in learning, research, and/or collaboration (American Council on Education, 2022).
International Program and Provider Mobility	The delivery of programs (e.g., twinning, joint/double degree, franchise, distance education) and providers (e.g., branch campuses, joint universities) across international borders (Knight & Liu, 2019; Knight & McNamara, 2017; Wilkins & Huisman, 2012).
International Research	Research that involves international locations or collaborators. This is a broad definition that encompasses individual institution-affiliated researchers traveling across borders for university-affiliated research, participation in global education hubs or networks, and bilateral or multilateral research partnership agreements that include provisions for mobility or cross-border collaboration.
International Partnerships and Networks	A formal arrangement—usually in the form of a Memorandum of Understanding or similar document—between institutions, professional associations, or research institutes through which parties agree to cooperate to advance their mutual interests that span international contexts and borders. In most cases, partnership agreements outline specific areas or projects of collaboration as well as relevant actors, departments, or units and timelines for completion, renewal, or exit.
Internationalization at Home	"The purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments" (Beelen & Jones, 2015, p. 69).

Figure 1: Conceptual Framework of the Potential Impacts of COVID-19 on Internationalization
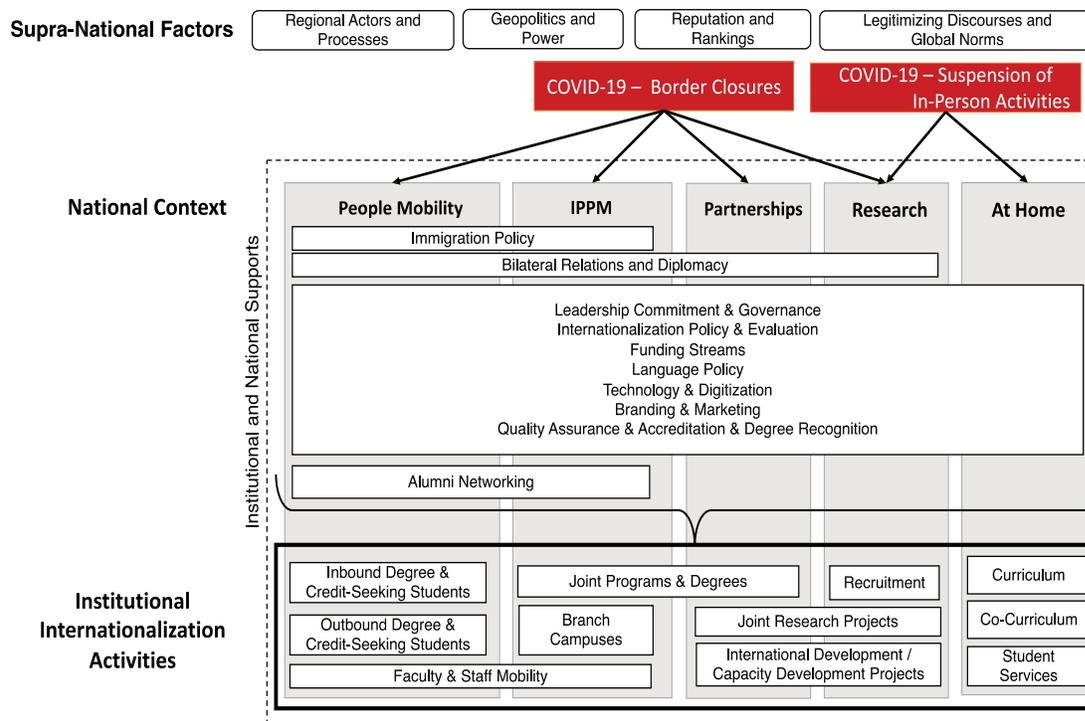
People Mobility

The first core domain of internationalization we examine is people mobility. For our conceptual framework, we referred to the American Council of Education (ACE) in defining "people mobility" as the physical movement of people (students, faculty, and staff) with the purpose of engaging in learning, research, and/or collaboration. We classified people mobility into two types in our analysis: *inbound mobility* (both degree- and credit-seeking) and *outbound mobility* (both degree- and credit-seeking). Inbound and outbound mobility are each relative to an HEI's perspective: *inbound mobility* refers to students, faculty, and staff coming from abroad to the country and institution to engage in learning, research, and/or collaboration; *outbound mobility* refers to students, faculty, and staff traveling abroad to engage in learning, research, and/or collaboration. The same student may be considered inbound and outbound depending on the view of the institution or country; therefore, in our model, each type is a sub-domain under the broader category of "people mobility" (Choudaha & de Wit, 2014; de Wit et al., 2013).

International Program and Provider Mobility

The second domain we consider is IPPM. Many terms have been used to capture the phenomenon of HEIs offering academic programs to students in other countries, either independently or through cooperation with host-country providers. These terms include transnational, offshore, cross-border, or borderless higher education (Kosmützky & Putty, 2016) and IPPM (Knight & Liu, 2016). In our conceptual framework, transnational higher education refers to the delivery of programs (e.g., twinning, joint/double degree, franchise, distance education) and of providers (e.g., branch campuses, joint universities) across international borders (Knight & Liu, 2019; Knight & McNamara, 2017; Wilkins & Huisman, 2012).

International Research

Research has consistently been framed as inherently international, dating back to early medieval universities and the concept of the "wandering scholar" (de Wit, 1999; Hayhoe & Mundy, 2017). Today, universities seek to conduct research that is globally relevant and impactful. As a domain of internationalization, we define research (or "international research") as the incorporation of an international element into the pursuit of institutional research. This integration may include initiatives that are part of a global education hub or network. Bilateral or multilateral research partnership agreements that contain provisions for mobility or cross-border collaboration may be included as well.

International Partnerships and Networks

The fourth domain we assess is partnerships, which have long been viewed as a way for HEIs to facilitate student and faculty mobility or to deliver coordinated technical programming. Scholars such as Olson (2013) have traced how international partnerships are becoming increasingly complex, often involving more institutions and activities. Formal partnerships are a prime mechanism by which other internationalization activities (e.g., joint research projects or joint degree programs) operate. Such partnerships can also be part of a broader internationalization strategy, with many HEIs identifying strategic partnerships as a priority for internationalization.

Institutions embrace partnerships as a main component of their internationalization strategies (Buckner et al., 2020), premised in commitments to "mutual benefit." Yet scholars have identified enduring coloniality and inequalities in academic partnerships between institutions in the Global North and South (Canto & Hannah, 2001). In light of our aim to understand whether and how COVID-19 has influenced partnership development or strategies, including possible partner selection, we have categorized it as a standalone domain. We define a partnership as a formal arrangement—usually in the form of a Memorandum of Understanding or similar document—between institutions, professional associations, or research institutes through which parties agree to cooperate to advance their mutual interests that span international contexts and borders. In our study, partnerships consist of bilateral or multilateral agreements as well as participation in an international consortium or network. We include international development projects

or capacity-building projects within this domain. Capacity building is a common practice in international development policy; it refers to cross-border initiatives to strengthen the capacity for development and growth of various sectors through supports to areas such as science, technology, research, and innovation. Building capacity for development may also entail indirect or direct intervention in domains related to public policy and institutional governance and is usually marked by inequality and an imbalanced power dynamic between countries in the North and those in the South (Altbach, 2004).

International at Home

Finally, the fifth domain of internationalization we evaluate pertains to activities occurring within the campus and curriculum, often called IaH. We refer to Beelen and Jones's (2015) definition, specifically "the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments" (p. 69). These authors emphasized the importance of internationalized learning outcomes, assessing such outcomes, internationalizing all programs rather than several elective courses, and providing internationalized learning experiences to all students instead of only those who can benefit from mobility opportunities. Activities within this domain include changes to the curriculum and co-curriculum and the provision of support services.

Curricular and co-curricular programs and activities provide students with chances to develop global and intercultural competence at home (ACE, 2022). Leask (2015) defined internationalization of curriculum as "the incorporation of international, intercultural, and/or global dimensions into the content of the curriculum as well as the learning outcomes, assessment tasks, teaching methods, and support services of a program of study" (p. 9). She further argued that universities should internationalize all types of curricula, including formal, informal, and hidden.

Additionally, ACE (2022) named faculty and staff support as a target area in the comprehensive internationalization framework. This framework holds the professional development of faculty and staff as imper-

ative to effective internationalization. Faculty should develop intercultural competence to be able to incorporate diverse and global perspectives into their teaching, research, service, administrative responsibilities, and local–global community connections. Institutional policies (e.g., tenure and promotion guidelines) reward faculty and staff who foster internationalization and recognize faculty and staff mobility as an asset (ACE, 2022). Finally, we included student support services as a component of IaH in our model; doing so allowed us to capture university policies that enable students' inbound and outbound mobility, counseling for international students, and an internationalized campus environment. Student, faculty, and staff support is vital for IaH.

Moderating Factors: Supports for Internationalization

Internationalization activities do not occur in isolation but are embedded within institutional and national contexts. Research has highlighted how HEIs' internationalization practices are tailored to long-standing mandates, rankings, and internal organizational processes (Buckner, 2019; Chan & Dimmock, 2008; Friedman, 2018; Seeber et al., 2016; Seeber et al., 2020). We expect institutions' norms, values, and identities shape their organizational dynamics and their responses to environmental changes. Studies also indicate that institutional and national policies and practices support internationalization in various ways. Scholars have recently paid closer attention to internationalization in higher education in relation to government; for example, national governments may endeavor to facilitate the internationalization of their higher education systems. Therefore, in mapping the impacts of COVID-19 on internationalization, we theorized that the pandemic's role would depend on policies and supports enacted at the institutional and national levels.

Structural Factors: National and Supra-National Factors

In addition to policy, we know that national contexts are heterogeneous and that structural factors (e.g., national economic resources, geopolitical power, and the primary language of instruction) influence what is pos-

sible and desirable with respect to internationalization. Therefore, in our conceptual model, we considered institutional activities on both a national level and a supra-national level, each of which reveals factors that could shape how COVID-19 has affected institutions' internationalization activities cross-nationally. For instance, we underlined geopolitics as one area that could impinge on internationalization projects in numerous ways.

Impacts of COVID-19

To conceptualize how COVID-19 has influenced internationalization activities, we added a COVID-19 dimension to existing internationalization frameworks. While the pandemic may have influenced individuals' health and well-being, the most direct effect on internationalization activities manifested in measures and policies enacted to mitigate the virus's spread—namely border closures that hampered international travel and the suspension of in-person activities. The latter strategy limited in-person interaction, including teaching, learning, and meetings. Some universities closed their campuses entirely, a decision which created a series of logistical issues for students in residence. In our conceptual framework, we hypothesized that both measures would influence internationalization activities, albeit possibly differently. We specifically expected internationalization domains related to physical mobility—or domains involving physical mobility of any type—to be most affected by border closures, which prevented travel. By contrast, we postulated that the suspension of in-person activities and the ensuing abrupt shift to virtual meetings and spaces would have the strongest impact on teaching and learning activities, including internationalization of the curriculum.

DATA AND METHODS

To conduct this study, we adapted the methods of other rigorous reviews in higher education (Oketch et al., 2014) to suit our purposes. Our research proceeded through five phases:

1. Planning: We elaborated the conceptual framework, search strategy, inclusion criteria, and initial coding protocol (i.e., country, publication type) as discussed above.

2. Searching: We identified relevant literature by iterating key search terms.

3. Screening of titles and abstracts: We determined whether each study met our inclusion criteria and excluded those that did not, which reduced the number of publications. By reading each study's abstract, we inductively, iteratively developed a list of topics and themes that the publications addressed. We used this list to create an extended set of "key themes" in our coding protocol.

4. Screening of full text and coding: We read each article and coded it for country of focus, publication type, relevance to internationalization domains, and key themes.

5. Analysis and synthesis: The key findings of all selected studies were analyzed, with studies related to each domain and key theme synthesized separately.

Phase 2: Literature Search

Using the key domains and sub-domains of internationalization outlined in the conceptual framework, our team carried out extensive searches of education resource databases to determine what had been published on this topic through August 2021.

In the Search phase, we first performed preliminary searches with various search terms and synonyms of "internationalization," "COVID-19," and "higher education" to determine combinations that yielded results best suited to our project's scope (see Appendix C for complete Boolean search terms). Following these initial probes, the team finalized a list of key criteria for inclusion in subsequent searches (see Appendix B). Major differences existed in publications regarding domains of internationalization; therefore, we refined keyword searches separately for each internationaliza-

tion domain (see Appendix B.)

The searches were conducted in two databases, Education Source and Education Resource Information Center (ERIC). Targeted word searches were performed in *University World News* and the *Chronicle of Higher Education*, which are not indexed in the other two databases. All keywords were searched in abstracts, and all document types were considered. Sources included academic and non-academic pieces from publication venues such as academic journals, books, conference proceedings, magazines, and newspapers.

Education Source is a comprehensive database appropriate for this study's literature search. According to its coverage list, the database includes 4706 sources of various types, including academic journals, books/monographs, collections of conference papers or proceedings, education reports, and magazines. **Table 2** lists the number of sources in our sample by type.

In addition to covering multiple publication types, Education Source contains publications from 80 countries spanning all world regions (see Appendix A). Several countries had a large number of pieces in Education Source, namely the United States ($N = 2252$), the United Kingdom ($N = 963$), Switzerland ($N = 285$), Germany ($N = 147$), Canada ($N = 124$), Australia ($N = 168$), and Turkey ($N = 67$). The number of sources based in non-Western countries was low in Education Source, representing a methodological limitation.

We also referred to ERIC, a comprehensive bibliographic and full-text database of education research and information. ERIC indexes sources across the spectrum of research in education. It contains 1306 journal sources featuring academic articles and 714 non-journal sources, which are mainly non-academic. Our search on ERIC thus included academic and non-academic publications.

Education Source and ERIC possess a substantial number of academic and non-academic sources. Many publications on the impact of COVID-19 on higher education internationalization were not published in academic outlets. Our combined use of Education Source and ERIC enabled us to gather non-academic articles on the topic of interest.

Phase 3: Screening of Titles and Abstracts

During screening, we reviewed each study's title and abstract to determine the publication's relevance to our research. Specific inclusion criteria were as follows:

1) **Published in English:** We decided to limit the scope of our initial search to English-language articles. English was the only common language among all team members, and we believe that much of the academic literature on higher education internationalization has been published in this language. This parameter nonetheless represents a study limitation. We hope to expand our review to publications in other languages in the future.

2) **Published After 2020:** We limited the publication timeframe to resources published after 2020 in order to exclude references to previous coronavirus outbreaks. We chose to add the term "pandemic" to our COVID-19-related search terminology to better capture pandemic references that did not specifically name COVID-19 within the abstract.

