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Geography Education Research in the World: Mapping Challenges and Opportunities Across Countries

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ABSTRACT

Writing collaboratively as colleagues who have transitioned from teaching geography in high schools to becoming university-based academics researching and teaching geography education, this commentary offers insights into the challenges of, and opportunities for, geography education research (GER) across the countries in which we live and work: Australia, England, Germany, Singapore and the United States. Drawing on the themed intervention *geography in the world*, we reflect upon the factors which shape geography education research in our country contexts. Then, through an examination of/across our own situated and relational geographic worlds, we argue the importance of developing practices that support Geography Education Research(ers) across diverse contexts.

KEYWORDS

Geography education; research; education; collaboration

Introduction

Seeking to recognize and value geography education research in academic debate, an education symposium was convened for the final day of the American Association of Geographers (AAG) annual meeting in Detroit, March 2025. Motivations for the symposium included facilitating international discussion around geography's position in schools and (inter) national education policy. In the United States (U.S.) context, geography has escaped some of the recent K-12 political battles more commonly associated with subjects like history. However, it has struggled to secure its curricular positioning in most states, with only nine of the fifty states requiring it to be taught as a stand-alone course in high school (Lambert and León 2022; Dutta and McSweeney 2024). As the Road Map for 21st Century Geography Education pointed out over thirteen years ago, "the amount of geography instruction that students receive, the preparation of their teachers to teach geography, and the quality of instructional materials are inadequate to prepare students for the demands of the modern world" ((Bednarz et al. 2013, p. 7)).

With the aim of (re)imagining futures for geography education in the U.S. and beyond, two panels were convened as part of the symposium. The panels were framed by the question: *What is needed from geography education research (GER) in consideration of geography education's future?* The panels – which brought together colleagues from Australia, Chile, England, Germany, New Zealand, Singapore and the U.S. – included us. After watching one another present our research

and contribute to the discussions, we began to (in)formally consider our work, professional identities, journeys and aspirations. We identified that we were all former high school teachers who have transitioned to being academics researching and teaching in geography education. We also considered how we navigate academic spaces – as individuals and women – and started to identify differences in the geographic worlds in which we work, considering how these differences shaped both ourselves and our research. Recognizing that GER is shaped by factors including personal interests, place-based issues, institutional and organizational priorities, as well as global processes, we also talked about the national space as a key driver and shaper of education policies, funding opportunities, and the spaces in which we work. In other words, we talked about what McFarlane (2022, 2024) has described as *geography in the world*.

In the next section, we introduce and examine the idea of *geography in the world*, before reflecting on GER in the national contexts in which we live and work. In doing so, we argue that while GER often engages with questions about what should be taught about the world and the discipline of geography, how, and why, less attention has been paid to how GER is shaped by the world. We posit that if we do not – individually and collectively – pay attention to how GER is shaped by the world, the geography education community will be less prepared to support research(ers) and attend to structural and everyday injustices and issues in the field.

Conceptual orientation: Reading GER through “geography in the world”

McFarlane’s themed intervention *geography in the world* (2021, 2023) - published in the journal *Transactions of the Institute of British Geographers* (TIBG) - provides the conceptual foundation for our commentary on GER. Themed interventions are conceptualized by TIBG as a “platform for a range of ideas about the state of the art in geographical scholarship and practice, or for discussion of a significant process, movement or event whose geographical components demand interrogation” (RGS, n.d.). Through inviting reflection on geography in different places and contexts, McFarlane (2024, 1) – in his own words – seeks “to provide resources to inform how we might collectively think and do Geography better together, with greater sensitivity to shared and distinct concerns” (2023, 1). Thus, drawing attention to the situatedness of geography—“the contexts, institutions, structures, and sites of dissemination that shape ... the discipline ... in different places across the world” (McFarlane 2022, 3).

McFarlane (2022, p. 3) explains the *geography in the world* initiative “is a kind of worlding that seeks not just to critique that historic hegemony but to learn and reflect on Geography in a range of institutional, political, economic, and cultural contexts.” Geography as a discipline has shaped, and been shaped by, colonial projects (Radcliffe, 2022; Puttick, 2023; Noxolo, 2025), and the discipline remains characterized by globally uneven and unequal geographies of knowledge production (Esson et al. 2017). For Müller (2021, 1441), the idea of worlding geography means “opening up” the discipline:

to those multiple unsung and untold places and voices that hide beyond the reach and grasp of current Geography and its privileged medium of English as a language. It implies bringing those worlds, those global anywheres and the voices seeking to represent, evoke and speak for and with them into the conversation, yet without pressing them into premoulded logics and debates

Through engaging with reflections from geographers working in different places and contexts, *geography in the world* supports reflection on the challenges and opportunities that shape geography, enabling evaluation of its current condition (McFarlane 2022). The commentaries included in the themed intervention provide “snapshots and glimpses into Geographical worlds” (McFarlane 2022, 6), offering a reflective lens through which to read the plurality of the discipline.

