

International Geographical Union Commission on Geographical Education

***International Declaration on Research in
Geography Education***

Geography in education is the study of the Earth, its natural and physical environments, human activities and social changes, the interrelationships and interactions of these and their effects, from local to global scales; and, among many skills, it uses mapping and fieldwork. When taught well geography makes a fundamental contribution to the education of all children and young people, promoting the development of citizenship. Ensuring the quality of geography education is, consequently, of great significance to policy makers and education leaders internationally.

It follows that those who teach geography in primary and secondary schools and in further and higher education need to be supported by research intelligence in at least six priority areas, in order to:

- clarify the purposes and goals of geography education, no matter how the geography curriculum is expressed locally;
- refine curriculum, pedagogic and assessment practices used in the teaching and learning of geography;
- deepen collective understanding of learning progressions in geography;
- improve ways in which high quality materials and resources for geography teaching and learning can be developed and provided;
- develop understanding of learners' geographical knowledge and experience, including their misconceptions, to enhance geography's teaching and learning;
- improve the teacher education of geography educators, linking innovative teaching practices to empirical research in geography education.

The outcomes of research in and relevant to geography education are to:

- provide and distribute evidence and/or conceptually robust arguments and practices that will improve the quality of geography education in national settings and internationally;
- encourage a 'research orientation' among geography teachers and educators that enables reflective and critical engagement with habitual practices and a professional habit of mind that demands improvement in the quality of geography education;
- strengthen the scientific status of geography education and consolidate it as an area of knowledge by developing and reinforcing working networks among researchers and educators.

The International Geographical Union Commission on Geographical Education [IGU CGE] supports and promotes research in geography education in all nations and cross-nationally. It aspires to developing an international culture of research in geography education to enable the development of policy and practices that enhance the quality of geography teaching and learning for all in formal and informal education. The IGU CGE encourages policy makers and geography educators to build capacity in research and its application to the classroom and wider learning contexts. It does this through understanding the current state of research and by elucidating current knowledge, needs and trends in order to identify future research intentions, priorities and practices and the means to bring these to fruition.

APPENDIX

International Declaration on Research in Geography Education: The Elaboration

1. Executive Summary

The Commission on Geographical Education of the International Geographical Union [IGU-CGE] strongly commends the value of research in geography education. Such research is vital to inform, to underpin and to evaluate progress in geography education. This declaration supports previous Charters and Declarations of the IGU in their aim to encourage the teaching and learning of geography to flourish worldwide, to the benefit of citizens, societies and international relations.

The IGU-CGE recognises that research in geography education exists in many different forms, from small-scale practitioner-based research to large-scale international surveys. Providing that they are conducted with rigour, studies based on a range of research methodologies have an essential role in taking forward policy and practice in geography teaching, learning, curriculum and resources.

The Commission aims to develop an international culture in geography education in which research investigations at a variety of scales are planned and conducted. The IGU-CGE commends the dissemination of research findings through formal and informal means, enabling cross-fertilisation and accumulation over time and space. Particularly, it notes the role of its own journal, *International Research in Geographical and Environmental Education*, and its regional and worldwide conferences in contributing to this dissemination process.

Research in geography education is circumscribed by human and financial resources. In some contexts, this research is the responsibility of specialist institutions but, more commonly, it is conducted by individuals, including research students, with limited financial and material resources. Whilst the field would benefit most certainly from increased resources, in the current global context it may be that attention is given to making the most effective use of existing funding. This could be achieved by maximising inter-linkages within the geography education research community cross-institutionally and internationally, through supporting interaction with research groups in cognate disciplines, and by fostering two-way communication with stakeholder groups to maximise the impact of the research undertaken.

Insofar as possible, international collaborative approaches to geography education research should involve partners from countries across the diverse range of political and socio-economic contexts. Whilst financial and other constraints can make this collaboration challenging, the Commission sees significant value in researchers from different contexts working and learning together.

For research in geography education to flourish, investment in the continued training and development of geography education professionals is necessary. This involves the provision of opportunities to undertake higher degrees as well as shorter training courses. Findings from geography education research, as well as opportunities to undertake small-scale research on personal practice, should be embedded within geography teacher education and accreditation programmes at all levels.