3) **A Focus on Internationalization of Higher Education:** Next, to best adhere to our research scope, all included studies addressed the internationalization of higher education. These areas are central to our project. Articles discussing the COVID-19 pandemic within other fields or only loosely within a higher education context were not relevant.

4) **A Focus on the Impact of COVID-19:** In addition to a focus on internationalization, we only included studies regarding the impact of COVID-19 on internationalization. For example, we excluded studies that mentioned COVID-19 as the research context but did not assess the pandemic's role in internationalization.

5) **Empirical or Analytical:** Eligible studies either included or were based on analyses and/or empirical data, thus yielding new knowledge, data, or conceptualizations. We considered all empirical data and methods and did not screen studies based on method. However, articles were screened out if they only included opinions or predictions that were not supported by empirical evidence or new analysis.

To keep track of and code selected articles, we used EPPI-Reviewer Web, an online software tool created and maintained by the Social Science Research Unit at the UCL Institute of Education, University of London. EPPI-Reviewer is designed for rigorous scoping and

systematic reviews, and its functionality allows for collaborative projects. In each phase of screening, once we determined that an article did not meet our inclusion criteria, we excluded it and moved on. Many articles would or could have been excluded for multiple reasons; **Table 2** reflects our prioritization of criteria.

Following our bibliometric search, all references and abstracts were loaded into EPPI. A team of research assistants read each publication's title and abstract to determine if it met inclusion criteria. Our initial review returned 781 articles based on search terms, 108 of which were duplicates (i.e., appearing in more than one database). The resultant sample contained 673 publications; 377 were then screened out based on their titles and abstracts. Sources could be excluded for several reasons, such as focusing on domestic issues (not internationalization) in higher education or on other levels of education.

Phase 4: Screening and Coding of Full Texts

We next read the full text of the remaining sources (*N* = 296). An additional 138 articles were excluded due to not meeting our inclusion criteria upon reviewing their full text. Some articles made only marginal references to COVID-19 as the research background and did not address how the pandemic affected internationaliza-

tion. Others were based on contributors' opinions or personal experiences; most publications excluded for this reason were newspaper articles featuring speculation rather than analysis.

Ultimately, 158 articles met all inclusion criteria. We then coded relevant information for these publications. We gathered information on each source to identify the types of literature being produced: the country or region of interest, publication type, key domain, and internationalization activity. We also coded the general themes discussed in each article, which we developed and expanded through emergent coding and later refined through iterative coding during the initial search and screening phases.

Phase 5: Analysis and Synthesis

In a second round of analysis, our research assistants read the articles coded under specific domains and key themes to summarize major findings from the literature. Within each domain and overarching theme, we identified emergent sub-themes. We also recorded detailed results from studies related to each sub-theme. The team wrote a series of memos on each domain and sub-theme as well; this process revealed several cross-cutting themes.

Table 2: Articles Included in the Study

Phase	Step	N
Literature Search	Initial Search	781
	Duplicates Identified and Removed	108
Screening of Title and Abstract		673
	EXCLUDE on date - focus is before 2020	4
	EXCLUDE on article focus - not IHE	261
	EXCLUDE on article focus - not COVID	76
	EXCLUDE on methods/analysis	36
Screening of Full Text		296
	EXCLUDE on article focus - not IHE	52
	EXCLUDE on article focus - not COVID	33
	EXCLUDE on methods/analysis	53
INCLUDED in study		158

FINDINGS

## Part I: Scale and Scope of Literature

In this section, we examine the scope of the literature on COVID-19's impacts on internationalization activities. We specifically comment on publication types and their geographic focus, internationalization domain, and key themes.

Publication Type

We cast a wide net to incorporate academic and non-academic publications into our sample, including magazines, academic journals, newspapers, and profes-

sional reports. **Figure 2** displays the total number of publications in our review by type. Of the 158 articles, more than half were non-academic (N = 107, primarily from magazines and periodicals). Only 30% (N = 45) were peer-reviewed academic articles. This pattern contrasts the higher education community's desire to reflect on a quickly changing dynamic with the protracted nature of academic publishing.

*Figure 2: Number of Articles by Publication Type*
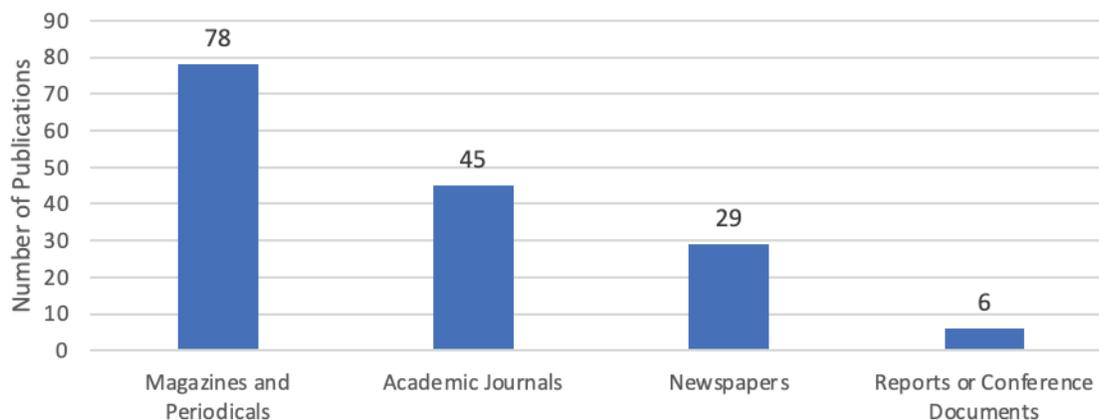
Publication Trends by Geographic Focus

Figure 3 presents the total number of publications in our review by country of focus (if applicable). Studies that examined trends in many countries were coded as "global." We coded a publication's country of focus as the host country or location of the institution(s) under discussion (vs. the authors' geographic affiliations or students' places of origin). For example, many articles

described international students' experiences; in these cases, we did not code students' national origin (if mentioned) but rather the host institution's country if that was the research focus.

Figure 3: Top Mentioned Geographic Foci
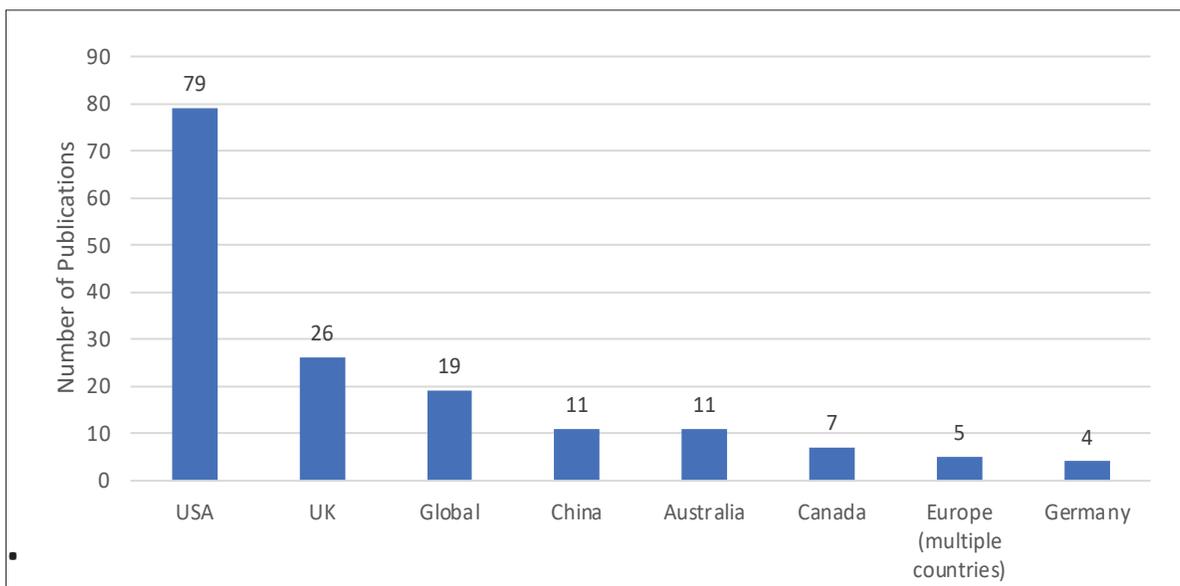
As depicted in **Figure 3,** the initial literature overwhelmingly focused on a small set of countries, specifically the United States and the United Kingdom. Articles about these two countries collectively represented almost 55% of sources in our sample. These countries are major destinations for international students. The literature thus seemed to reflect current trends in international student mobility. Both countries are majority English-speaking. Therefore, the emphasis in our sample may be partly attributable to our inclusion criteria regarding English-language articles.

Figure 4:Top Mentioned Geographic Foci by Publication Type
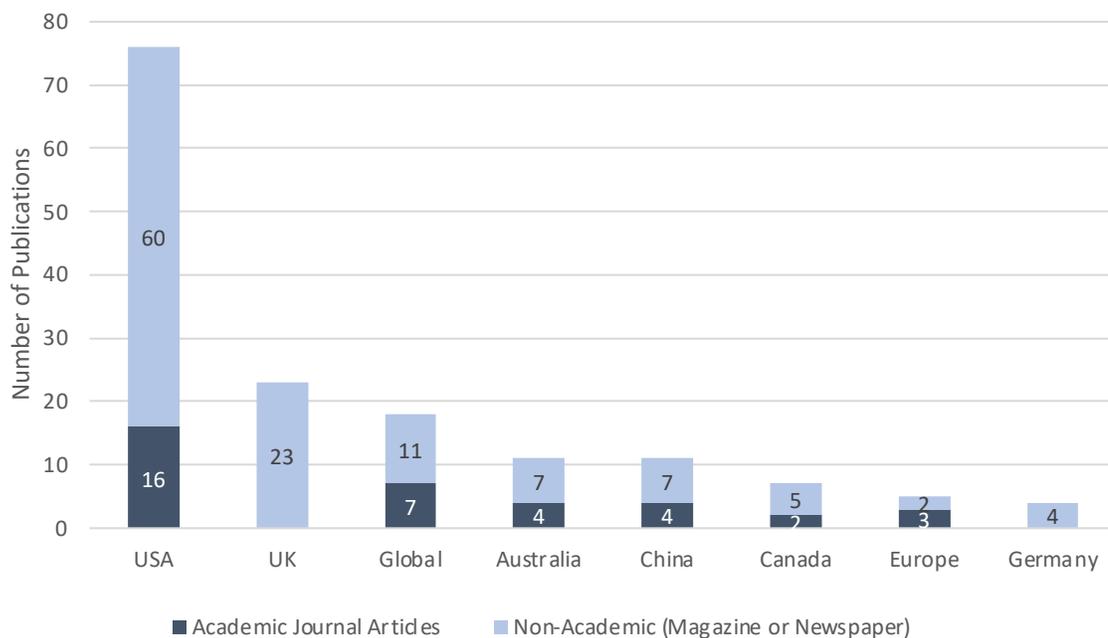
We disaggregated the total number of publications by type, specifically academic (i.e., journal articles) and non-academic (i.e., magazine articles, newspaper articles, and reports). Figure 4 illustrates sources' geographic (country) focus by publication type. Much of the initial information on COVID-19's impact on internationalization appeared in non-academic pieces focusing on the United States and the United Kingdom ($N = 84$ collectively). Figure 4 also indicates the absence of academic articles from the United Kingdom; publications in this category mostly revolved around the pandemic's impact on the U.S. higher education system.

Non-academic sources, which are generally shorter, atheoretical, and published without peer review, set the tone of the conversation about COVID-19's immediate impact on internationalization. Stark differences in the publishing timelines and processes between academic and non-academic sources likely affected knowledge dissemination overall. At first glance, the lack of academic journal articles discussing international partnerships during the pandemic implies an overall drop-off in collaborative engagement; however, a closer assessment of available resources suggests that the lengthy peer-review process in academic publishing may pose a challenge in time-sensitive situations such as the pandemic. Whereas magazines have efficient publication processes, academic journal articles progress on a considerably slower timeline due to peer review. We do not intend to assess or discuss at length the rigor of peer-reviewed research in academic journals. However, these circumstances insinuate that academic journals may not be the best tool for knowledge sharing and mobilization in a rapidly evolving space. At the same time, many techniques that periodical editors use to attract readers may exaggerate negative consequences or emphasize a crisis rhetoric. Early storylines could then persist even if subsequent peer-reviewed research belies these claims.

Publication Trends by Internationalization Domain

We also examined publication trends across internationalization domains. The domains or sub-domain of

focus was coded from publications and corresponded to the domains and sub-domains in our conceptual framework. **Figure 5** shows the number of publications by domain. People mobility attracted the most attention ($N = 139$), with 99 articles on inbound mobility and 40 on outbound mobility.

As discussed in our conceptual framework, we mostly differentiated between inbound and outbound people mobility. This decision was partly practical; we could often readily discern which type of people mobility authors were addressing. Our choice contrasts the more typical emphases on degree mobility and credit mobility. Definitions of internationalization usually distinguish degree-seeking and credit-seeking students when discussing international mobility. This distinction is important because degree- and credit-seeking students typically have unique goals, and their durations at host institutions vary substantially. However, we found that academic studies on international students were much less likely to clarify the population of focus. For example, many articles referenced "international students" or "international mobility" in general. Articles on inbound international student mobility most commonly profiled degree-seeking students, whereas those on outbound mobility examined credit-seeking students (i.e., those studying abroad). As **Table 3** shows, these generalizations are quite broad, and many articles concentrating on inbound international students did not state whether students were degree-seeking or credit-seeking. Articles on outbound mobility tended to be much clearer regarding their population of interest. In our review, 13% of studies examining outbound mobility were addressing degree-seeking preferences. Most of these studies concerned Chinese students' preferences for international degree mobility in the wake of COVID-19.

After mobility, the most mentioned internationalization domain was IaH ($N = 29$), which focused on collaborative online international learning (COIL)/virtual education ($N = 22$). Other internationalization domains received less interest, in line with a traditional view of internationalization as centering on student mobility. However, a disproportionate number of studies in our sample were from the United States, where research was heavily trained on international

Table 3: Articles by Mobility Type

	Inbound (N)	% Inbound	Outbound (N)	% Outbound
Degree-seeking	43	43%	13	33%
Credit-seeking	1	1%	21	53%
Both	12	12%	1	3%
Not mentioned or unclear	44	44%	5	13%

students. Despite pandemic-induced changes, work on domains associated with IaH (e.g., curriculum, co-curricular/extracurricular activities) remained negligible. This area thus calls for additional research.