However, it is significant to note that McFarlane (2022) is explicit about the limitations of the initiative. No single author or contribution can capture the full range of issues shaping geography within any given country or context. Moreover, both the national and the discipline are imperfect units of analysis: differences and tensions can exist regarding the nature of the discipline, and geographers are often distributed across cognate fields, merged into new formations, or connected to various nonacademic publics. Consequently, the initiative’s hope is not to define geography in any singular way but to stimulate discussion and reflection around the conditions of knowledge production and dissemination in geography.

Geography in the world offers a potentially illuminating lens for thinking about GER. Just as McFarlane’s initiative foregrounds geography’s plurality and the situated conditions of knowledge production, our commentary seeks to map and compare the diverse epistemic, institutional, and cultural contexts in which GER happens.

Our approach to collaboration

Following the AAG annual meeting in Detroit 2025 we met online *via* Zoom, reflecting that to truly engage with the question posed by the panel discussions in the education symposium it was important to understand geography education in the world, in all its diversity, in the present time-space. The temporal nature of the question framing the panels was important to note; both due to its focus on the future, but also because geographic worlds are shaped by previous and current generations and their work. Put another way, geography education - much like the discipline of geography “as a theoretical, methodological, and institutional domain - is of the world, composes worlds, reflects worlds, and is worlded” (McFarlane 2022, 3).

Following the Zoom meeting, each author wrote an 800-word reflection on GER in the country in which she worked. The aim of this task was to introduce the scope and scale of GER in each context, also considering the factors which shape and constrain it. While recognizing the limitations of writing and reflecting upon country-specific GER as individuals (e.g., places and institutions vary, people’s experiences and imaginations of them vary, and individual reflections are inherently subjective), the national focus sought to reduce potential ethical issues associated with writing as individual people and support engagement with the policy contexts which shape geography education. While recognizing that “the ground from which we might understand, talk about, collaborate, and alliance-build across global space is a highly uneven one” (MacFarlane, 2023, 1), by identifying collective issues and concerns, we are in a better position to advocate for the building of a multi-scalar social infrastructure to support future geography education research(ers).

After reading one another’s reflections on GER, we met *via* Zoom to discuss our country contexts. One author then inductively coded the contexts, seeking to identify the main thematic foci in each country. She actively considered factors which shape GER in each context to support further consideration of how these factors and GER varies between places. The decision to inductively analyze the narratives reflected an understanding that geography education is related to, but distinct from, geography as a discipline, because of its focus on learning and teaching, including in schools and within pre-service teacher education programs. The themes were shared, discussed, and developed through an iterative process before being agreed upon by all authors (Table 1). Each author then revised her country-context, ensuring her depictions addressed each theme and explained any anomalies.

We consider this process to be the first articulation of a larger discussion on this issue, and we actively invite contributions and reflections from colleagues working in different

Table 1. Inductive themes derived from analysis of the national GER contexts.

Theme that shapes GER	Working definition of theme
The context of education policy	Spatial responsibilities in education policy making, including nation state vs. decentralized (federal state) structures and the agency of academics in shaping research agendas.
The context of geography education research(ers)	How institutional contexts shape geography education research, and how the wider context of higher education and financial support for GER influence the field and research(ers).
The context of geography education in schools	The nature and context of geography education in schools, including challenges such as teacher recruitment and retention; out-of-field teaching; and the positioning of geography in national and institutional curricula.
The context of geography teacher education	The structure and positioning of geography teacher education. For example, school- and university- based initial teacher education and ongoing opportunities and funding for professional learning. This also considers ground-up collaborations.

countries, places and educational contexts across the globe. We are particularly conscious that we are all geography educators based in the “Global North”, privileged to be in tenured academic positions despite the wider context of increased insecurity in higher education.

Starting the conversation: Examining GER in Australia, England, Germany, Singapore and the United States

Australia

Australia is known through western knowledges and its colonial history to comprise of states and territories: the Australian Capital Territory (ACT), New South Wales (NSW), the Northern Territory (NT), Queensland (QLD), South Australia (SA), Tasmania (TAS), Victoria (VIC), Western Australia (WA). Through Aboriginal and Torres Strait Islander Knowledges, the unceded lands, waterways and skyways of Australia comprise Country and each Country, of which there are over 250, represent the richness and diversity of communities, customs and cultures, and languages and dialects (AIATSIS 2025).