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The following priorities are commended to enable the development of a strategic approach to geography education research institutionally, nationally and internationally:

1. To encourage co-ordination within geography education research by facilitating the networking and co-operation of researchers and the dissemination of methods and findings;
2. To create overviews of research in geography education in order to identify progress, key understandings, gaps, future needs and possible approaches;
3. To establish mutually agreed lines of research in geography education through the clarification of current gaps and the prioritisation of future needs;
4. To investing in capacity building within current teams of geography researchers and through identifying and fostering future members of such teams.

To conclude, the Commission on Geographical Education commends the value of geography education research and the role it has to play in supporting policy and practice in the teaching and learning of geography across the range of contexts and education levels. It encourages those in positions of influence at institutional, regional, national and international levels to consider the ways in which geography education research can be fostered, to the ultimate benefit of young people, teachers, schools and societies.

2. Preamble

The Commission on Geographical Education of the International Geographical Union:

supports the *International Charter on Geographical Education*, the *International Declaration on Geographical Education for Cultural Diversity*, and the *Lucerne Declaration on Geography Education for Sustainable Development*;

is committed to research in geography education as fundamental for teaching and learning in geography for all citizens in the context of lifelong learning;

affirms the aim of the Commission to develop an international culture in which research investigations, at a variety of scales from the local and regional to the national and cross-cultural, are conducted into those interests, concerns and issues relevant to geography education;

is conscious that research in geography education should, and can be, informative, enabling and stimulating at all stages of education, contributing to fostering a lifelong enjoyment and understanding of the world;

recognises the contributions that geography education, and the benefits of research into geography education, make in preparing people for significant roles in a multiplicity of workplaces, and in doing so contributes through its education and training to understanding and identifying solutions to significant local, national and world challenges;

is aware that students of all ages benefit from a geography curriculum and formal and informal teaching and learning underpinned by reliable and trustworthy findings from research in geography education;

acknowledges that research in geography education is conducted in national and international contexts and is increasingly being disseminated through local, regional and international conferences, research presentations and publications, including via the world wide web;

is mindful of the analyses of research in geography education undertaken by geography education researchers around the world which identify its range, potential, strengths and limitations;

is concerned that, nonetheless, current research in geography education is often small-scale, short-term, piecemeal and underfunded;

encourages collaborative approaches to research in geography education within and between the contexts, settings and institutions in which it is fostered and occurs locally, nationally and internationally;

is ready to assist and support colleagues in fostering, engaging in and communicating research in geography education in all countries of the world;

commends this *International Declaration on Research in Geography Education* to geography educators, learners and decision-makers world-wide.

3. The nature, value and focus of geography education research

In order to develop high quality geography education across all countries of the world, the 1992 *International Charter on Geographical Education* recognises, for all stages of education, the value of geographical learning that is well founded and underpinned by rigorous and reliable research. The integration of geography teaching and research in geography education is vitally important.

The *Charter* states that geography education research should focus on the learning and teaching of geography in the early and primary years, in secondary and tertiary education, in teacher education, in vocational and adult education, and in other lifelong learning contexts. It is affirmed that research in geography education should aim to contribute to the wider development of theories, practices and resources in learning and teaching. Further, research has an essential role in preparing future geography educators and in maintaining the professional development of current geography educators in schools, colleges, universities and in adult and informal education through their education and training.

The *Charter* values the wide range of complementary approaches to research in geography education, including: historical research; changing understandings and theories in education applied within geography education; children's and adults' geographies; the variety of aspects of learning and teaching by adults and children in geography education; the nature, selection, development and use of curricular resources and outcomes from their use; the uses of geospatial and digital information technologies and media; and comparative research.

Definitions of geography vary locally and globally, within diverse socio-cultural and political contexts. Researchers in geography education are challenged to focus their studies and investigations on the broad range of people, contexts and themes which are fundamental to people's experience and learning and in relation to educational settings and activities and the influences on them. These dimensions include the *learners, educators, curriculum and resources, pedagogy, policy makers and influences on policy, its history and research practices* in geography education.

The foundational understandings for geography education lie with the *learners*, what they bring to, how they respond to and what they gain from geographical learning. The other dimensions focus on the 'how' in translating the findings and understandings from research about learners into effective teaching, curriculum, resources and pedagogy. There are also influences on geography education in its settings, as well as how it has changed over time and for its participants. These dimensions of geography education – which are not rigid, and in which research topics should be cross-dimensional – are noted here and extensive examples of topics for research are given in the Annex to this *Declaration*.