Distribution of Key Themes

We identified a number of key themes and emphases for each publication, developed through iterative rounds of emergent coding. This set of key themes included topics such as documenting students' experiences, calling to rethink internationalization, discussing the shift to online internationalization, and others. Figure 6 displays these themes' frequencies over all publications. Our coding results pointed to a strong fo-

cus on international students, roughly evenly split between experiences during COVID-19 ($N = 53$) and enrollment trends at the institutional or national level ($N = 46$). Fewer articles, but still a sizeable set ($N = 27$), addressed the transition to online learning and the institutional support services available for international students. Issues of equity, diversity, and inclusion and especially anti-Asian discrimination also appeared often ($N = 23$). Physical health, mental health, and well-being ($N = 12$) did not represent a major theme, nor did other content-oriented themes (e.g., intercultural education, language education).

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*Figure 5: Number of Publications by Internationalization Activity*
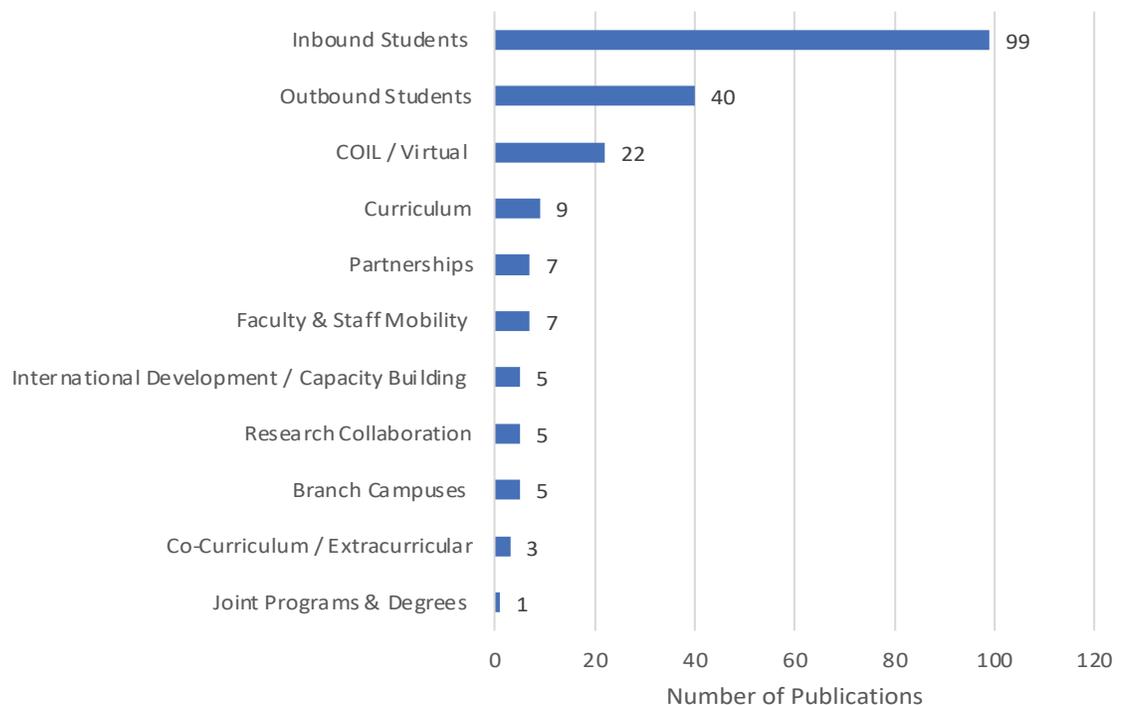
Figure 6: Number of Publications by Key Theme
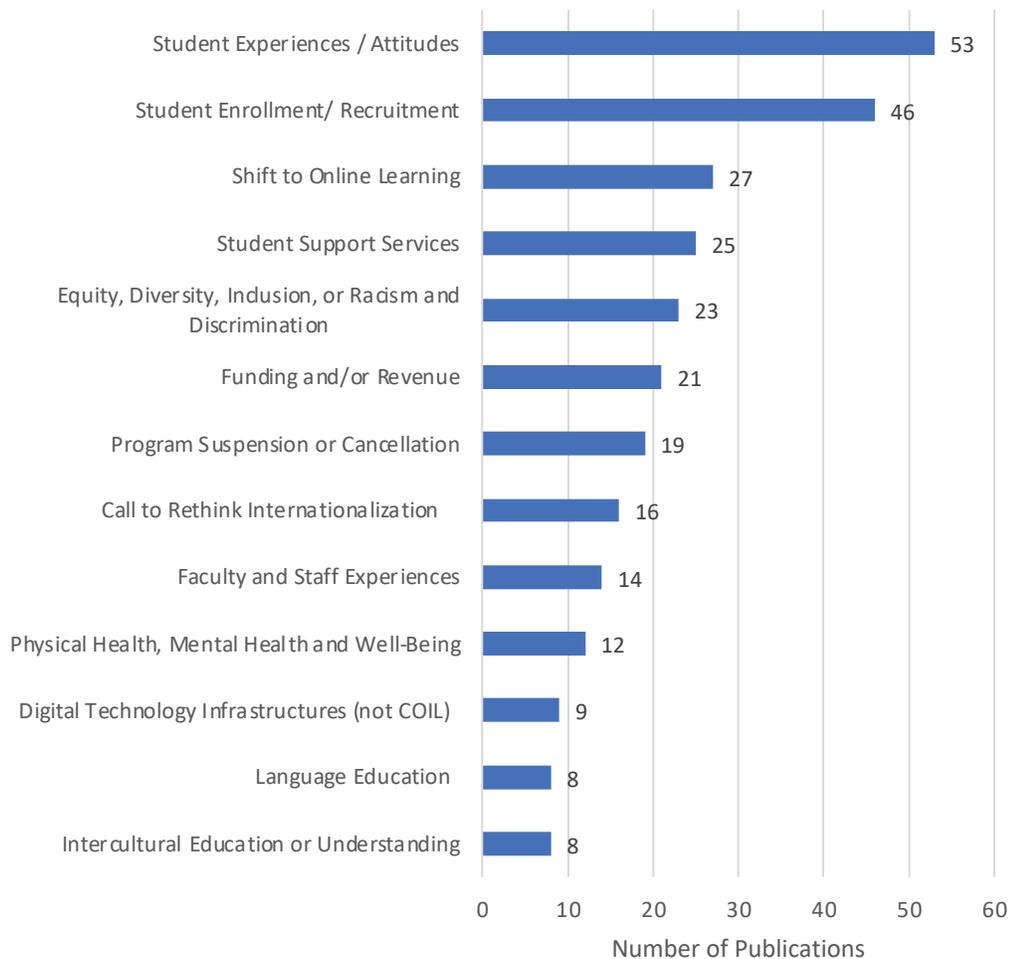
The distribution of publication types based on focal themes presents a distinction between the most common topics in academic journals versus in non-academic publications. The latter outlets seemed more interested in easily quantifiable and timely themes, such as funding and/or revenue (95% of pieces on these topics were published in non-academic sources) and student enrollment/recruitment (91% in non-academic sources). Program suspension/cancellation also attracted disproportionate scrutiny in non-academic outlets (89% of all pieces regarding this theme were published in magazines and newspapers), as did student support services (81% of all pieces). On the con-

trary, academic journals principally revolved around topics related to the "new normal" in internationalization. Calls to rethink internationalization were more common in the academic literature (totaling 69% of all sources on this theme) along with intercultural understanding (83%) and language education (75%). Lastly, academic and non-academic publications both covered students' experiences/attitudes and the shift to online and virtual communications.

Figure 7 also indicates that most studies pertained to student-related topics (i.e., students' experiences and enrollment). This trend coincides with our domain-specific findings, where inbound and outbound

student mobility were the most popular codes. Students remained at the heart of the concept of internationalization in HEIs while other actors, such as faculty and researchers, garnered far less interest.

Figure 7: : Number of Publications by Key Theme and Publication Type
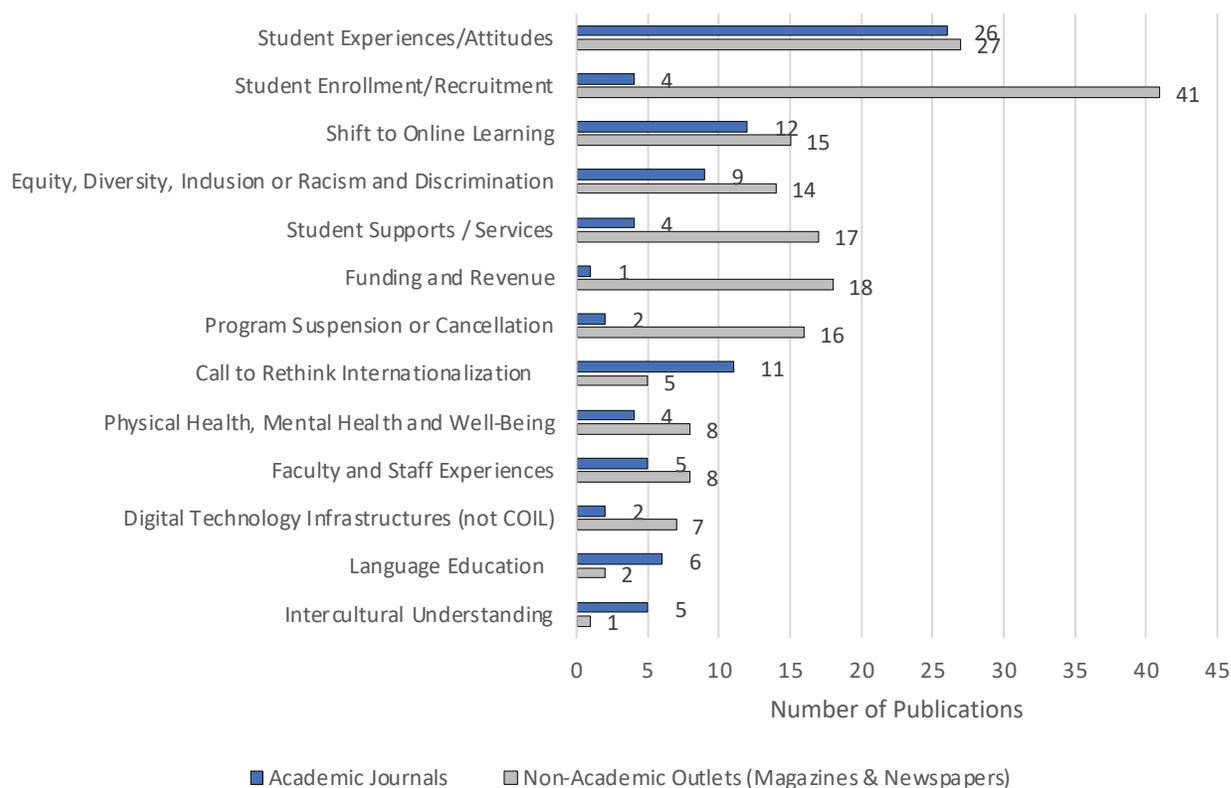
As anticipated based on the high number of articles, the most cross-cutting priorities corresponded to the three most studied domains: inbound degree- and credit-seeking students, outbound degree- and credit-seeking students (including study abroad), and COIL/virtual education. Inbound mobility was extensively investigated from the perspectives of student enrollment (N = 38), inbound students' experiences during the pandemic (N = 34), and funding and/or revenue (N = 17). Outbound mobility and COIL/virtual education also presented a fairly robust distribution of cross-cutting themes among the most popular codes. Articles tended to investigate priorities linked to the most immediate consequences of the pandemic during the period under review, which mirrored the initial stages of the COVID-19 outbreak.

Figure 8: Theme Frequency by Internationalization Domain

Theme	Inbound	Outbound	COIL	Curriculum
Student Enrollment/Recruitment	38		2	
Student Experiences/Attitudes	34	13	10	3
Funding and/or Revenue	17	13	3	
EDI or Racism and Discrimination	13	3	4	4
Physical Health, Mental Health and Wellbeing	11	5		
Faculty and Staff Experiences	3	1	5	1
Intercultural Understanding	1	2	1	4

Legend: ■ Inbound ■ Outbound ■ COIL ■ Curriculum
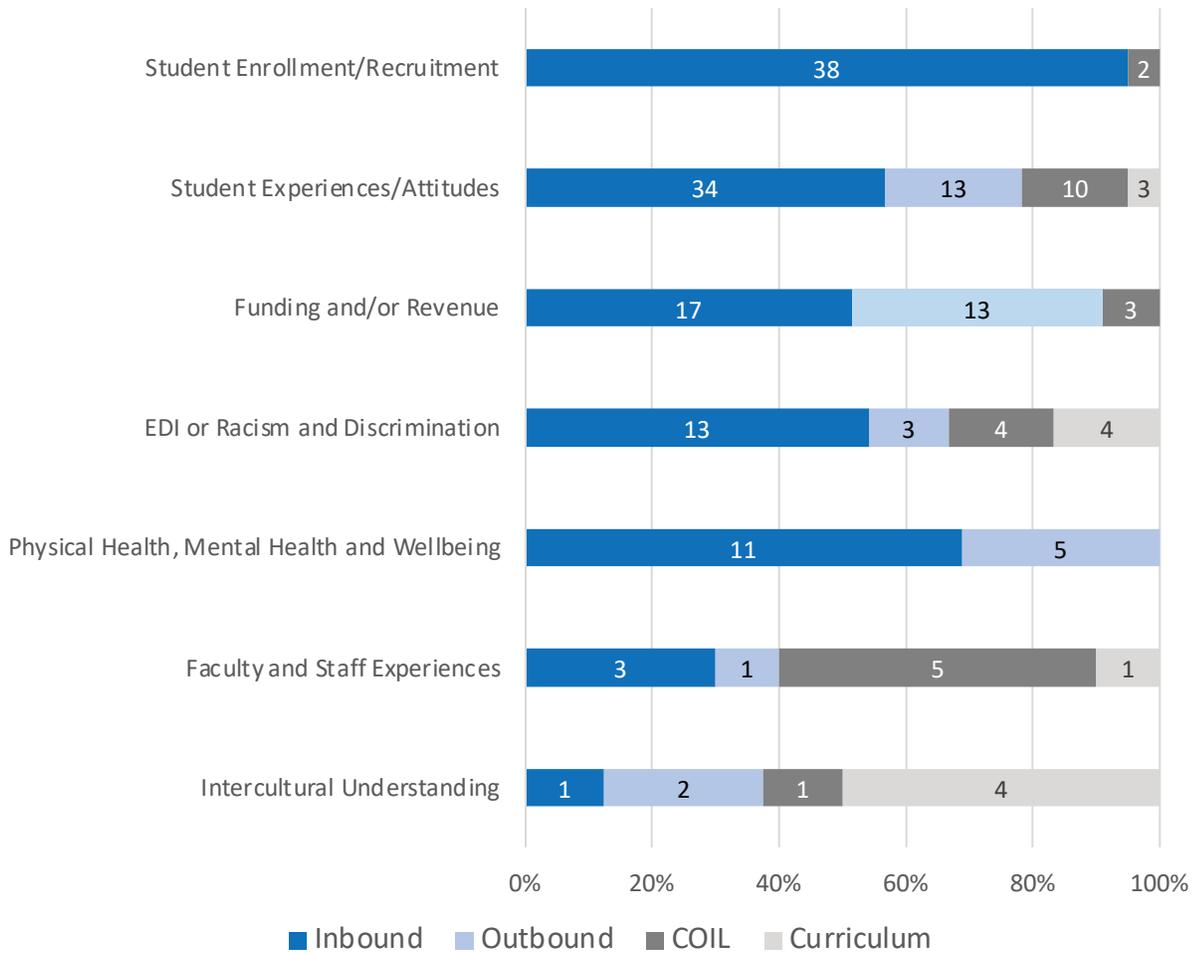
Different Emphases Around the World

To better understand how key themes varied across countries, we categorized publications by their focal country. We then analyzed differences between publications from core Anglophone countries that are major recruiters of international students (i.e., the United States, the United Kingdom, Australia, Canada, and New Zealand) versus all other countries. To compare core Anglophone countries and non-Anglophone countries, we calculated the percentage of publications on major themes to determine how countries' foci differed.