Using the colonial structure of states and territories, there are Federal policies and strategies for education across Australia. For example, the *Melbourne Declaration on Educational Goals for Young Australians* (MCCETYA 2008) set the goals of equity and excellence in Australian schooling, with creativity, confidence and active informed citizenry being at the center of learning. This policy drove Federal strategy and funding of the Australian Curriculum Assessment and Reporting Authority (ACARA) to develop a national assessment program and an Australian Curriculum for a suite of subjects including Geography. Indigenous Knowledges are included in the suite of Australian curriculum subjects as a cross-curriculum priority. Implementation and subsequent funding of federal strategy for education occurs throughout each state and territory. For example, funding and implementation of the *Australian Curriculum: Geography* (ACARA 2013) into NSW schools is the responsibility of the NSW government.

Geography in Australia faces uncertainty as a university discipline and a school subject. For example, between 1951 – 1981, the discipline grew from the appointment of eight to more than 200 full-time geography academics nationally (Head and Rutherford 2021). Since 1981, a decline in the visibility of geography at universities prevails, arguably in response to continued restructuring across the sector which

emphasizes study, funding and career pathways associated with the Science Technology Engineering and Mathematics (STEM) construct. Currently, 25 of 37 universities offer a geography-related major degree, and 14 of those 25 universities do not include geography in the school or department name. It is typically embedded into a Faculty of Science such as through a School of Geoscience (Hay 2025; Head and Rutherford 2021; National Committee for Geographical Sciences [NCGS] 2018). In terms of geography in schools, a lack of visibility still occurs, attributable to curriculum development processes which do not recognize the interdisciplinary nature of geography as both a science and social science. For instance, geography has long been situated as a subject in the key learning area of Humanities and Social Sciences (HASS) (Gerber 1990; Biddle 1999) and this positioning is reinforced through the *Australian Curriculum: Geography* (ACARA 2013).

The positioning of geography as a subject of the humanities, presents a challenge for developing its identity and integrity and influences a deficit perception of geography as a “coloring in” subject that lacks rigor and relevance, and limits university study and choices for career pathways (Biddle 1999; NCGS 2018; Caldis and Kleeman 2021). Progress is slow in recognizing the interdisciplinary nature of geography in the school curriculum despite long-term scholarly and political debates about curriculum reform, and the influence of interest groups such as professional associations in shaping curriculum content, and advocating for the additional recognition of geography in policy and practice as a STEM-subject (Biddle 1999; Kleeman 2009; Caldis 2014; NCGS, 2018; Gleeson, Klenowski and Looney 2020).

An insufficient pipeline of geography teachers and geography education researchers can be linked to challenges arising in the positioning and perception of geography rather than centralized decision-making. For example, there is a discrepancy in core learning affordances for geography; where nationally, geography is core learning up to Year 8 (age 14), yet, in New South Wales (NSW), the subject of geography is entrenched as a core-learning subject from Kindergarten up to Year 10 with opportunities for elective or optional study in the senior secondary years (Biddle 1999; Kleeman 2009; NESAs 2015; NESAs 2024). Those involved in GER will most often be situated within a School or Faculty of Education, rather than the discipline of geography itself. These researchers will also lead geography methodology units in an initial teacher education program, noting 19 of 37 universities offer a geography specialization pathway and nine out of 37 universities employ a full-time specialist

geography educator (NCGS 2018). This situation affects the provision of geography methodology units and limits the potential pool of specialist geography teachers. It also indicates how small the pool is for GER.

Out-of-field teaching or teaching beyond subject specialization in geography is arguably an outcome of there being limited opportunities to study geography at university and in initial teacher education programs. A recent national survey of 289 teachers revealed almost 46% were teaching geography as an out-of-field, subject; further most were humanities and social science teachers who are required to teach geography but do not have this as their specialist subject (Kriewaldt and Lee 2022). Professional associations, other professional learning providers, initial teacher education providers, and a strengthened connection between geography academics and geography educators are all held up as being important structures of support for the development of geography and geography education (NCGS 2018; Caldis 2022; Head and Rutherford, 2022; Kriewaldt and Lee, 2022; Hay 2025).

England

Along with Wales, Scotland and Northern Ireland, England is one of four countries which comprise the multi-state nation that is the United Kingdom of Great Britain and Northern Ireland (UK). Each of the countries legislates its own education policy, with the UK government legislating for England. Geography has been a discrete subject in the national curriculum since its inception in 1991 (Rawding 2015) and it is compulsory in primary and lower secondary education (Department for Education 2014). Geography then becomes an optional subject that students may choose to study for General Certificate in Secondary Education (GCSE) and at Advanced Level (A Level). Geography is sometimes taught in an integrated way or through topics in primary schools, and geography departments may be situated in humanities' faculties in secondary schools. England is currently amidst a curriculum and assessment review, which will shape the nature of geography education in schools (Department for Education, 2025).