A. *Learners*

Learners in and of geography education include all those children, youth and adults engaged in learning in formal institutions and informal settings. This dimension of research in geography education concerns such aspects as how learners gain and develop their geographical experiences and their understanding of geography during their lives from their earliest years. It can be influenced by theories of learning. It encompasses learning informally and in educational settings, learners' motivations, their knowledge and misunderstandings, and their views about their experiences of geography education.

B. *Educators*

Educators involved in geography education include pre-school and school teachers, university educators and teacher educators, adult educators, informal educators and those involved with the media as a means of informing and educating people. This dimension of research in geography education concerns such aspects as educators' experience and understandings of geography, their motivations for and attitudes to teaching and communicating about geography, their learning in and of geography, their experience of teaching geography, the influences and impacts of the contexts in which they work, about how they make use of the networks they are involved with, about their professional development and its impact on their teaching, and their approaches to and the ways they manage change as it affects their geography teaching.

C. *Curriculum and resources*

Curriculum in geography education includes the structures, contents and manifestations of courses taught to learners, while resources refers to the variety of hardcopy and virtual materials and environmental resources which educators and learners use in their teaching and studies. This dimension of research in geography education concerns such aspects as the contexts and roles of geography in the curriculum, how its teaching and learning is planned, where it takes place, innovation, progression in geography curricula in educational settings, the variety of practices used to construct and enhance geography curricula and teaching, how the experience for learners and educators affects the curriculum, and the resources available and used by

educators in such settings as classrooms, the outdoors and other teaching sites and spaces.

D. *Pedagogy*

Pedagogy in geography education includes all the approaches, techniques and methodologies to teaching and learning employed in educating learners. This dimension of research in geography education concerns such aspects as the repertoire for teaching on which educators' draw, the range of strategies educators use and their impact on learners, the opportunities and constraints influencing educators' contexts and styles of teaching, understanding learners' experiences of geography teaching, assessment in geography and its uses, effects and outcomes, and approaches to connecting geographical learning to learners' lives. It will be influenced by the roles that educational theories play in understanding learning and teaching.

E. *Policy makers, influences and historical contexts*

Policy makers and others who influence geography education include government ministers and policy advisers, civil servants, geography textbook authors and editors, non-governmental organisations, business leaders and interests, public commentators in the media and elsewhere, research and other funders, education and other advisors at local and national levels, monitoring services, and academics in cognate disciplines. Their impact includes the nature and impact of policy decisions as they affect geography education locally and nationally, the contexts and ways in which educational and other policies and influences are brought to bear on geography education in its range of settings, and the effects of changes in policy implementation. This dimension of research in geography education concerns such aspects as the history of geography education and influences on changes within and affecting it over time, the inclusion of geography in national curricula, the ways in which such decisions are arrived at and who is involved, the influence of others with interests in relation to the subject in education, and the perspectives of those who employ those with a geography education background.

F. *Research practices and places*

Research practices and places in geography education include the nature of research and the contexts of research, including with whom and where the research is conducted, as well as those who undertake research, their education, the influences on their approaches to research and its communication. This dimension of research in geography education concerns such aspects as theories underpinning research in geography education, approaches to undertaking and analysing research, the institutions where research is initiated and undertaken, the sites of the samples both human and material, the individuals and communities doing research, overviews and uses of research in the subject/discipline and aspects of it, the communication of research findings, the impacts of research outcomes, and the images of geography education research.

The integration of teaching and research in geography education is vitally important for the future health of the subject discipline.

There are vital links between research in geography education and congruent areas, including development education research, global learning research, environmental education research, research into education for sustainability, citizenship education research, research in outdoor learning, research in information and communications

technologies (ICT) in education, research in spatial intelligence and spatial thinking, and research in the learning and cognitive sciences and in the physical and social sciences. There are also important relationships between research in such cognate subjects as science education, geology education and history education.

4. Contexts of and challenges in research in geography education

Research in geography education requires recognition of its positioning in relation to studies in existing and related cognate research fields.

Research in geography education is circumscribed by human and financial resources. In some contexts this research is the responsibility of specialist institutions. Most often, it is conducted by individual researchers, including research students, with few financial and material resources. Maximising the efficiency of such researchers is a high priority. Funding for national and international individual, team and collaborative research in geography education is possible through the programmes of many national science and social sciences agencies, which should be investigated continuously and to which bids for funding should be submitted.