Figure 9 shows that core Anglophone countries have placed considerable emphasis on student enrollment and recruitment, totaling 25% of publications in this country group. In comparison, only around 15% of publications on this theme featured non-Anglophone countries. Approximately 28% of publications about these countries focused on students' experiences and attitudes, whereas about 22% of the articles from core Anglophone countries did so. These statistics corroborate trends in student mobility in that core Anglophone countries receive the most international students worldwide and have therefore been substantially affected by the pandemic and are concerned about student enrollment and recruitment.

Core Anglophone countries usually stress funding and revenue compared with non-Anglophone countries: 12% of publications from core Anglophone countries addressed this theme versus a mere 6% in

non-Anglophone countries. This finding reflects the reality that international students are important revenue sources for HEIs in core Anglophone countries. It also coincides with the research focus on student enrollment and recruitment for this country group.

Compared with student enrollment, students' experiences, and funding and revenue, a much smaller set of literature concentrated on physical health, mental health, and well-being. This theme was more prevalent in work from Anglophone countries (7%) than from non-Anglophone countries (3%). This difference may have emerged because most international students travel to core Anglophone countries, with many hailing from Asian countries. These students' families are accordingly far away, with immediate social support being scarce during the pandemic.

Non-Anglophone countries produced slightly more literature on diversity, racism, and discrimination (13%) compared with core Anglophone countries (10%). This finding is intriguing: numerous reports and other types of literature have explored students' experiences with racism and discrimination during the pandemic in core Anglophone countries—particularly in terms of anti-Asian racism. The COVID-19 virus was first identified in China, the country which many international students call home. It is important to note that we only conducted an initial literature search; more research on this theme may be released about core Anglophone countries over time. It is therefore necessary to continue tracking this area.

Faculty and staff experiences constituted another theme that received less literature coverage. Only 4% of research from core Anglophone countries concerned this theme, compared with 10% from non-Anglophone countries. Core Anglophone countries' emphasis on student enrollment and recruitment may have contributed to this gap. Faculty and staff experiences generally gain less attention in the internationalization field, which focuses more on student mobility and the student experience. Yet more internationalization research should involve faculty and staff; both are important stakeholders.

Another major distinction between core Anglophone countries and non-Anglophone countries accompanied calls to rethink internationalization.

Non-Anglophone countries underlined this theme more (12%) than core Anglophone countries (5%). Current research on internationalization is largely Western-centric. Researchers and practitioners from non-Anglophone countries may deem it more urgent to rethink internationalization, while core Anglophone countries might still prioritize dwindling student enrollment and revenue. This is another theme that requires monitoring.

Intercultural understanding has elicited far less curiosity in both core Anglophone countries (3%) and non-Anglophone countries (4%). This seeming lack of interest has created a marked void in the literature. A critical goal of internationalization is to increase intercultural understanding, making the dearth of research on this theme alarming. Interestingly, the pandemic-related halt in travel sparked more worries about student enrollment and recruitment and students' attitudes than about students' intercultural understanding. The aim of intercultural understanding in relation to internationalization thus seems to have been overlooked.

Figure 9: Comparison of Major Themes between Core Anglophone Countries and All Others
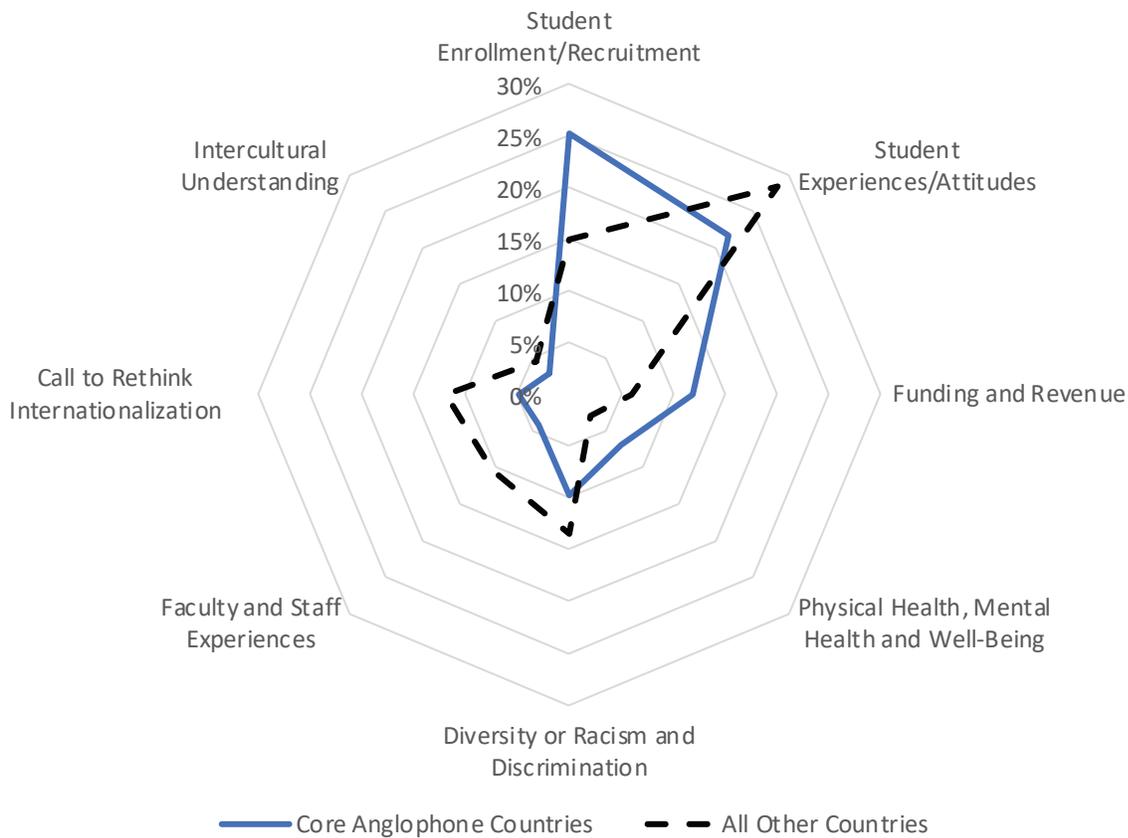
Part II: Impact of COVID-19 on Each Domain of Internationalization

In this section, we summarize findings on the impact of COVID-19 on each internationalization domain. We also ponder the roles of national policies and institutional supports as moderators of identified impacts.

International Student Mobility

The early literature overwhelmingly discussed people mobility, particularly inbound degree-seeking students. Among the 158 publications included in our review, 99 pertained to inbound student mobility: 26 in academic journals, 53 in magazines and periodicals, 16 in newspapers, and 4 published as reports and conference proceedings or meeting documents. In terms of geographic distribution, 90 publications involved major destinations for international students, namely the United States ($N = 59$), the United Kingdom ($N = 16$), Australia ($N = 9$), Canada ($N = 5$), and Germany ($N = 4$).

Student enrollment/recruitment was the most popular theme in this domain across publication types, appearing in 38 sources. The second most common theme encompassed students' experiences and attitudes ($N = 34$). Two other frequent themes were student support services and funding/revenue, mentioned in 18 and 17 sources, respectively.

Nearly immediately following border closures in March 2020, newspapers, magazines, and periodicals began investigating the pandemic's impact on interna-

tional student enrollment/recruitment. At first, in the absence of official enrollment data, information was mainly derived from the number of issued student visas and via interviews with leaders and administrators. Insight was later obtained from surveys conducted by professional associations, institutional enrollment and recruitment figures, and national statistical data.

Publications highlighted declining enrollment and presented a somber outlook at the start of the pandemic. Early reports of low enrollment numbers spawned anxiety about the duration and long-term effects of this crisis. However, after the initial panic and amid residual uncertainty, confidence steadily grew that the pandemic's impact would likely be temporary and that the global number of international student enrollments would eventually improve (Gardner, 2021; Kercher, 2021; O'Malley, 2021a). For instance, in an article published in October 2020, Baker (2020b) mentioned that in the United Kingdom—despite a 100% drop in the number of student visas issued from March to the end of June—universities were optimistic about the sector's recovery. In the United States, a report shared findings from the Institute of International Education's fourth COVID-19 Snapshot Survey: international student applications for the 2021–22 academic year were nearly twice the jump documented by HEIs for the previous year (O'Malley, 2021b).

That said, this hopefulness was not uniform cross-nationally. The expectation that some countries would recuperate more easily than others has been attributed to a constellation of factors—including but not limited to governments' and institutions' responses to the pandemic, imposed travel restrictions (Kercher, 2021), immigration environments (Baker, 2020b; O'Malley, 2021a), and politics and geopolitics (Dennis, 2020; Fischer, 2020a).

The literature has also underscored revenue loss as an area of concern tied to reduced international student enrollment, especially in countries where international student fees serve as an essential income stream (Bothwell, 2021; Basken et al., 2020). Magazines and periodicals addressed the need for government-provided financial assistance from the start of the pandemic. Such was the case in the United States where, for instance, the Association of International Educators projected that the drop in international student enroll-

ment in fall 2020 could cost universities US$4.5 billion (Marklein, 2020). International students and their families contributed nearly $41 billion to the U.S. economy in the 2018–19 academic year, creating or supporting more than 458,000 jobs and making international education the fifth largest services export in the country (Banks & Stewart, 2020). In light of these dependencies, the Association of International Educators advocated for federal financial aid for HEIs to help offset the impacts of low enrollments on institutional budgets and on the national economy. Another example is the United Kingdom: a British Council report predicted 14,000 fewer new enrollments from East Asia alone in the 2020–21 academic year compared with 2019–20. The financial implications of lower enrollments, as discussed in the report, prompted the University and College Union to criticize their government's "wait and see" approach and to call for immediate financial help (British Council, 2020).

Moreover, the loss of revenue caused by the pandemic drew renewed attention to HEIs' overreliance on international student fees as a revenue source. Some publications (Bebbington, 2021; Ross, 2021) addressed the decrease in international student enrollment in Australian universities due to COVID-19 and the adverse impacts on HEIs' research and overall budgets. In these studies, multiple stakeholders criticized institutions' dependence on revenue generated from international student fees and a lack of accompanying financial risk management plans. On the positive side, responses to these issues included recommendations for inventive practices such as new funding strategies and the development of a revamped systemwide research "vision" within the Australian higher education system.

We also found that the pandemic catalyzed change and innovation around international student recruitment practices. Multiple studies emphasized either the shift to or growth of online and digital learning. For instance, a literature review exploring international student enrollment in Ghana suggested ways to enhance online engagement with potential students (Nyame & Abedi-Boafo, 2020). Wood (2020b) explored changes that U.S. HEIs had made to their international graduate student recruitment processes to surmount pandemic-related obstacles; the article presented valuable strategies, such as creating country-specific virtual

events and webinars and implementing technology-assisted fast-tracking of admissions (Wood, 2020b). Elsewhere, the German Academic Exchange Service [DAAD] reported that, among other important digitization efforts, HEIs had developed myriad digital recruitment approaches to attract and better serve international students throughout the recruitment process (Gardner, 2021).

Studies addressed other topics tied to student enrollment and recruitment to a lesser extent. For instance, Kercher (2021) identified a global trend showing that the pandemic-related decline in international students affected bachelor's programs more than graduate programs. Some articles also identified differences across institution types (Bothwell, 2021). In the United States, a 2021 survey released by the Institute of International Education showed 60% of doctoral institutions in the country reported an increase in applications whereas 60% of community colleges anticipated fewer applicants (Fischer, 2021a). Another under-investigated area is COVID-19's impact on international student enrollment/recruitment in different higher education systems; some authors argued that countries with strong public education sectors might be less affected than others (e.g., Baker, 2020a).

In addition to the large volume of research on international student enrollment, studies on international student mobility examined students' experiences and attitudes. Thirty-four articles in our sample were coded as referring to both inbound mobility and students' experiences/attitudes. Seventeen were in academic journals, 10 in magazines, and seven in newspapers. The publications primarily addressed four sub-themes: visa issues, online learning during the pandemic, mental health, and discrimination. All sub-themes were cross-cutting and are detailed in other sections of this report. Online learning is discussed later in this section under "Internationalization at Home." In *Part III: The Roles of Policies and Supports,* we describe visa issues under the "National Policies" section; in *Part VI: Cross-Cutting Themes,* we report on students' experiences related to mental health and discrimination.

Along with the above-mentioned themes, another important finding reflected the pandemic's consequences for degree completion. Two articles identified border closures and poor institutional flexibility around degree requirements in China as the cause of this problem. These sources reported on students from Asia and Africa at Chinese HEIs who feared they would not obtain their degrees due to missing opportunities to complete laboratory work, publication delays, and failure to meet other academic deadlines (Lau, 2021a, 2021b). Weissman (2020) indicated that graduate international students in the United States were facing similar challenges. Specifically, doctoral students were reported to have been unable to complete their doctoral work because of restricted access to libraries, laboratories, and fieldwork sites (Weissman, 2020). Both articles remarked on the lack of student support and advocated for the creation of targeted supports for students facing academic difficulties from the pandemic. Although we did not specifically identify the student populations under study in this round of coding, we believe that most research focused on undergraduates' experiences. Weissman (2020) highlighted particularities of graduate students' experiences and unveiled the need for additional research on the diversity of international students' experiences.