Since the late 1970s, there has been an established Chair of Geography Education (most recently Professor and Chair of Geography and Environmental Education) based at UCL Institute of Education in London, but this post has not been advertised since the last person resigned the role in 2023. Geography education researchers are generally based in faculties of education in England and are often responsible for at least some teaching in pre-service teacher programs, known in the UK as Initial Teacher Education (ITE). However, changes under the Conservative-liberal coalition (2010-2015) and Conservative-led government (2015-2024) have "sought to challenge the role of higher education institutions (HEIs) and prioritize school-based experience" (Hordern and Brooks 2023, 800), centralize ITE curricula, and define "bestness" in teacher education (Hordern and Brooks 2023; Brooks et al. 2024). Resulting in Ellis & Childs (2023, 2) arguing "England now has the most tightly regulated and centrally controlled system of ITE anywhere in the

world", with the state regulating ITE through an "assemblage of multiple policies – from the macro-level of student numbers and financial models down to the micro-level of what an individual teacher educator does and says" (p4).

Over recent years, there has been a pedagogic turn in higher education with academic geographers engaging with research about teaching and learning (Finn et al. 2022). This has, in part, been shaped by an increase in Teaching and Scholarship contracts, along with a greater focus on questions of curriculum, pedagogy and assessment in universities. Groups such as the Royal Geographical Society's (with Institute of British Geographers) Geography and Education Research Group (GeogEd) have sought to support engagement across the fields of geography education and pedagogic research to support student transition, teaching and research (Finn et al. 2022). Attention has also been paid to the relationships between geography education and geographies of education, for example, through considering how socio-spatial injustices shape the nature of education spaces, education access and attainment (Finn et al. 2022; Hammond et al. 2022; Kraftl et al. 2022). Colleagues working in schools and other education spaces also make contributions to the field of geography education - including through research, post-graduate studies, practitioner inquiries and writing for professional journals such as *Primary Geography* and *Teaching Geography*. However, they can face barriers to engaging with research, such as difficulty accessing journals through pay walls and limited scholarship time (Freeman et al. 2024).

Much geography education research focuses on factors which shape the teaching and learning of geography in schools. This includes engaging with questions about how curricula and policy shape practice and children's lives, as well as questions about the nature and value of geography education and its relationships with issues and debates of our time (Hammond & Healy, 2022; Lambert and León 2022). For example, through examining how geography education has (re)produced and/or challenged systemic and everyday injustices (Winter, 2018; Pirbhai-Illich and Martin, 2023; Sammar, 2024; Puttick et al. 2026) and considering geography's role in sustainability and climate change education (Morgan, 2012; Walshe, 2017; Healy et al. 2025; Puttick, 2025).

UKRI (UK Research and Innovation) – a non-departmental public body comprised of multiple councils – is the main body responsible for research and innovation in the UK. GER may also be funded through awards from organizations such as the Royal Geographical Society (with Institute of British Geographers) and British Education Research Association, as well as through grants from HEIs. However, it has been argued that GER is often small-scale and self-funded, resulting in a patchy field (Lambert 2010; Butt 2020). A recent survey of geography teacher educators found that just four out of 30 participants had over 10% research time (Hammond et al. 2024b). Whilst this survey is not representative of all geography teacher educators in England, it raises questions about social infrastructure and how geography educators – who have often transitioned from working in schools - can be supported to engage in, and with, research (Hammond et al. 2024). Groups such as the

Decolonizing Geography Collective¹ and the Geography Education Research Collective (GEReCo)², have sought to support this work through creating spaces for collaboration, whilst navigating challenges to capacity building in the field and attending to injustices in education and research. However, geography education research(ers) may be impacted by the financial crisis affecting higher education in the UK at present, which is impacting job security and research and funding opportunities.

Germany

Geography education (research) in Germany is strongly shaped by the federal structure of the country, with Germany's 16 federal states holding broad authority over education policy and administration. This decentralized system leads to regional variation, for example in the geography curricula used in schools and in the regulations governing teacher education and employment. Despite this diversity, the core structures may still be outlined.

The responsibility for research in geography education lies predominantly with universities. A large number of universities offering geography and preservice teacher education programs include a professorship for geography education (research). A digital map maintained by the German geography education association (HGD) shows the distribution of research institutions across German-speaking countries³. In most cases, professorships in geography education are situated within geography departments themselves usually embedded in faculties of mathematics and natural sciences. Nevertheless, some professorships are institutionally anchored within faculties of education. This institutional placement can shape the thematic priorities and methodological approaches of research conducted at each site.