There are issues concerning the domination in research in geography education of such features as:

- the immediate, practical concerns and interests of researchers, which may limit the topics being researched in geography education;
- limited intra-institutional and inter-institutional research groups, which may inhibit opportunities to develop research;
- a lack of stable, substantive foci for research, nationally and internationally, which may have the effect that gaps in research remain unaddressed;
- limited ties with members of other education research disciplines/areas, which might constrain opportunities to enhance research of value across cognate disciplines/areas;
- constrained national and international infrastructures to foster and support research in geography education, which inhibit researchers from gaining informative access to the cognate research of others;
- access to funds for research, which limits the ability to undertake research.

These are matters which the promotion of geography education research can enable to be addressed, in order to enhance the opportunities for the development and implementation of effective practices in policy development, curriculum, teaching, learning and resource creation in geography education.

Research in geography education includes collaboration between educators and researchers, educators and/or their students as researchers, and interaction with policy-makers, governmental and non-governmental organisations, publishers and the broadcasting and other media. National and international collaborations in geography education research often draw and rely on networks such as the International Geographical Union, its Commission on Geographical Education and other geography, geography education and cognate networks nationally and internationally, which exist to facilitate the national and international exchange of ideas and provide researchers with opportunities to share their work with audiences at workshops, symposia and conferences. However, this can be inhibited by language barriers between researchers, though where a shared language is used research can benefit greatly.

Research in many areas of geography education can be enhanced through international collaborations. Independent and concurrent reforms present opportunities for comparative analyses of curricula and curricular change and their attendant impacts on educators' preparation and learners' engagement with geography. The introduction and implementation of new or revised national geography standards and curriculum frameworks provides opportunities for collaborative studies, as this is the case with well-established curricula. Partnership projects between subject associations and organisations across different nations in geography education can enable developments in methodology, through which researchers can consider and communicate internationally regarding the goals and aims of geography in schools from the perspective of human capability development.

Insofar as possible, international collaborative approaches to geography education research should be extended in developing regions. There are considerable challenges in financing such partnerships. While developed nations have suffered reductions in funding and increased workloads which can limit collaboration, the needs remain particularly acute in developing regions where the available research and opportunities for research in geography education are more limited than in other parts of the globe. There are useful precedents for geography education research in developing regions. Learning from such initiatives enhances approaches to conduct collaborative research in a manner that is truly equitable, respectful and mutually beneficial. Geography education researchers can benefit in this context from publications on recommended practices for international research collaborations with scholars in developing regions and should seek to do so, drawing on guidelines available from national and international agencies.

The rapid growth and evolution of instructional technologies, e-learning and online education has significant international dimensions. Research is required to understand the implications of these trends for geography education. Many educational institutions are deploying web technologies to support collaborative online international learning throughout the curriculum as a strategy of engaging learners in the perspectives of their peers in different countries. There are and will be further developments in this process in geography education and research into its practices and impacts with geographers and geography educators will be of benefit to many internationally.

5. The development of researchers

The development of research in geography education requires the education and training of researchers, both educators and those who work as researchers, in the methodologies and approaches applied in geography education research. This necessitates opportunities to undertake research degrees, at masters and doctoral levels, in geography education, which should involve taking research modules and courses during postgraduate studies. It requires opportunities for employment in post-doctoral research posts, and for researchers to seek support to develop research skills and competence which involve learning to research in the context of geography education. For the future of research in geography education it is paramount that opportunities are provided through academic institutions to develop researchers and that access is available to learners and educators in their educational settings to facilitate research activities and experience.

Many researchers in geography education are practicing teachers undertaking postgraduate degrees or geography educators in university departments of education.

While the latter may be required to undertake research as part of their work, researchers working in schools and further education are key contributors to research and must be nurtured and developed. Many such geography education researchers may also perceive their identity as linked, in part, with their interest in and desire to enhance their skills as educators. This provides an opportunity to nurture a wider cadre of geography education researchers, not least who are most closely linked with the education of school-based learners.

Research is needed on and to improve the professional development of researchers, including those moving to host nations coming from other countries for their graduate studies. The number of foreign-born educators and learners in educational settings, including universities, continues to rise in many countries, but many institutions are struggling to support them and provide for their academic and future professional success.