In short, the literature indicates that COVID-19 caused international students to experience varying degrees of distress that negatively affected their physical, psychological, social, and/or economic well-being (Bista, 2020; Blake et al., 2021; Gao, 2021; Ge, 2021; Matthews, 2020a; Mok et al., 2021; Novikov, 2020; Sumbogo et al., 2021). Such research showcases the need for more adequate national and institutional supports for these students.

Outbound Mobility

Within the domain of people mobility, our sample contained 40 publications on outbound mobility: 21 were specific to credit-seeking students studying abroad, and 13 reported on students' preferences for future degree-seeking mobility.

In terms of geographic distribution, among publications with a clear focal country, the United States was the focus of approximately half ($N = 22$), followed by China ($N = 4$) and the United Kingdom ($N = 4$). Overall interest in outbound mobility lagged behind that in inbound international students. Even so, the country distributions were relatively similar, with most work related to the United States and the United Kingdom.

Most of the publications were featured in magazines and periodicals (*N* = 20) or newspapers (*N* = 12). These appearances reflect a concentration on swiftly communicating information and discussing institutional responses to crises. Articles in magazines and periodicals primarily traced changes in national regulations regarding border closures, abrupt cancellations of study abroad programs, urgent repatriation of students who were abroad during the first wave of the pandemic, and advice for navigating this ever-changing terrain. The professional direction of publications on these shared practices was evident. Newspaper articles originated from *University World News* and described emerging trends in international outbound mobility during and after the pandemic. Finally, articles in academic journals (*N* = 8) presented qualitative and quantitative analyses of the rationale underlying international students' choices in the COVID-19 era.

The majority of reviewed items referred to surveys and online questionnaires as data sources. Experts' opinions about and experiences in higher education appeared widespread, as did testimonials capturing students' perspectives. Several information sources were therefore used. Complicated methodological approaches were largely absent, likely due to the need for timely guidance under highly fluid conditions.

Degree-Mobility Preferences

Here, we first discuss how COVID-19 affected students' choices about study abroad destinations, particularly in terms of future degree-seeking mobility. A number of studies examined decision-making processes and personal factors to shed light on the choices of current and future international students who were contemplating studying abroad (or who had decided not to do so due to the pandemic). Commonly mentioned characteristics included updated study plans, newly chosen destinations, and consideration of a range of factors. Prospective international students reported generally preferring face-to-face interaction over online learning (Bothwell, 2020). Nevertheless, study counselors in China reported no or minimal decline in the number of Chinese outbound students (Chow-Liu, 2021). In terms of study destinations, however, Chow-Liu (2021) indicated that students had started to consider other English-speaking countries apart from the United

States—bearing in mind the distance from their home countries given the unpredictability of the pandemic. In deciding whether to stay in an international destination or to return home (for students already abroad during the pandemic), individuals compared the epidemiologic scenarios in both countries, the mental and physical health of themselves and their families, potential consequences for academic progress, and social responsibility (Cao & Chieu, 2021).

A related set of studies examined future trends in mobility flows to paint a more vivid picture of present circumstances. These publications often used large-scale surveys to monitor existing needs and predict future demands. Yet the impressions gained from these surveys differed considerably depending on the countries involved, the research focus, and the stakeholders contributing to the article. For instance, a global survey confirmed that 79% of international students preferred on-campus study abroad programs with Canada as the top destination (Nuthall, 2021). A similarly optimistic picture emerged for African students who considered the United Kingdom a safe and welcoming destination for their outward mobility plans (Kigotho, 2021b). For African students during the pandemic in particular, numbers had demonstrably declined; Kigotho (2021a) indicated that these students' future mobility would be shaped by travel restrictions, leading to a redistribution of student flows internationally. A survey conducted in India and Nepal presented slightly different findings, with school graduates remaining positive about their future study abroad plans—although many respondents expressed uncertainty about the pandemic and mentioned that their study plans had been disrupted, compelling them to either search for online alternatives or to abandon their initial aspirations (Sharma, 2020c). Certain articles linked future plans for mobility to geopolitics: Lau (2020b) discussed the possibility of China influencing outbound Chinese international student flows according to its diplomatic relations worldwide.

Credit-Seeking Outbound Mobility

We identified two major sub-themes within the subset of studies addressing credit-seeking outbound mobility: 1) immediate impacts of the pandemic and 2) students' experiences while moving to virtual exchange.

Regarding immediate impacts, articles in magazines and periodicals delineated how pandemic-related restrictions had affected study abroad programs and students. This category covers a variety of topics, from descriptive approaches related to government measures and health concerns to sharing advice about institutional responses, risk management, and repatriation plans (e.g., Bothwell, 2021b; Hayes & Al'Abri, 2020; Marklein, 2021; Sutton, 2020; West, 2020c, 2020d; Zalaznick, 2020). Publications on emergency responses, which mainly addressed the first (and most unexpected) wave of the pandemic, often included references to disastrous economic effects for outbound mobility in the longer run (Banks & Stewart, 2020; Marklein, 2020). The pandemic also cast light on many institutions' lack of proper risk management strategies for mobility programs (Schuller & Colus, 2020).

Most articles stressed the need for flexibility in navigating this sensitive and complicated territory. In terms of our overall sample, the pandemic and its new reality were usually framed as disruptive, economically devastating, dangerous, and restricting. The narrative was less intense in publications whose statistical data were presented more descriptively than interpretatively. The outlook seemed mostly neutral; in these cases, the pandemic was depicted as an event that cannot be undone and that will surely alter the outbound mobility landscape. Irrespective of the tone of publications, the immediate response was repatriation or cancellation of study abroad programs followed by occasional substitution through online offerings.

The pandemic brought ubiquitous border closures and travel constraints. The transition to virtual exchange and attendant changes in the student experience thus emerged as another sub-theme. Numerous publications examined how institutions had moved from on-site to online study abroad programs and the responses of upper-year and newly admitted students (Chow-Liu, 2021; Schuller & Colus, 2020; Wood, 2020a). For example, a study abroad course was redesigned using virtual reality to immerse students in a foreign environment; participating HEIs organized virtual tours in Google Tour Creator, which students appreciated. Liu and Shirley (2021) concluded that "traditional study abroad courses can be redesigned into fully online COIL courses" (p. 192) but noted that virtual reality cannot replace full cultural immersion. The authors further suggested that, after the pandemic, hybrid study abroad programs can be created that harness the advantages of both teaching modes (i.e., in-person and virtual).

Researchers also pointed out the need for effective emergency responses and outlined issues that arose during or because of the transition to online services (e.g., lower quality of online experiences, negative effects on recruitment due to limited interaction during online visits, inclusiveness). Alternatives included continuing study abroad programs via online tools, allowing deferrals, and designing fully remote outbound mobility programs. These options enabled HEIs to accommodate senior students' needs while offering newly admitted student flexible choices (Chow-Liu, 2021; Gallagher, 2020; Schuller & Colus, 2020; Wood, 2020a). The sub-theme of students' experiences extended beyond the shift to online learning. Discrimination, especially anti-Asian sentiments, led to critical lived experiences for some outbound students (Lau, 2020a). We address this point in greater depth as a cross-cutting theme.

In short, the literature on outbound mobility chiefly focused on current students and their perspectives during the pandemic. More than half of publications ($N = 25$) examined the challenges that institutions and students faced because of COVID-19 during study abroad or when students were planning to leave their country of origin. Eleven items revolved around students' future choices, program design in the coming years, and upcoming trends in the field. The remaining articles ($N = 4$) referred to both present and future conditions. A few publications ($N = 3$) considered circumstances during and after the pandemic as strong motivations for rethinking international outbound mobility and creating opportunities for change. Suggestions in this regard were fairly vague but tended to view post-pandemic reality through a different lens—as a chance to recast educational practices, particularly in relation to the curriculum (e.g., Dietrich, 2020; Ohito et al., 2021).

International Program and Provider Mobility

In contrast to people mobility, only six articles in our review were about IPPM (five on branch campuses and one on joint programs). The literature on the pandemic's impact was therefore thin in this respect. Of the six sources, two were published in academic journals and each pertained to branch campuses; four appeared in magazines and periodicals or newspapers such as *Times Higher Education* or *University World News.*

In terms of studies on branch campuses, topics included the move to online or virtual communications, faculty members' perspectives, and international student mobility. One aspect of this limited literature involved the merits of branch campuses. Publications examined how branch campuses could help students affected by border closures, thereby limiting disruption to students' study plans. For instance, Bothwell (2021) found that Malaysian branch campuses of UK and Australian HEIs enrolled students who could not travel due to travel restrictions. This course of action prevented interruptions in students' education. New York University is one such example: students were allowed to study at either of its branch campuses if they could not come to the United States (Moja, 2021). Branch campuses' operations seemed to have helped these HEIs partly alleviate pandemic-induced disruptions for students.

Faculty members' experiences on branch campuses were not always positive. In China, for example, a faculty member of a Sino-joint university reported tight restrictions on movement, family separation, and more stringent constraints on academic freedom (Times Higher Education Staff, 2021). Another reported that their contract had been terminated after an encounter with an unmasked student in class. This faculty member also cited a lack of support to help them return to the United Kingdom. This article from Times Higher Education argued that in times of crisis such as COVID-19, strong national policies in host countries may lead to tension around internationalization—particularly for foreign faculty who, like their students, may find themselves stuck between two regulatory regimes (Times Higher Education Staff, 2021).

Only one publication reflected on joint programs (Schuller & Colus, 2020). This article discussed how the Erasmus Mundus Joint Master's Degrees, which have an important mobility portion, adapted to the pandemic. The authors described concerns about how intercultural aspects of this program could be delivered without physical mobility.

In all, few publications examined the impact of COVID-19 on IPPM. The literature was fragmented in its consideration of students' attitudes about moving online, anecdotes on faculty members' experiences on branch campuses, and how universities with either branch campuses or joint programs have dealt with pandemic-induced disruptions. A positive note is that universities have striven to adapt to the pandemic to minimize interruptions for students. For instance, students who cannot travel may enroll at branch campuses (if available) to continue their studies.

International Research

As with IPPM, our review uncovered little research on how COVID-19 has influenced international research collaboration: only two articles broached this topic. One addressed the pandemic's impact on a research–practice partnership. The partnership had existed for 3 years prior to the COVID-19 outbreak and was not disrupted; the team of researchers and practitioners could accommodate each other's needs and sustain the project during the pandemic (Altavilla, 2021). Sharma (2020b) reviewed how tensions in U.S.–China relations, partly triggered by COVID-19, had affected international scientific collaboration. Research collaborations between the United States and China were found to have increased (as had collaborations among countries such as the United States, Canada, the United Kingdom, China, and Italy), particularly in terms of research related to COVID-19. Collaboration is necessary when conducting COVID-19 research (e.g., to analyze viral specimens). Sharma (2020b) ultimately concluded that scientific nationalism and globalism can co-exist.

Another three articles mentioned the pandemic's effects on research while discussing other topics. For example, one study mapped cuts to research funding in the United Kingdom, which were framed as an unexpected and indirect consequence of the government's need to slash spending in some domains due to high

spending on health care in the wake of COVID-19. These funding cuts could influence UK universities' partnerships with low- and middle-income countries, as the cuts mainly affected foreign aid projects through which UK universities collaborate with these nations (Grove, 2021). Another mentioned how reduced research funding, coupled with Brexit's impact on UK universities' access to research funding in the European Union, have prompted UK universities to seek research collaboration with countries such as China and the United States (Morgan, 2020). An article on IaH in the United States mentioned that research collaboration at the institutional level and the faculty level has managed to move online without major disruptions (Rogers, 2020).

Overall, COVID-19 did not appear to have major negative effects on research collaboration, although this domain was relatively underexplored in our sample. Even in the United Kingdom, which saw cuts in government funding for research, HEIs apparently sought to establish research partnerships with institutions in other countries. The global challenge of the pandemic seems to have brought scientists together despite sometimes tense international relations, such as between China and the United States. Research collaboration represents an area in which COVID-19 has yielded opportunities, opening fertile grounds for additional research.

International Partnerships and Networks

Of the activities identified in our conceptual framework, those on partnerships and collaboration constituted another domain with little acknowledgement. Publications along this line were limited: joint programs and degrees ($N = 1$), partnerships ($N = 7$), joint research projects/research collaboration ($N = 5$), international development/capacity development projects ($N = 5$), and co-curricular/extracurricular activities ($N = 3$).

Only 11 articles concerned partnerships and collaboration in international higher education: six from magazines, two from newspapers, two from academic journals, and one report. Several other pieces in the sample mentioned partnerships and collaboration as tools for transitioning to digital spaces at the start of the pandemic but did not address these activities as in-

ternationalization domains. Although this initial analysis appeared to reflect a lack of focus on this topic, a closer review of the literature suggested that *published research* has likely been too narrow to capture key areas of knowledge dissemination.

Our review of the grey literature from professional associations revealed several insights. First, despite disruptions, the perceived importance of partnerships and research collaboration did not decrease due to the pandemic. By contrast, partnerships were considered highly important (CBIE, 2022; CIHE, 2021; IAU, 2020). Collaboration became critical not only when searching for solutions but also in strategizing a way forward for the internationalization of higher education. Publications highlighted how people working in internationalization offices swiftly moved usual practices into virtual spaces and ultimately "adapted to stay the same." Although few published articles addressed these areas, our supplementary review of online material (i.e., webinars and publications from professional associations) reflected international partners' transition from physical to virtual activities, ranging from visiting delegations to research colloquia to partnership agreements (Jacobs et al, 2021, p. 362).

Second, even though standard mobility programs and in-person delegations ground to a halt due to international travel restrictions, virtual collaboration expanded into a digital space in unprecedented ways. This form of cooperation served as a tool for promoting diplomacy and sustaining crucial academic relationships (CBIE, 2021). The literature accentuated how key relationship-building teams and units—often within international offices—were vital in fostering, maintaining, and evaluating partnerships and research collaboration with external partners and stakeholders, even amid the ever-changing pandemic.