Professorships typically involve responsibilities in both teaching and research, with an increasing emphasis on knowledge transfer and public engagement. Most professors pursue three to four main research areas and are generally supported by a research team. Research teams vary in size and composition but often include doctoral candidates and student assistants. At some locations there are also postdoctoral researchers. These people are actively and deliberately involved in geography education research, usually holding temporary contracts. In the German academic system, the staffing structure is different from the Anglo-American context, where there are also permanent positions outside the professorship, such as senior lecturers or readers. Apart from that it is common for some team members to focus exclusively on teaching or administrative duties.

The geography education research landscape in Germany is strongly shaped by external funding structures, as most professorships are modestly equipped and depend on third-party funding to support research initiatives. Among the most significant national funders is the Federal Ministry of Education and Research, which issues thematically focused calls for proposals aligned with current policy priorities. In contrast, the German Research Foundation (DFG) supports basic research across all disciplines,

offering highly competitive funding for investigator-driven projects with many different funding options. Foundations also play an important role, for example the Deutsche Bundesstiftung Umwelt, which funds sustainability-related research projects, or the Klaus Tschira Stiftung, which supports science education. Additional resources are available through international programs, such as the German Academic Exchange Service (DAAD) or European Union research frameworks.

In German schools, the position of geography as a subject varies between federal states and different school types (for example: *Gymnasium* and comprehensive schools). Geography can be introduced as a new subject starting from ISCED Level 2 (young people aged 10-11). It is commonly classified as part of the social sciences and appears inconsistently across grade levels. In some school types, it is taught in interdisciplinary combinations with history or civics.

Preservice teacher education in Germany is structured into three phases, each situated in different institutions. The first phase consists of university-based academic training, which must be completed with a master's degree. In this phase, students usually choose two subjects in which they receive disciplinary training (for instance geography and mathematics), complemented by subject-specific didactics, as well as coursework in educational sciences. The second phase, which is rather unique internationally, is a paid practical teacher training phase lasting 18 months. During this period, pre-service teachers teach in schools while simultaneously receiving training in teacher training institutions, where expert teachers provide supervision and guidance. Successful completion of this phase leads to formal certification. The third phase consists of continuous professional development during in-service teaching.

Geography education research in Germany faces several interrelated challenges concerning schools, pre-service teacher education, and the wider research environment. A persistent reduction in the number of geography lessons in schools might result in less geographic literacy among students and, consequently, a shrinking pool of future geography specialists and teachers. A second challenge concerns the recognition of geography as an integrative discipline that bridges the social and natural sciences. In both schools and teacher education, the natural-scientific dimensions of geography, physical geography, are often underrepresented (Scholten et al. 2025). Within teacher education, the tripartite system—university studies, teacher training, and in-service teaching—creates disconnects between research and practice. These phases are institutionally and personally segmented, making coherent collaboration and mutual learning difficult. Finally, the international visibility of German GER remains limited, as much of the work is still published in German and few scholars participate in international collaborations. This reduces the field's resonance in global debates. Early-career researchers also face insecure employment and narrow career pathways outside full professorships, further constraining the field's renewal and international engagement.

Singapore

As a small island city-state, geography education in Singapore is highly centralized –all public and government-aided schools (approximately 92% of schools) use the same national curriculum, textbooks and online resource materials prescribed and developed by the Curriculum Planning and Development Division at the Ministry of Education (MOE). Geography exists as a standalone subject only at grades 7-12 (ages 11-18), but it is an optional subject from grades 9-12 (ages 14-18). At grades 3-6 (ages 8-11), it is integrated into social studies, which is compulsory. A significant feature of the school geography education landscape is the tight networks among the MOE, Institutes of Higher Learning (IHLs), and schools. For instance, geography curriculum planners involve a rotation of school geography teachers who are seconded for two to four years at the MOE as part of their career development, working closely with MOE's geography subject specialists who themselves were previously high school geography teachers. Apart from the strong presence of teachers and teacher leaders in curriculum development, academic geographers, geography education researchers, and assessment board specialists are also involved.

Geography is situated in Singapore as a humanities subject and takes its reference from both the 2016 Charter drafted by the International Geographical Union's Commission on Geographical Education (IGU-CGE), as well as the United Nations 2030 Agenda for Sustainable Development (Ministry of Education, Singapore 2023a, 6-7). Chang (2014) has argued that Singapore's education system might be too responsive to the needs of society. For instance, the most recent curriculum revisions situate geography as an anchor subject for teaching and learning about sustainable development to support Singapore's climate goals. To achieve this aim, curricula topics draw on selected aspects of both physical and human geography in order for students to understand the relationships between human activity and environmental systems. The curriculum is also aligned with goals to develop twenty first century competencies – emphasizing inquiry-based learning, including field-based inquiry as a signature pedagogy (Seow et al. 2019), as well as the use of digital technologies for teaching and learning geography (Ministry of Education, Singapore, 2023a, 8). This framing of the nature of geography education influences those who undertake GER and what constitutes valid geographical study.