Researchers must consider seriously how to maximize opportunities for learners to participate in and engage with internationalization in relation to their research in their institutions, through such activities as study abroad and the use and innovative applications of technologies to link researchers for international collaborative research and learning. These global learning experiences are essential for preparing learners with the competencies to research and work interculturally and geographical understandings that increasingly define workforce needs in many industries.

6. Strategic Development

In order to develop research in geography education strategic approaches are required. The purpose of a strategic approach is to enable research in geography education to be focused, to take into account needs nationally and internationally, to foster increasing interrelationships between research and researchers in particular aspects of geography education, and to support and share research activities and outcomes. The following five elements are noted as key elements in and priorities to enable the development of a strategic approach in geography education research institutionally, nationally and internationally.

1. *The development of co-ordinated research in geography education*
 - through open sharing of the research interests and activities of geography educators and others in cognate disciplines;
 - among and between researchers in institutions and cross-institutional teams;
 - within Masters and Doctoral programmes over time, in particular to contribute to the research needs of the geography education community and to reduce isolation in research activity and learning;
 - by creating access to Masters and Doctoral research products through open publishing on institutional sites.

2. *The development of overviews of research in geography education*
 - through the creation periodically of disciplinary, inter-disciplinary and multi-disciplinary overviews of research in geography education broadly and in the variety of aspects of research within geography education to identify progress, key understandings, gaps, needs and possible research approaches;
 - through overviews of research undertaken collaboratively nationally and internationally;

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- through the preparation and publication of guidance and exemplifications of research methodologies and methods to apply in geography education research;
 - through seeking ways to use computer software to enhance the collation of research in geography education, alongside providing open access to such research collation on appropriate websites.
3. *The development of lines of research in geography education*
- through clarification about research that is needed to advance geography education, such as about the key gaps and problems to investigate;
 - by identifying the kinds of research which will enable it to be undertaken effectively;
 - by recognising how such research does and can connect with other research in education and cognate disciplines;
 - through undertaking the groundwork to support and sustain such research.
4. *The development of capacity building for research activity in geography education*
- by building teams of researchers, both for team investigations and through connected research studies in and between institutions, who are able to apply for research funding from national and international research funders;
 - through engaging with learners and educators in formal and informal educational settings;
 - through engaging with educators and learners in the academic discipline of geography in higher education and with geographers working in the commercial environment;
 - by engaging with cognate researchers in other disciplines to undertake cross-disciplinary research of benefit to geography and other subjects;
 - by increasing the opportunities in more universities to undertake geography education research through postgraduate degrees at masters and doctoral levels.
5. *A focus on the attributes of research in geography education*
- through the alignment of key research questions to extend and deepen research foci, questions, activities and findings;
 - by using the motivation of a problem context to engage with key research needs;
 - through focusing on the core ideas, knowledge, skills and practices in geography education, taking account of national and international contexts and interpretations;
 - by drawing on research on cross-cutting themes and key ideas and concepts pertinent for geography education and cognate disciplines;
 - by utilising a range of tasks, measures and assessments to achieve research outcomes.

7. Methodology

Research in geography education is firmly embedded in research methods derived from the social sciences which are used most commonly in educational research, and it is recognised that in appropriate circumstances use is made of research methods drawn from the physical sciences. Such research must be firmly grounded in the most rigorous methods, yielding findings that are valid, reliable and

transferable. The essence of research is that it is trustworthy, which means that whether undertaken with large samples or using small case studies it provides insightful outcomes, which contribute cumulatively with other research findings and outputs to inform aspects of geography education research more fully and deeply.

A broad range of methodologies are valuable for research in geography education, including empirical, theoretical/philosophical, comparative and historical approaches. There is a wide variety of qualitative and quantitative, interpretive and positivist, methods available to researchers. Methods should be selected carefully according to the aims of the research, the questions under investigation and the context of the research.

All research should meet the highest ethical standards, as defined by the research ethics requirements of relevant national and international bodies, including research institutes and centres, universities and other institutions of higher education where geography education research takes place.

8. Dissemination

It is important that the findings of research in geography education should be effectively disseminated locally, nationally and internationally. The facilitation and organisation of informal and formal networks is central to this.

The Commission on Geographical Education of the International Geographical Union has a key role in promoting academic discussions and exchanges focused on research in geography education at local, national and international levels. In particular, it seeks to achieve this through the organisation and sponsorship of international conferences and symposia, institutional support for international funded projects, the distribution of electronic newsletters, and the fostering of networks of researchers in geography education and cognate disciplines. This is equally the responsibility of geography and geography education communities and associations in national contexts.