Internationalization at Home

Of the 158 articles in our analysis, 29 were coded as pertaining to IaH. We defined this topic area as concentrating on internationalization of the curriculum ($N = 10$), co-curricular or student services ($N = 4$), and COIL ($N = 26$). Some sources referred to multiple subthemes. More widely, IaH research concerned two primary topics: 1) curricular and co-curricular internationalization; and 2) virtual learning, including

COIL. These articles covered three core issues, namely students' attitudes towards and experiences with virtual collaboration and courses ($N = 8$); the impact and issues of moving to virtual collaboration and courses ($N = 7$); and university support for the shift to online venues and strategies to ensure effective virtual courses or programs ($N = 5$).

The most prominent themes focused on international students' attitudes and experiences with online learning. Students reported mixed perceptions of online learning (Pricope, 2021; Kolesova et al., 2021). Some viewed their online learning experiences positively, mentioning greater digital literacy, increased independent learning ability, and time flexibility. Students also adopted time management strategies during online learning, such as by combining online studies and online social life to cope with pandemic circumstances (Pricope, 2021; Kolesova et al., 2021). Online exchange programs could enhance students' intercultural competence despite being virtual. For example, Liu and Shirley (2021) analyzed a business study abroad course that used COIL and virtual reality. COIL was implemented with students from four countries: the United States, Germany, Brazil, and India. The authors discovered that students were satisfied with the COIL course and improved their intercultural competence through this learning mode. Students also reported being motivated by their instructor's feedback. This research confirmed that a personalized connection with students is paramount in online learning. One major hindrance was the time zone differences between participating countries.

Some international students struggled with the shift to online learning platforms for various reasons, including new expectations for participation or a lack of digital competency (Lin & Nguyen, 2021). Students also faced family pressure about the devaluing of Western education as courses moved online (Lin & Nguyen, 2021). In addition, although international students could adapt to online learning, some still preferred in-person classes. They also appreciated being able to experience the culture and opportunities to work on campus (Nuthall, 2021).

Several articles on this topic were dedicated to teaching language to foreign students in virtual spaces. Pricope (2021) found that according to students, the advantages of virtual instruction include investing the same amount of time in online learning as in face-to-face learning, discovering personal traits, having opportunities to communicate directly with teachers, saving time, and using novel technologies. Regarding disadvantages, students mentioned needing clarification of new material; written explanations were not always sufficient (e.g., in asynchronous learning). Students also underlined the difficulty of mastering the pronunciation of new words and a lack of synchronous communication with their teachers. Interestingly, teachers identified similar drawbacks: limited interaction with students, the amount of time needed to provide students feedback, difficulty helping students with pronunciation, and having few opportunities to work with students individually. Pricope (2021) concluded that teacher–student interaction is integral to students' success. Kolesova et al. (2021) reiterated the importance of communication during virtual teaching, adding that the hierarchy changes in this environment: students take more initiative in online learning. Another article on this topic documented the merits of using technology in foreign language teaching to enhance the quality of the educational process. Technological advancements facilitate language and speech exercises, speech actions, and the use of informational technology tools, all of which render foreign language teaching more effective (Venzhynovych et al., 2021).

The second most common theme in the IaH literature was the impact of moving to virtual collaboration/courses and resultant issues. These studies mainly described immediate effects such as campus closures and disruption to international students' studies. Research has outlined numerous advantages and disadvantages of moving to online learning. One improvement is that the cost of online programs tends to be lower (for transnational education) than in-person options, providing access for a larger number of students and to different student groups (Li & Haupt, 2021). Additionally, for certain courses or programs, online offerings have attracted more students due to the convenience of virtual communication (Fang, 2021). Students can also develop digital competency through this mode of learning and can cultivate traits such as self-reliance (Pricope, 2021). However, studies also identified issues have emerged from the shift to

online learning as well, including unreliable internet or lack of quiet space to study. Teachers also have reported heavier workloads, instances of student cheating, and inadequate communication during class due to internet delays, or may need additional training in delivering online instruction (Novikov, 2020).

In terms of university responses, articles in this area described how HEIs navigated the rapid shift to online learning. Strategies included providing training to faculty and graduate teaching assistants, providing students financial aid, implementing a hybrid model of student advising, and empathizing with students' challenges and offering accommodating programs (Bisoux, 2020). Studies reported that hybrid or online programs were more accessible to students but expressed concerns about how the intercultural component could best be delivered virtually (Gallagher, 2020; Schuller & Colus, 2020). Bisoux (2020) offered advice for running effective virtual exchange programs: 1) finding the right partner; 2) paying attention to student group size; 3) building flexibility into the program for students; 4) finding competent facilitators to manage group dynamics; and 5) using alumni as facilitators.

Two studies examined successful examples of COIL and virtual learning during the pandemic. First, the State University of New York's COIL convened a group of faculty and administrators from 18 universities in March 2020 to develop virtual experiences related to the world's pressing issues. These experiences aimed to help students engage internationally at a time when international travel and study abroad programs were canceled. A six-week pilot program enrolled 58 students from these 18 universities to work with nongovernmental organizations in Africa and the Middle East. The faculty and administrators assessed the program upon completion and received remarkably positive evaluations from students (Forward, 2021).

A second example was the Network for Intercultural Competence to Facilitate Entrepreneurship—established by the University of Edinburgh in collaboration with seven European universities—is intended to foster students' global citizenship along with intercultural and entrepreneurial skills via a virtual exchange program (Seran & Reinhard, 2021). The program combines live online sessions and in-person summer school. The first summer session was fully on-line due to the pandemic. The authors advised that when creating virtual exchange programs, universities should find appropriate partners in their institutions, create programs that accommodate different academic calendars, limit student groups to seven students or fewer, train facilitators, and use alumni as facilitators (Seran & Reinhard, 2021).

Part III: The Roles of Policies and Supports in Moderating the Impact of COVID-19

We theorized that policies and supports at numerous levels (e.g., national policies and institutional practices) would have differential pandemic-related effects on internationalization activities at the institutional level. This section highlights three moderating factors: 1) national policies, which can support or hinder internationalization activities; 2) institutional practices; and 3) professional associations.

National Policies

Government policies could alleviate or aggravate the pandemic's effects on internationalization. Of the 158 articles in our review, 36 were coded as mentioning "government policy and responses." These sources often appeared in magazines and periodicals, newspapers, reports, and conference documents. The majority focused on international student enrollment and international student tuition and fees, particularly in English-speaking countries. Some articles mentioned foreign faculty members' circumstances in non-English-speaking countries, especially for faculty who could not travel.

National governments adopted distinct policies related to COVID-19 control, domestic lockdowns, and international travel. These policies resulted in differential outcomes for internationalization and international student enrollment. Related expectations also transformed with time. Early in 2020, many news reports projected that countries that handled COVID-19 would see a rise in international student enrollment. Locations presumed to benefit included Australia, New Zealand, Germany, and countries in East Asia (i.e., Japan, South Korea, and China). Countries that did not handle the outbreak well were anticipated to lose international student applicants, including to the United

Kingdom, Canada, and the United States (Baker & Lau, 2020). Data released by 2021 pointed to a recovery in international student numbers in countries that had loosened entrance restrictions (Gardner, 2021). International student applications and enrollment thus returned to previous levels in the United Kingdom, Canada, and the United States. However, the borders of Australia, New Zealand, Japan, and China were closed to international students for longer and studies highlighted worries regarding future international student enrollment in these areas (Ross, 2021; Lau, 2021).

Shifting policies left international students trapped between regulatory regimes while remaining unprotected by their host and home countries (Yojana, 2020). As flights were canceled and borders erected, students often found themselves stranded—separated from their families and other forms of support (Matthews, 2020). When a flight became available, students needed to decide whether to stay in the host country or return home and forgo other opportunities offered through their mobility experience (Fischer, 2021b).

As outlined in our conceptual framework, several types of policy affect internationalization and international education. First, the legal requirements for international student immigrant status were a major concern during the initial stage of COVID-19. In the summer of 2020, the United States agreed to eliminate the mandate that international students be sent home if studying at colleges that would move fully online in the fall. Second, international travel restrictions were of great consequence. For example, students from countries on the United Kingdom's "red travel list" were instructed to self-quarantine at a hotel and thus canceled their plans to enter the United Kingdom (O'Malley, 2021a). The UK government later made a series of announcements relaxing visa requirements for international students, including temporarily allowing students to renew or change the category of their visas without having to return home. At the national level, the U.S. government instituted travel bans to China and other countries, screenings at major international airports, and a national lockdown for visitors from certain countries. No flights were available from China to the United States. Such policies prevented international students from China from entering the United States directly for an academic year. Although students could

enter the country in other ways, such as by obtaining a visa to Singapore or another third country and staying for 14 days before entering the United States, these workarounds were costly and inconvenient.

Some governments provided international students financial assistance. Germany adopted a no-fee policy and allocated aid grants ($125–$600) to international students facing a financial emergency due to the pandemic (Language Magazine Staff, 2020a). The UK House of Commons (2020) stated that higher education providers could draw from existing student premium funding—worth around £23 million per month—for student hardship funds, including mental health support. The Education Ministry of Great Britain appointed Sir Steve Smith as International Education Champion to support international students and the higher education sector during the pandemic (Education Journal Staff, 2020). Although other countries such as Japan have provided aid to international students as well, these cases did not appear in our sample, reflecting another limitation of our review. This practice was also uncommon; for instance, guidance from the U.S. Department of Education excluded international students from the Coronavirus Aid, Relief, and Economic Security Act (Majorana, 2021).

The roles of national policies were also addressed in articles on online learning, specifically in terms of the links between online education and visa eligibility. Publications from the United States commented on the Trump administration's policy preventing international students from maintaining their student visa status when taking online courses (Castiello-Gutiérrez & Li, 2020; Specia & Abi-Habib, 2020). This mandate was reversed after several HEIs filed lawsuits: the policy was critiqued for being discriminatory and for dehumanizing international students. By contrast, an article on Indian policy described how Kerala State Higher Education Council launched a series of initiatives to support international students' online learning.

Institutional Practices

The literature highlighted how institutional policies and practices could support internationalization in the midst of disruption. Thirty-five articles discussed institutional support or policies, which were often coded under more than one related sub-code. Sub-codes in-

cluded institutional leadership commitment and governance (*N* = 22), institutional internationalization policy and/or evaluation (*N* = 10), branding and marketing (*N* = 2), and alumni networking (*N* = 1).

Most articles in this area were in magazines and periodicals, with fewer in academic journals and newspapers. This distribution is consistent with the content of these sources, which largely detailed HEIs' responses to the COVID-19 outbreak. Pertinent sub-themes revolved around successful institutional emergency responses and recommendations for other institutions to follow during global emergencies. The overall aim was to share best practices among institutional leaders and internationalization experts. Some articles described how HEIs had navigated government policies, international students' needs, and local nuances while adhering to their values (De Boer, 2021; Fan, 2021; Gallagher, 2020; Gutkin et al., 2021; McKie, 2020; Moja, 2021; West, 2020b). Other publications contained suggestions drawn from either institutional experiences or best practices cited in official reports (Bothwell, 2021a; Burt, 2021; Jansa & Anderson, 2021; Rogers, 2020; Seran & Reinhard, 2021; Sutton, 2020; Toner, 2020; West, 2020a; Wood, 2020b). Topics of interest spanned several domains: safety protocols, taking into account international students' individual particularities; student recruitment; financial support; effective communication (including avoiding contradictory guidelines); the development and strengthening of international partnerships; virtual collaboration; local community engagement; internationalization of the curriculum; and leadership distribution.

Less common sub-themes included institutional reactions to discrimination and anti-Asian incidents (Dill, 2020; Lee, 2020; Mittelmeier & Cockayne, 2020), project leadership during the pandemic (Jacobs et al., 2021), and institutional responses regarding the move to online education (Laufer et al., 2021). A set of articles outlined issues to which leaders could refer in order to make informed choices (Castiello-Gutiérrez & Li, 2020; Fischer, 2021a; Huang, 2021; O'Malley, 2021), and two publications analyzed the collective reaction of U.S. HEIs which opposed the U.S. government's action of banning international students from staying in the country while studying fully online (Fischer, 2020b; Language Magazine Staff, 2020b). Many publications

in this category were cross-coded with the domain of inbound degree- and credit-seeking students, implying institutional decision making and policy planning were highly associated with incoming international students and their experiences. Other domains such as virtual education, internationalization of the curriculum, and outbound mobility were much less likely to be linked to leadership and institutional internationalization policy perspectives about COVID-19.

In terms of methodology, the largest set of sources relied on self-reports of institutional approaches as well as institutional experts' and leaders' opinions. A few publications documented findings from surveys and interviews with leadership representatives. Institutional responses were often discussed as being directly related to government policies, which constituted the major factor affecting HEIs' courses of action. The overrepresentation of the United States in our sample precluded a thorough investigation of the breadth of institutional responses to national pandemic policies worldwide. In general, though, HEIs seemed to try to use the free space left by government policies to navigate the field most effectively for their communities. Interestingly, the composition of HEIs' international student bodies, their recruitment prospects, local idiosyncrasies, and networks inspired somewhat similar approaches (bearing in mind the U.S. context emphasized in our sample). HEIs also prioritized specific actions corresponding to their own conditions. Especially during the initial phase of the pandemic, institutional leaders and experts had to rely on creativity when weighing their options and choosing the best approach. These professionals turned to magazines and periodicals soon after to share best practices for the benefit of all (Gallagher, 2020; West, 2020a).

HEIs' top concerns amid the pandemic were as follows: early emergency responses, discrimination, moving online, reinforcing international partnerships, adjusting recruitment practices, and collecting reliable evidence. Institutional leadership was highly interested in international students' experiences and less so in internationalization domains beyond inbound mobility. Marketing and branding did not appear to be institutional priorities. Although some sources mentioned recruitment (Burt, 2021; Wood, 2020b), this issue was not directly tied to commercialization. Another strik-

ing omission was quality assurance when institutions transitioned to online teaching and learning.

Professional Associations

Professional associations played a prime role in supporting internationalization. We found that higher education associations and targeted professional associations published a wide range of surveys, reports, and other resources that provided information for universities grappling with COVID-19's impact on internationalization. For example, in August 2020, the IAU published its *Regional/National Perspectives on the Impact of COVID 19 on Higher Education* report, which reflected the pulse of higher education to offer just-in-time lessons from the early stage of the pandemic. Released mere months after the outbreak, the report stressed the value of research collaboration as a tool for coordinating a strategic response to the pandemic and as a mechanism for sustaining and advancing the goals of international cooperation in higher education (IAU, 2020). In this way, professional associations reached diverse audiences and delivered timely resources in a rapidly evolving space. Their work contributed to knowledge mobilization that helped universities navigate new terrain. A major limitation of our review is that only print publications were formally included in our review; while we know that webinars and other digital formats were important sources of knowledge sharing, we had no way to formally include them in our review.