In Singapore there are only two (out of six) publicly funded universities that offer geography as a university subject, and only one, the National University of Singapore that has a standalone geography department. The other geography program is situated within the only teacher education institution that can certify teachers to teach in Singapore schools, the National Institute of Education (NIE), within which there are only three geography education specialists. The geography educators at the NIE are involved in developing, teaching, and supervising research across undergraduate and post-graduate levels, higher degree coursework and research programs, certification courses for geography heads, and ad-hoc in-service programs for geography teachers.

GER is funded mainly by the MOE. The state exercises outsized influence over the direction of geography education research, funding both geography content and education research through which its priorities are supported. For example, the Education Research Funding Programme (ERFP) outlines clearly MOE's (changing) research agenda (Ministry of Education, Singapore 2023b). Geography education researchers explicitly outline how research proposals are aligned with the MOE's priorities to obtain research funding. There is also a strong push for research teams to include both MOE curriculum officers and school practitioners. This influences the direction and scope of geography education research as well as the composition of research teams, potentially affecting research impact on geography school curricula, pedagogies and assessment. In addition, the MOE commissions research directly, such as "working papers" by education researchers that provide data for policy decisions⁴. Within the MOE, curriculum officers, subject specialists and teacher leaders are expected to undertake funded small-scale research to guide their work. NIE's geography education researchers sometimes serve as research mentors and evaluators for these projects.

This tight ecosystem comprising the MOE, NIE, and schoolteachers, presents both strengths and weaknesses for geography education and research. Most obviously, geography education researchers have opportunities to interact with the international geography community through conferences and publications, facilitated by funding opportunities. Working in partnership with MOE policymakers and school practitioners also enables more successful translation and scaling of research findings to policy and practice. However, there is a tendency for the research agenda to be largely dictated by national education policies, which may cause some parochialism and limit the scope of geography education research. Moreover, research that is more critical of these policies does not enjoy the same resourcing and impact as those that align with the national agenda.

United States of America

Geography as a school subject is primarily situated within the social studies (SS) in the U.S., although its official presence (as required, optional, or absent) within the K-12 school curriculum, varies by state. Nevertheless, it is common for geography-specific standards to be integrated with standards from other social studies sub-disciplines (e.g., history, political science, economics) to outline a holistic SS education. While elementary and secondary students in some states may experience geography-specific lessons or courses, it has been argued that it is more common for students to engage with geographic knowledge and skills through integrated SS classes (Zadrozny 2021), which can be dominated by other SS sub-disciplines such as history (Lambert and León 2022). Despite this trend, the policy commitments to SS as part of the mandated public-school curriculum in the U.S. have endured and, in most states, geography is named as an essential, if under-taught, part of this integrated field of study.

In terms of preparing teachers, such a range of disciplinary approaches and lenses constituting the amalgamative social studies can be challenging for social studies teacher educators who come from different educational backgrounds, conduct research in a variety of subfields, (Busey and Waters 2016; Waters and Hensley 2020) and who often have very limited time to work with prospective teachers. Indeed, it is common for aspiring elementary and secondary teachers to have only one education course focused on the teaching and learning of social studies (e.g., social studies methods) in which geography may not feature significantly (León forthcoming). Furthermore, few aspiring teachers in the U.S. are sufficiently prepared in disciplinary geography and this is particularly true of physical geography (Bednarz et al. 2013).

In many states, K-12 geography has struggled to maintain its curricular position both within the larger field of social studies education and as a separate secondary school subject, although there are state-specific exceptions (Bednarz, et al. 2013). Importantly, K-12 GER in the U.S. is limited by the small number of scholars who dedicate themselves to the field. This relates to the limited number of PhD programs which would allow one to emphasize both geography and education (National Council for Geographic Education 2025). More commonly, PhD geographers adopt interests in geography education (sometimes never having worked in K-12 education) or EdD/PhD educationists might personally develop interest and expertise in geography. These educationists often begin their careers as social studies teachers and eventually work within university teacher preparation, although many (including this author) do not have advanced degrees specific to geography.

The circumstances described so far suggest a degree of fragility in both the visibility of geography in the K-12 curriculum and in the research infrastructure that exists to support it. This perhaps inevitably results in research and scholarship that exhibits an inherent parochialism, or at least conservatism in the sense that effort is directed mainly to conserve or bolster the position of geography. In such circumstances wider perspectives, including pedagogies and epistemologies from the Global South, may be set aside in favor of tackling local concerns deemed more urgent and appropriate – such as teacher development or the integration of geographic perspectives into some aspect of the school curriculum. While individual local creativity can result in funding which supports geography education (e.g., Mitchell et al. 2018), access to research funding from bodies such as the National Science Foundation requires emphasizing intersections with science (e.g., Embury et al. 2026) which creates tension with regard to geography's social studies "home."