An essential aspect of the Commission's work is the publication of a peer-reviewed journal *International Research in Geographical and Environmental Education* [IRGEE], committed to the dissemination of research findings. This journal stands alongside a wide range of national and international paper and web-based virtual journals which publish articles about research in geography education. Such journals are important sources for researchers in geography education to use in relation to their research. In particular, such journals can support the wider geography education community by disseminating short research summaries of the outcomes of research theses and projects, alongside detailed research papers.

Research in geography education is occasionally published in geography journals, education journals and other subject research journals. This is vital in making geography education research available and accessible to a wider audience of educators and researchers. It can benefit the wider community through providing insights into educational interests from a geographical perspective, as well as be a source of contact between researchers which can help to foster inter-disciplinary research.

The Commission occasionally sponsors Symposia and Conference Proceedings in geography education in which research is reported, and endorses the publication of edited monographs on research in geography education, which act as further

sources for the dissemination of research. These may be made available in hardback copy or virtually through websites, and by links through the range of social media.

9. Impact

Impact is the demonstrable difference that good research makes to society, in this case education. Research findings may be addressed to other researchers in geography education, researchers in other fields of education and in other disciplinary areas, policy makers, influential agencies and figures, resource creators, educators and learners. Research in geography education has to have a significant impact for it to be considered relevant and useful, given that the purpose of geography education is to develop the knowledge, understanding and achievements of learners through its educators, the curriculum and resources, and pedagogy, and in relation to policy makers and other influences on educational thinking and practices. Such research may be practically focused or it may address new thinking and developments in geography education or review changes and developments. Research needs to aid understanding of and developments in the curriculum, teaching and learning, as well as to identify approaches and processes to redress concerns and improve learning, understanding and achievement to be appreciated as making a valued contribution.

There are many stakeholders who are interested in, and may use, the findings of geography education research: educationally, politically, economically, socially, culturally and environmentally. Such stakeholders desire to see research make a difference. Research impact should, where appropriate, involve the end users of research, such as educators and learners, as collaborators in research, where they may help to shape the matters and issues to investigate, the processes of research and its outcomes. This sits well with the intention to integrate teaching and research, to be inclusive of research processes and to embrace a wide range of methodological approaches. Research impact in geography education should be shared with the academic community and contribute to the development of rigorous academic debate among its researchers, as well as with those in the wider geography and social communities who are interested in geography education research and its outcomes.

ANNEX

The suggested dimensions and some examples of topics for research in geography education

This Annex provides examples of possible areas, topics and themes related to each of the six dimensions in geography education research set out in section 2 *The nature, value and focus of geography education research*. This is not intended to be an exhaustive list. Its role is to illustrate the range and variety of research possibilities pertinent to developing a fuller and deeper understanding of and in geography education.

A. *Learners*

Examples of topics focused on research into learners and geography education include:

- Ways in which learners across a range of contexts and experiences gain and develop their understandings of their world and its geographies;
- Learners' constructs of their familiar and secondary experiences and meanings, including the relationship between their personal geographies and their geographical learning in formal and informal educational settings;
- Learners' experiences in the places in which their geography education occurs and its relevance to their learning in and of geography;
- The changing processes of geographical learning from childhood to adulthood;
- Geographical learning among minority groups;
- Progression in geographical learning within and across learner groups, within year groups, across grades and through educational phases;
- The evolution over time of learners' spatial understandings and thinking and its application in and for geographical learning;
- Perceptions and representations of places and environments at various geographical scales, including national contexts and globally;
- Learners' misunderstandings, misconceptions and stereotypes which affect their geographical learning;
- Learners' understanding of geographical concepts and vocabulary;
- Learners' engagement with, views on, and valuing of geography education;
- Learners' dispositions towards, engagement and reasoning with, and attitudes to their application of geographical knowledge and skills;
- Learners' developing spatial thinking;
- The impact of learning geography over time in developing a sense of geography and knowledge of and attitudes towards aspects of geography and the subject as a whole;
- Individual differences in the development of and changes in geographical understanding over time, including competence and capability in geographical learning and its application;
- How learners' voice is engaged with in geography education and with what effect;
- How learners' geographical learning impacts on their understanding, appreciation and interaction with the world around them, locally and globally;
- The motivations of learners to study geography.