Part IV: Cross-Cutting Themes

In this section, we identify cross-cutting themes that emerged from the literature. We defined a cross-cutting theme as an idea appearing in at least two internationalization domains and seeming to reflect broader conversations. Rather than being specific to a domain of internationalization or to internationalization itself, these themes permeated general discussions of higher education policy and practice in the wake of COVID-19: 1) uneven impacts and shifting inequalities; 2) COVID-19's effects on xenophobia, racism, and discrimination, especially among Asian students; 3) COVID-19's effects on students' physical health, mental health, and overall well-being; 4) the emergence of new geopoliti-

cal realities that are altering the internationalization landscape; and 5) calls to rethink the status quo.

Uneven Impacts and Shifting Inequalities

The suspension of in-person classes and activities led to virtual and online international learning and collaboration throughout HEIs. The advantages and disadvantages of this shift represented a recurring theme across many domains of internationalization (e.g., international student mobility, course delivery, and partnerships and collaboration). Concerns were repeatedly raised about the nature of the pandemic's uneven impacts on HEIs and students. While the strengths of many hierarchies seemed to wane due to new forms of virtual participation, others were assembled in relation to borders and the internet.

Research has generally noted clear advantages to online learning. More precisely, the move to virtual forms of internationalization has afforded students greater access to international education. However, uncertainty persists about how best to deliver the intercultural component and to ensure that all students can adequately use these online platforms to improve their learning. Many students would prefer to return to campus for their studies. Looking towards the future, blended learning may provide an opportunity to leverage the benefits of both online and in-person education.

Much of the literature on internationalization has not yet addressed how internationalization domains—not only course delivery—have fared during this online transition. Some suggested that, despite increasingly complex processes arising from pandemic shutdowns and work-from-home directives, partnerships have become more accessible and chances for engagement have become more frequent (Forward, 2021). Growing resource digitalization and the shift to online platforms are partly responsible for these benefits, as are increased digital literacy and a yearning for human connection. Pre-existing issues of unequal access to technology will remain prevalent in the post-COVID-19 era of internationalization; however, technology will likely become a standard means through which academic institutions foster relationships.

Other types of inequalities have emerged based on

vaccination status, firewalls, and internet connectivity. Some articles raised concerns that the shift to online learning could exacerbate unequal access to quality education (Lau, 2020). This problem pertains to all students but has been highlighted in relation to international students from countries whose internet connectivity varies substantially (Lin & Nguyen, 2021).

Bias, Racism, and Discrimination

A second theme in our sample concerned students' experiences with racism and discrimination and how such incidents affected internationalization. Of the 23 related publications, research showed that these issues (e.g., xenophobia) predominantly affected East Asian students. Racism and discrimination dovetailed with two other themes: international student mobility and students' well-being and mental health. Hate crimes, discrimination, and unfair treatment of Asians have compelled these students to decide not to travel abroad or simply to stay closer to home (Chow-Liu, 2021; Mok et al., 2021). Mok et al. (2021) examined how students in Mainland China and Hong Kong planned overseas studies in light of the COVID-19 crisis. Among 2739 respondents, 84% expressed no interest in studying abroad after the pandemic. When asked about developing their plans for overseas learning, most Chinese respondents overwhelmingly cited "personal safety" (87%) and "health and well-being" (79%) as major worries (Mok et al., 2021). The next section presents relevant overlaps with physical and mental health.

Physical Health, Mental Health, and Well-Being

A third cross-cutting theme involved health and well-being. Twelve items (four academic journal articles, five magazine articles, and three newspaper articles) were coded as focusing on physical health, mental health, or well-being. We purposefully selected publications about international students and excluded work solely discussing domestic students. The chosen pieces covered several populations, such as international exchange students in Europe (Matthews, 2020); international degree-seeking students in Canada, the United States, and the United Kingdom (Bothwell, 2020); and international students at a global level (Bothwell, 2021). Asian students, Asian international students, and Chinese international students were mentioned most often (Anandavalli et al., 2020; Blake et al., 2021; Gao, 2021; Ge, 2021; McKie, 2020). Most pieces pertained to North America regardless of publication type.

These articles collectively indicated that international students have met unique obstacles affecting their physical health, mental health, and well-being. International and domestic travel restrictions, financial consequences (in terms of scholarships, tuition fees, and income), socio-political events, and communal hate crimes have put these students in vulnerable positions, especially in the top international student recipient countries. Such circumstances have influenced students' general well-being. Associated problems have been magnified in the North American context because former President Trump first referred to COVID-19 as the "China virus," which aggravated COVID-19-related racial discrimination in addition to deep-rooted systemic racism (Anandavalli et al., 2020; Blake et al., 2021). One article indicated that "xenophobic actions [threaten] international students' safety and presence … and these rates were higher among students from East Asian and Southeast Asian countries such as Japan, China, and Vietnam (22%–30%), given increasing Sinophobia (anti-Chinese sentiment) in the country" (Anandavalli et al., 2020, p. 366). Racism, "double unbelonging," and social disapproval of political criticism were common struggles for Chinese students (McKie, 2020).

For the above reasons, concerns about safety, physical and mental health, and racial biases have adversely affected international students—most notably students of color, Chinese students, and other Asian students in the United States and Canada. International students from China have experienced high degrees of anxiety, discrimination, insecurity, outrage, shame, and identity loss throughout the pandemic (Gao, 2021). Many international students have even returned home. Blake et al. (2021) discussed problems facing international students along with students who are Black, Indigenous, and People of Color; institutional racial biases led doctoral students in these groups to report feelings of stress, anxiety, a lack of social support, and isolation.

The few studies on institutional supports for inter-

national students conveyed that such supports were inadequate in meeting students' needs. COVID-19 has impeded students' access to and sense of connection with the university community and resources; overall campus and departmental support has declined as well (Blake et al., 2021). In a survey of 600 Omani students studying abroad, fewer than 50% of respondents stated they had received adequate psychosocial support from the universities (Hayes & Al'Abri, 2020). A few articles written by university counselors and psychologists offered concrete recommendations in this regard but acknowledged that limited research has addressed international students' mental health needs (Ananda-valli et al., 2020). Suggestions for supporting these students include using culturally sensitive tools to address xenophobic experiences of COVID-19-related racial discrimination. Counselors could also "empower international students by framing their concerns as part of a larger systemic issue to minimize self-blame" (Ananda-valli et al., 2020, p. 369). Other suitable strategies include therapy, wellness activities, and peer counseling (Gallagher, 2021). Blake et al. (2021) advocated for promoting international students' development in the following ways: by assigning graduate students to academic mentors who share and are familiar with diverse cultures; by implementing a diverse course curriculum; by instituting university childcare and virtual education assistance strategies; and by supporting efforts towards a collective university policy that protects these students.

Voids nevertheless exist in this stream of literature. No articles mentioned the physical and mental health issues facing faculty and staff in higher education. None of the sources were authored by institutional administrators who offered strategies to support members of the higher education community. One article that broached related topics underscored worries about visa issues for international students and administrators' concerns about student compliance with social distancing guidelines on and off campus ("An About Face on Visas," 2020).

Navigating New Geopolitical Issues

Another theme spanning multiple domains was how COVID-19 measures interacted with, or created, geopolitical issues for universities and students. The 15 articles that mentioned geopolitics covered inbound mobility, equity, discrimination, and racism. The recruitment of international students and students' experiences/attitudes were also closely associated with the geopolitical sphere. Most publications referred to geopolitical tensions between the United States and China in the higher education field (Lau, 2020b; Times Higher Education Staff, 2021; Tu, 2021). All authors pondered how COVID-19 might affect the emerging relationship between the Western world and China or other source countries of international students. Many sources questioned the supremacy of the U.S. higher education system (Dennis, 2020; Lee, 2020; Specia & Abi-Habib, 2020).

A few articles mentioned how geopolitical factors intersected with the shift to online learning and created difficulties for international students studying from their home countries. Publications reported that students needed to be especially careful in that conversations of history, gender, LGBTQ rights, international relations, and economic theory could trigger political sensitivities. Students from China, among many other countries, live with stringent censorship laws and internet monitoring (Lau, 2020c). To mitigate these impacts, some institutions have allowed students to opt out of controversial discussions without grade penalties or to take part in classes anonymously. Yet these accommodations can limit the diversity of views and access to knowledge.

Articles also unpacked U.S. policies from the Trump and Biden administrations, including those detailing harms to students from the United States' reputation and long-term attractiveness as a study destination (Dennis, 2020; Gray, 2021; Specia & Abi-Habib, 2020). Racism has played a decisive role in international students feeling unwelcome in this country (Lee, 2020; Tu, 2021). The state of research collaboration between China and the United States is drastically different: COVID-19 boosted research projects between the two (Sharma, 2020b). Publications on China investigated the country's power in directing its considerable international student population to specific places based on geopolitical criteria (Lau, 2020b). Researchers also addressed academic freedom (Sharma, 2020a). Geopolitical consequences in the experiences of international students and academics generated no-

tice as well; both groups often found themselves caught in the middle. Students confronted distress and forced career choices in particular. Authors have therefore encouraged international students to speak up and not passively accept their conceptualization as cash cows for HEIs (Anandavalli et al., 2020; Castiello-Gutiérrez & Li, 2020).

Rethinking the Status Quo

A fifth cross-cutting theme amplified calls to rethink how internationalization is practiced. For example, with respect to curricular and co-curricular internationalization, one avenue for change involves improving intercultural education. Dervin et al. (2020) pointed out that the behavior of politicians, journalists, decision makers, and the general public during the pandemic demonstrated their distorted views of interculturality. Some politicians and journalists made unnecessary comparisons between nations and jumped to conclusions without carefully considering the context. Dervin et al. (2020) therefore suggested that educators teaching about interculturality should attend to its roots—the interdependency between politics, (social) media, education, and research, governed by the economy and globalization—rather than concentrating on visible aspects (e.g., culture, differences, democracy, and human rights). Three principles can guide this task: "beyond comparison, the mirror: turning inward, and questioning the unquestionables" (Dervin et al., 2020, p. 99). Deardorff (2020) similarly underlined the importance of a paradigm shift for international educators in moving from "me" to "we" and thinking beyond "us" versus "them" to acknowledge a shared humanity. In a more discipline-specific study, Morley and Cunningham (2021) wrote about the importance of international placement in undergraduate nursing curricula to develop nurses' intercultural skills.

Discussion and Concluding Observations

This report has summarized the literature on how the COVID-19 pandemic, and policies and practices intended to limit its spread, affected internationalization in higher education. We undertook a rigorous review of academic and non-academic sources published through August 2021. Our final sample consisted of 158 articles, 45 of which were in peer-reviewed jour-

nals. A sizeable set of papers documented the pandemic's effects on HEIs' internationalization efforts. This initial review of the literature provides a firm foundation for future and comparative studies of the impacts of COVID-19 on different internationalization activities and in different national contexts.

Our review revealed overrepresentation. The vast majority of studies referenced the United States, with a smaller number about the United Kingdom and Australia. This discrepancy may be due to our choosing English-language publications. This imbalance may also be related to dominant research themes during the study horizon: International student enrollment/recruitment and international students' experiences were two of the most thoroughly studied topics. It is unsurprising that some of the higher education systems that attract large numbers of international students also captured the most attention in these publications. This disparity may be partly attributed to the robust "safety net" in these countries as well—national economic rescue and stimulus initiatives likely enabled scholars to continue their research activities during the pandemic.

We further discovered that the literature overwhelmingly investigated international students and individual-level mobility. This finding is particularly intriguing; it suggests enduring assumptions about internationalization in relation to individual-level movement across national borders. Even when physical mobility was impossible (or at least severely restricted), internationalization continued to be conceptualized based on student mobility and study abroad. This realization is even more striking when considering that the internationalization of higher education has long been defined in terms of curriculum rather than mobility, on all students rather than the few who go abroad, and on the impact of internationalization (de Wit & Leask, 2015).

Our review shows that people mobility reflects a prevalent understanding of internationalization as analogous to students' physical mobility. Several other domains (e.g., research, joint programming, and curricular and extracurricular internationalization) remain largely ignored in the literature. This relative lack of focus could have arisen for multiple reasons. For instance, scholars' reports on international student re-

cruitment may naturally highlight competition within a cutthroat global landscape over the more collaborative aspects of internationalization (e.g., partnership development). The focal points of international students and students' experiences imply more intense interest in how internationalization maps onto curricula and student learning than research. This trend reinforces the notion that students, rather than faculty and staff, are the primary actors in internationalization.

This conception is evident in, for example, the study abroad domain. Articles in this area generally revolved around students and described how institutions sought to support student mobility during the pandemic. This perspective aligns with attempts to unravel students' mobility decisions during the first COVID-19 wave and to predict their future choices. The associated literature—predominantly non-academic sources on outbound mobility—therefore tended to interpret internationalization as directly connected to individual-level mobility. Researchers further examined this topic through several lenses outside education (e.g., economic, political, geographic) that affect national higher education systems.

In terms of *how* the COVID-19 pandemic influenced internationalization, as discussed in the conceptual framework, we postulated that two major policy responses were at play: 1) border closures that halted travel and 2) the suspension of in-person activities, which limited physical presence on campuses and in-person teaching and learning. As anticipated, both elements directly affected internationalization activities, albeit in different ways. We observed that border closures had impacts on internationalization activities involving physical mobility (i.e., inbound and outbound). The same trend applied in other domains featuring people mobility, such as students' and faculty members' physical movement for research purposes.

Studies unveiled how sudden border closures brought on by COVID-19 left many students and faculty physically unable to travel, often stranding them far from home or their destination countries. Students faced urgent practical needs (e.g., arranging flights to their home countries or institutions). Over the longer term, many students reported being and feeling far from home due to being prohibited from crossing national borders. The logistics of flights, quarantine rules, and visas were recurrent concerns.

The second mechanism of impact we identified was the suspension of in-person activities and the simultaneous shift to online and virtual teaching and collaboration. The suspension of in-person activities was tied to general isolation. Mental isolation was also a theme in many studies: being physically far from home without access to in-person activities left many students lonely. A large body of work has unearthed the adverse mental health effects of social distancing and isolation. Articles in our sample detailed how the broader impact of social isolation layered onto international students' individual circumstances such as time zone differences and the inability to obtain flights or secure housing.

The move to online learning and internationalization activities brought fresh opportunities along with disadvantages. This shift facilitated more accessible forms of engagement. It also enabled various types of international connections and activities that were previously contingent on physical mobility. Transitioning to online learning was a potential equalizer in some ways. Even so, new inequities emerged: many international students attended classes in inconvenient time zones, and some students were subjected to stringent internet control.