The most comprehensive profile of GER in the U.S. context comes from a landmark report titled "*A Road Map for twenty first Century Geography Education: Geography Education Research*" (Bednarz et al. 2013). This report focused on addressing two main questions which remain relevant today: 1) What areas of research will be most effective in improving geography education at a large scale? 2) What strategies and methodologies can relevant research communities develop and adopt to maximize the cumulative impact of education research in geography?

The *Road Map* concluded with a list of recommendations discussed elsewhere (Lambert et al. 2025, this issue), most of which remain largely unfulfilled and long term in nature. In addition to these recommendations, we can acknowledge that public schools continue to be viewed through the lens of future employers and citizens - which no doubt influences the type of geography being taught in classrooms. Despite these aims, there exist other research-worthy areas of focus such as how teachers and curriculum writers respond to calls to decolonize geographical knowledge (e.g., Meehan, et al. 2023; Milner, 2026) or to teach geography with often excluded lenses such as that of race/ism (e.g., Lambert and León, 2026) or social class (e.g., Huckle, 2025). In the future, US GER might benefit from increased research activity within organizations like the NCGE and research which squarely addresses policy and advocacy (see for example Mitchell 2020). Furthermore, the U.S. GER community might also openly interact with wider educational research communities, including social studies education researchers, look for opportunities within teacher education scholarship (León, forthcoming), as well as seek out additional collaborations with international partners (e.g., the recent RaLiCaM project explored in Lambert and León, 2026) which develop methodological, conceptual and practice-oriented resources which can be adapted for various national educational contexts. One further recommendation of the *Road Map*, which should be revisited, is to have teams of geography education researchers looking at, and investing in key research questions (Bednarz et al. 2013).

Discussion

McFarlane (2022) calls on us to examine GER through the lens of situated and relational geographic worlds. In the sections above, we have outlined GER in the country contexts in which we live and work, from our viewpoints as former high school teachers and academics working in geography education research. Comparison of country contexts has enabled us to identify common concerns and contextually situate dynamics that shape GER, revealing the terrains in which we work, and the possibilities that can arise from them.

One of the clearest insights from this comparison is that the country is not always the most meaningful unit of analysis to understand geography education research. Our reflections illustrate diversity and internal fragmentation within countries, in part due to devolved governance structures. In Germany, geography variously appears as a standalone school subject in some states but not in others and may be compulsory or optional at different grade levels, depending on regional policy. In Australia, state educational authorities determine how the national curriculum is implemented and geography can appear as a standalone subject or be integrated into other humanities subjects. In the U.S., geography is almost universally treated as part of social studies, with variations in how the geography standards are enacted across states and school districts, which have a tremendous amount of freedom. England and Singapore provide more unified accounts of the place of geography as a school subject, with national curricula that provide guidance on the geographic

knowledge that should be taught and at which stage of schooling. Although, it is important to note that in England, not all schools are required to follow the national curriculum (Department for Education, 2014). Even in Singapore, which arguably provides the most compelling case for the relevance of a country-level analysis (mainly because it is also the size of a city), it would be incomplete to ignore the role of individuals who shape research and teaching in places and communities, and what Priestley (2021) describes as the supra site of curriculum making. Here, actors such as the OECD, United Nations and International Geographical Union (Commission on Geographical Education) shape education through processes including policy learning and transnational curriculum discourse. For example, the 2016 Charter on Geographical Education and the United Nations 2030 Agenda for Sustainable Development have both shaped geography curricula in Singapore (Ministry of Education, Singapore, 2023a, 6-7).

As place-based and institutional geographies and histories also shape teaching, learning and research, we suggest it would be more useful to understand geography education in each country as a landscape sculpted by multi-scalar forces, resulting in uneven terrains. More pertinently, this also affects what is researched and researchable – due to issues like data comparability and access within, and between, countries. This leads to questions about how we might more meaningfully conceptualize the scope and scale of GER so that we can build on research from across contexts to better understand and support geography education research(ers).

A second notable issue is geography's disciplinary positioning and identity across the contexts. Geography has been described as a composite and integrative discipline (Brock 2018), which has, at times, led to geography becoming subsumed within other subjects in national and institutional curricula. The country cases show that geography is sometimes positioned within integrated subjects. For example, in the United States it is mostly situated within social studies, in Germany it sits in social science, while in Australia, geography is often positioned within humanities and social science curricula. This positioning can lead to physical and environmental dimensions of geography being removed from geography and/or conceptualized solely as part of science. We argue this positioning is particularly problematic in what has been described by Latour (2018) as the new climatic regime. As Latour (2018, 8) explains with regards to migration:

Migrations, explosions of inequality, and New Climatic Regime: these are one and the same threat. Most of our fellow citizens underestimate or deny what is happening to the earth, but they understand perfectly well that the question of migrants puts their dreams of a secure identity in danger.