Finally, we determined that international partnerships and research have seen benefits and drawbacks from COVID-19. Despite bans on international travel and border closures, partnership-building processes were quickly adapted. These adjustments helped to sustain collaborative activities. The logistics of in-person international collaboration have certainly become more complicated since the pandemic; however, opportunities for connection are more frequent, thereby fostering innovative ideas around partnership. Heavier reliance on technology has led digital literacy to play a pivotal part in the delivery of academic courses and resources, in how research collaboration transpires, and in how partnerships are forged.

Key findings from the literature are summarized in **Table 4.**

Table 4: Impact of COVID-19 on Internationalization of Higher Education

Domain	Category	Mechanisms	COVID-19-Related Impacts
People Mobility	Inbound International Student Mobility	National borders closed abruptly	☐ Many international students were physically stuck, either in their home countries or their destination countries ☐ Isolation and lockdowns affected students' physical and mental health due to being unable to travel ☐ Student support staff faced new and increased demands
		National borders remained closed	☐ Many new international students studied online from their home countries, underlining the importance of reliable, secure, open internet for learning and equal opportunities to succeed
		Long-term border closures created ambiguity	☐ In-person applications, attendance, and enrollment declined in some universities and countries; long-term trends are unknown ☐ Some institutions faced lower institutional revenue, especially for top student-receiving countries
		Uneven access to vaccination	☐ Opportunities for international mobility within and across countries were further stratified
		Politicization of COVID-19's origins in China	☐ Geopolitical tensions rose ☐ Anti-Asian racism rose, specifically towards Chinese international students in North America
	Outbound Degree-Seeking Students	National borders closed	☐ Ambiguity over future travel opportunities led some students to change study destinations or look to branch campuses
	Outbound Credit-Seeking Students	National borders closed	☐ Study abroad experiences were disrupted and shortened ☐ Students were stuck abroad ☐ Universities realized the need for rapid risk mitigation
		Suspension of in-person activities	☐ The shift to online learning led to a rise in virtual exchange programs, which presented novel challenges and experiences
International Program and Provider Mobility		Long-term border closures	☐ Interest and enrollment in some branch campuses in home countries or in countries open to international travel increased
International Research		Pandemic-related spending reduced government spending in other areas	☐ Funding declined for international research and partnerships; some research projects were canceled or eliminated ☐ Low-and middle-income countries may be more affected than high-income countries (i.e., further stratification of higher education systems)
		COVID-19 as new topic	☐ New international research collaboration
		Border and campus closures	☐ Some students' graduation or professors' research were delayed ☐ Faculty and students Campus closures could not access labs or conduct fieldwork
International Partnerships and Networks		Suspension of in-person activities and shift to online activities	☐ International delegations and meetings were canceled ☐ Professional associations quickly transitioned to an online format (e.g., webinars and virtual knowledge sharing) ☐ The shift to virtual modalities expanded who could be included in partnerships and knowledge sharing
Internationalization at Home and Collaborative Online International Learning (COIL)		Suspension of in-person activities and shift to online learning	☐ More students and faculty experienced COIL and international virtual exchange ☐ Pedagogical approaches were adjusted based on the advantages and disadvantages of online and in-person learning ☐ Blended learning could continue long term

Avenues for Future Research

Our review of the literature suggests that many areas deserve further research. First, some domains such as IPPM, research, and partnership development have been largely ignored. The pandemic's effects on these domains of internationalization are hence unclear. The long-term impacts of COVID-19 on research, academic conferences, and collaboration especially require additional investigation. Second, the articles in our sample focused on students and disruptions to their mobility. Other populations and stakeholders were rarely featured (e.g., the role of border closures and the move to online learning vis-à-vis faculty experiences or preparation; the experiences of researchers and HEI leadership/administration). Subsequent work could delineate internationalization leaders' and administrators' decisions on how to respond to COVID-19 and what to prioritize. For example, the literature suggests that the choice to either close a campus or remain partially open was important for many leaders. Follow-up research could explore the implications of this decision on different aspects of internationalization.

Third, the literature has mostly considered students' physical and mental health, especially among students of Asian descent and from international backgrounds. Much less is known about effective solutions or institutional support strategies. Insight into these topics is urgently needed. Similarly, little has been written about pandemic-induced challenges (and solutions) facing faculty, leadership, and administration. This discrepancy points to two research directions regarding in-person and virtual support: 1) more in-depth investigations of student support, namely how to optimally assist students in studying online or from a long distance; and 2) the difficulties that international faculty, staff, collaborators, and mental health/health services providers encounter. Understanding these issues from various angles could generate robust insight conducive to a more holistic, supportive, diverse, and international campus environment.

Fourth, the long-term impact of COVID-19 on international student enrollment should be tracked over time. Our review pinpointed short-term impacts while medium- and long-term effects remain to be seen. Despite much initial concern, our review suggests that international student enrollment has bounced back in many countries. Researchers should continue to monitor long-term impacts on student enrollment, study destinations, and potentially distinct effects across countries and institution types. Our review also frames the pandemic as more than a crisis: in some cases, it has ushered in fresh opportunities for internationalization (e.g., in the use of technology and a greater desire for research collaboration). Scholars should examine new strategies as well as the extent to which these tactics reflect tangible changes in internationalization. Research in this vein could focus more explicitly on equity, social justice, and collaboration instead of competition and revenue. Core Anglophone countries seem less inclined than non-Anglophone countries to rethink internationalization based on our review. Yet if HEIs' interest in tracking enrollment and revenue is any indication, maintaining the status quo is a priority. If COVID-19 is to be taken as an opportunity for transformation (vs. simply a disruption to the status quo), then Anglophone countries should contribute along this line as well.

Fifth, we noticed that although professional organizations (e.g., IAU and others) have performed rapid-response research on the pandemic's impact on internationalization, their part in supporting internationalization under these circumstances is largely absent from the literature. These organizations' roles in translating and disseminating discourses deserve closer scrutiny. The development and implementation of sound internationalization practices, along with their outcomes, could carry meaningful practical implications.

Lastly, internationalization activities and international mobility have been largely affected by government policies, especially on visas, international travel restrictions, and student subsidies. The future of internationalization warrants careful deliberation. Scholars have made various predictions about international student and researcher mobility after the pandemic. Even so, current publications are not comprehensive enough to cover all major receiving and sending countries. A systematic examination of how governments have supported or prohibited international mobility, and how available mobility data reflect such policies, would be useful. Topics that were primarily analyzed in non-academic sources (e.g., magazines and periodicals) merit

consideration as well. It would be interesting to monitor academic approaches as they become available to verify whether conclusions hold when data are evaluated via more rigorous methods.

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Table A1. Number of Sources by Publication Type and Country (Education Source)

Country	Academic Journal	Book/Mono-graph	Conference Proceedings Collection	Educa-tional Report*	Maga-zine	Report*	Total
United States of America	1110	196	21	273	543	109	2252
United Kingdom	831	63	3		63	3	963
Switzerland	3	282					285
Australia	78	17		48	24	1	168
Germany	138				9		147
Canada	79	7	1		24	13	124
Turkey	64		1		2		67
Netherlands	20	19					39
Spain	29	2			3		34
New Zealand	16				5		21
Colombia	20						20
Romania	15		3				18
Brazil	16						16
India	14				2		16
South Africa	9				3		12
Czech Republic	11						11
Lithuania	11						11
Taiwan	10						10
Mexico	9						9
Russian Federation	9						9
Italy	8				1		9
France	6				3		9
Malaysia	7				1		8
Slovenia	7						7
China	6				1		7
Ireland	6						6
Sweden	6						6
Greece	5						5
Hong Kong	5						5
Pakistan	5						5
Bulgaria	4		1				5
Norway	4				1		5
Poland	4				1		5
Portugal	4		1				5
Chile	4						4
Croatia	4						4

Country							
Iceland	4						4
Denmark	1					3	4
Japan	3						3
Serbia	3						3
Slovakia	3						3
Malta	1		2				3
Singapore	1	1	1				3
Austria	2						2
Belgium	2						2
Cuba	2						2
Egypt	2						2
Finland	2						2
Iran (Islamic Republic of)	2						2
Korea, Republic of (South)	2						2
Kuwait	2						2
Luxembourg	2						2
Nigeria	2						2
North Macedonia	2						2
Philippines	2						2
Ukraine	2						2
Trinidad & Tobago	1				1		2
Argentina	1						1
Barbados	1						1
Bermuda	1						1
Georgia	1						1
Ghana	1						1
Hungary	1						1
Indonesia	1						1
Israel	1						1
Jordan	1						1
Kenya	1						1
Latvia	1						1
Oman	1						1
Peru	1						1
Puerto Rico	1						1
Qatar	1						1
Thailand	1						1
United Arab Emirates	1						1
Uruguay	1						1

Venezuela (Bolivarian Republic of)	1						1
Yemen	1						1
Costa Rica					1		1
Tanzania, United Republic of					1		1

* According to Education Sources categories, Education Reports are mainly published by governments, such as the U.S. Department of Education. Reports are mainly published by non-profit organizations in education.

Appendix B

Keyword Search Terms—by Domain

Domain	Keywords
People Mobility	"international student*" or "international facult*" or "international scholar*" or "student* mobilit*" or "mobile student*" or "academic* mobilit*" or "people mobilit*" or "mobile scholar*" or "mobile staff" or "mobile academic*" or "staff mobilit*" "faculty mobilit*" or "mobilit* of student*" or "mobilit* of scholar*" or "mobilit* of staff" or "mobilit* of faculty" or "mobilit* of academic*" or "talent mobility" or "study abroad" or "student* exchange*" or "exchange student*" or "foreign student*" or "foreign academic*" or "foreign scholar*" or "foreign staff" or "faculty exchange*" or "staff exchange*" or "exchange facult*" or "exchange staff" or "inbound" or "outbound" or "inward" or "outward" or "student* migration*" or "scholar* migration*" or "faculty migration*" or "staff migration*" or "flow* of student*" or "student* flow*" or "faculty flow*" or "academic* flow*" or "flow* of faculty" or "international mobilit*" or "overseas"
International Program and Provider Mobility	"Transnational higher education" OR "cross-border higher education" OR "borderless higher education" OR "international program and provider mobility" OR "branch campus" OR "offshore campus" OR "satellite campus" OR "offshore campus" OR "portal campus" OR "joint program" OR "franchise program" OR "international private program" OR "joint degree" OR "double degree" OR "multiple degree" OR "twinning program" OR "twinning programme" OR "joint programme" OR "partnership programme" OR "distance education" OR "MOOC" OR "open university" OR "online education" OR "joint university" OR "international university" OR "joint venture university"
International Research	"international research" OR "international research collaboration" OR "international research network" OR "international research hub" OR "global research" OR "research partnership" OR "research collaboration" OR "joint research collaboration"
International Partnerships and Networks	SU "higher education" AND AB (and/or) SU "partnership" OR "collaboration" OR "international partnership" OR "international collaboration" OR "global partnership" OR "global collaboration" OR "international network" OR "international hub"
Internationalization at Home	"Internationalization at Home" or "Internationalization of the Curriculum" or "virtual mobility" or "virtual learning" or "Collaborative Online International Learning" or "COIL" or "faculty support" or "student support" or "international student services" or "staff support" or "comprehensive internationalization" or "campus internationalization" or "intercultural competence" or "intelligent internationalization" or "internationalization of the curriculum in the disciplines" or "professional development"
COVID-19	"pandemic" OR "covid" OR "covid-19" OR "coronavirus" OR "2019-ncov" OR "sars-cov-2" OR "cov-19" OR "2019 novel coronavirus" OR "coronavirus disease"
Higher Education	"higher education" OR college OR university OR post-secondary OR postsecondary OR "tertiary education"

Appendix C

This is the complete Boolean string we used in our final literature search for this study. The string includes all keywords used for each internationalization domain (see Table 1).

Summary: (((Mobility Key Terms) OR (IPPM Key Terms) OR (Research Key Terms) OR (Partnerships Key Terms) OR (Internationalization at Home Key Terms)) AND (Higher Education Key Terms) AND (COVID-19 Key Terms))

Complete Boolean String: (((("international student*" or "international facult*" or "international scholar*" or "student* mobilit*" or "mobile student*" or "academic* mobilit*" or "people mobilit*" or "mobile scholar*" or "mobile staff" or "mobile academic*" or "staff mobilit*" "faculty mobilit*" or "mobilit* of student*" or "mobilit* of scholar*" or "mobilit* of staff" or "mobilit* of faculty" or "mobilit* of academic*" or "talent mobility" or "study abroad" or "student* exchange*" or "exchange student*" or "foreign student*" or "foreign academic*" or "foreign scholar*" or "foreign staff" or "faculty exchange*" or "staff exchange*" or "exchange facult*" or "exchange staff" or "inbound" or "outbound" or "inward" or "outward" or "student* migration*" or "scholar* migration*" or "faculty migration*" or "staff migration*" or "flow* of student*" or "student* flow*" or "faculty flow*"or "academic* flow*" or "flow* of faculty" or "international mobilit*" or "overseas") OR ("Transnational higher education" OR "cross-border higher education" OR "borderless higher education" OR "international program and provider mobility" OR "branch campus" OR "offshore campus" OR "satellite campus" OR "offshore campus" OR "portal campus" OR "joint program" OR "franchise program" OR "international private program" OR "joint degree" OR "double degree" OR "multiple degree" OR "twinning program" OR "twinning programme" OR "joint programme" OR "partnership programme" OR "distance education" OR "MOOC" OR "open university" OR "online education" OR "joint university" OR "international university" OR "joint venture university") OR ("international research" OR "international research collaboration" OR "international research network" OR "international research hub" OR "global research" OR "research partnership" OR "research collaboration" OR "joint research collaboration") OR (SU "higher education" AND AB (and/or) SU "partnership" OR "collaboration" OR "international partnership" OR "international collaboration" OR "global partnership" OR "global collaboration" OR "international network" OR "international hub") OR ("Internationalization at Home" or "Internationalization of the Curriculum" or "virtual mobility" or "virtual learning" or "Collaborative Online International Learning" or "COIL" or "faculty support" or "student support" or "international student services" or "staff support" or "comprehensive internationalization" or "campus internationalization" or "intercultural competence" or "intelligent internationalization" or "internationalization of the curriculum in the disciplines" or "professional development")) AND ("higher education" OR college OR university OR post-secondary OR postsecondary OR "tertiary education") AND ("pandemic" OR "covid" OR "covid-19" OR "coronavirus" OR "2019-ncov" OR "sars-cov-2" OR "cov-19" OR "2019 novel coronavirus" OR "coronavirus disease"))