Separating humans from nature in geography education policy and/or practice has the potential to shape educators and children's imaginations of the world. It is therefore important for geography education research(ers) to continue to pay attention to how geography is constructed in curricula and taught in schools, and how this shapes

children's experiences and imaginations of, and actions in, the world.

Another impact of the positioning of geography within social studies is that the discipline may become less visible to students and beginning teachers in some contexts and phases. Whilst there are rich and vibrant primary geography communities – evidenced through the annual Charney Manor primary geography conference and professional journal *Primary Geography* in England – geography's visibility in primary schools remains a challenge in some contexts. In high schools, Caldis and Kleeman (2019) and Kriewaldt and Lee (2022) have argued that non-specialist teaching in Australia impacts the quality of instruction in geography classrooms, compounding imaginations of geography as less important than the sciences in the public eye.

A third theme that emerged from the analysis concerns the environments in which GER is produced. Across countries, GER is sustained by relatively modest, and in some cases fragile and under-funded communities. For instance, in Australia fewer than half of the universities offer a geography specialization and only nine out of 37 universities have a full-time geography educator. In the U.S. there are few mechanisms for preparing PhD geography educationists. In Singapore only two out of six publicly funded universities offer degree programs in geography and there are only three geography educator researchers. In England, only one established Chair of Geography Education has existed in recent decades, and this position has not been filled since it was vacated. While Professorships in Germany are sufficiently numerous, they often rely on temporary contract-based teams to do their work leading to a degree of insecurity and workforce turnover. Collectively, this suggests a precarious pipeline for future GER.

In these geographic worlds, learned societies and professional associations appear to play an important role in sustaining geography education communities. For instance, the Hochschulverband für Geographiedidaktik (HGD) in Germany, the Royal Geographical Society (with Institute of British Geographers) and GEReCo in England, national and state Geography Teacher Associations in Australia, and the National Council for Geographic Education (NCGE) as well as the AAG in the United States provide spaces for networking, engagement and advocacy. A more formal network of support exists in Singapore with an established ecosystem of funded education research, access to inter-institutional teams, and pathways for integrating research and practice.

To address many of the aforementioned challenges, GER(ers) might continue to focus on the relational affordances offered by close partnerships within and across these professional bodies. This recognizes that geography education is not only that which transpires in schools and universities, but also between colleagues and with students (hooks, 2003), suggesting that learning can become a fundamentally “communal activity, carried on within a shared culture,” and an individual's thoughts and actions are shaped – at least in part – by social interactions and processes (Seixas 1993, 310).

The German case alluded to the issue of access to GER knowledge production through language with much of the research conducted and published for a German-speaking

audience. While publications in native languages are likely more accessible to that nation's community of educators and especially teachers, these geographic worlds are hidden from others due to language barriers. How might GER benefit from a concerted effort to pull multilingual resources together using translation technologies? This would not only increase the volume of GER but also broaden the range of issues researched beyond that which currently engages the English-speaking world. Moreover, even within English speaking contexts, GER in the form of practitioner research is being produced by teachers who do not have access to GER tucked away behind the paywalls of top tier publishers. This research is sometimes published through professional publications like *Teaching Geography* in England and *HSSE Online* in Singapore or shared through teacher association networks but may not be read or cited by geography education researchers. If we desire to strengthen the visibility and legitimacy of GER through increasing research capacity, it would be wise to consider the capacities that are currently being ignored.

Conclusion

A continued discussion across countries is essential, and we are particularly keen to hear from colleagues living and working in contexts beyond North America, Western Europe, Singapore and Australia. If you are interested in contributing to this discourse, please feel very welcome to contact one of us by email. We are interested in further exploring how GER is positioned both within and across national contexts. In doing so, educational theoretical foundations, such as reflexivity theory or practice architecture, might provide productive frameworks for advancing this kind of research. Ultimately, doing geography education research better together requires sustained support for, and nurturing of, geography education research and researchers in, across, and between places, both today and in the future.

Notes

1. Decolonising Geography. <https://decolonisegeography.com/>
2. GEReCo UK IGU-CGE – Geography Education Research Collective/UK Commission on Geographical Education of the International Geographical Union. <https://decolonisegeography.com/>
3. GER locations in German-speaking countries: Forschungsstandorte - HGD.
4. <https://www.ntu.edu.sg/nie/research/research-publications/nie-working-paper-series>.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

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Ethical approval was not required for this research.

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