B. *Educators*

Examples of topics focused on research into educators and geography education include:

- Educators' worlds and geographies, and the influence of their world views and experience on their perceptions of geography and its teaching and learning;
- What teachers are required to know, understand and do – their competencies and skills – in order to teach geography effectively, in structured and informal educational settings, to learners, and their attitudes and responses to such requirements;
- Changes in educators' understanding of geography as a discipline over time and its impact on them and their teaching;

- Educators' misunderstandings, misconceptions and stereotypes which affect the nature and quality of their teaching;
- Cultural determinants of educators' geographical behaviour;
- Influences on educators' choices of the strategies they use in their geography teaching, including their approaches to teaching, the resources they use and the interventions they make to enhance learners' understanding;
- The preparation of educators to teach geography education across formal education, including the early years, primary and secondary schooling and in further and higher education;
- Educators' expectation of learners in and of geography;
- Educators' attitudes to and valuing of geography and learners' geographical learning;
- The local and national contexts in which a geography educators work;
- The local, regional and national contexts in which geography educators are educated and trained;
- The motivations of educators to teach geography;
- The impact of change in educational settings on teachers of geography.

C. *Curriculum and resources*

Examples of topics focused on research into curriculum and resources and geography education include:

- The natures of and rationales for geographical knowledge as applied and/or stated for curricula and learning across formal education, including its role in syllabus construction for formal qualifications;
- The value, nature and purposes of geography education for learners;
- Curriculum planning in geography education;
- National curriculum developments, including their formulations and verifications in practice;
- Educators' understandings in interpreting and applying geography curricula;
- Educators' decision-making in curriculum planning and in the implementation of curricular plans, in single subject and cross-curricular contexts;
- Within curriculum plans, what educators select to teach and what influences these choices;
- Geography in single subject, cross-curricular and integrated contexts;
- Ways, including experimental and innovative approaches, of constructing curricula that seek to balance geographical concepts, skills and information;
- Continuity, progression and transition in geography curricula, including the extent to which progression and sequenced learning can be identified and set out in and across aspects of geography;
- Continuity and interruptions in learners' geographical teaching and learning, and its impact on their learning in geography;
- The hidden curricula of geography teaching and learning, intended and unintended, and the messages about geography and geographical learning conveyed;
- How geography appears, is taught and learned and is recognised by learners in the contexts in which geography is taught;

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- Comparative research into national curricula, including both national and local solutions for, and approaches to, implementation;
- Informal and extra-curricular geographical learning;
- Links with cognate subjects, including science and history, and with other curriculum areas, such as citizenship;
- The application of geospatial technologies in learning, including changes and developments in map, photograph and geographical information systems (GIS) technologies and resources;
- The utilisation of resources provided by digital geo-communication, such as volunteered geographic information, GIS online, blogs, forums, webquests, social networks, and such like;
- The nature, understanding and use by educators and learners of primary and secondary teaching resources, such as field and heritage centres, urban and landscape sites, textbooks, resource packs, web-sourced resources and a myriad of further resources used by educators and learners;
- The preparation, publication of and access to resources for educators and learners of geography education;
- The teaching of exemplar geography curricula and its impact on learners.

D. *Pedagogy*

Examples of topics focused on research into pedagogy and geography education include:

- Appreciating and understanding learners' experiences of geography teaching, including the knowledge and attitudes they construct from their experiences;
- Classroom and out-of-classroom organisation and environments as settings for geographical education;
- The effects of the images of geography education provided to learners and other educators, through settings, display, texts and other forms of presentation;
- Approaches to and outcomes of various teaching and learning strategies, such as problem solving, enquiry-based learning, didactic teaching, team-based and other collaborative approaches, homework studies, and many others used in geography education;
- Approaches used by educators to make geographical studies relevant to learners, including connecting to their everyday living geographies with individuals and groups of learners, and learners' responses to such approaches and links;
- Ways to model and support the acquisition of the effective practices of geography and geographical studies;
- Educators' recognition of and strategies to tackle learners' misunderstandings and stereotypes, and their effect;
- How educators plan and teach differentially in geography lessons;
- Ways in which learners learn to formulate geographical questions, their understanding of what a geographical question involves, and how they become able to do this effectively and consistently;
- How learners are supported to acquire, organise, analyse and use geographical information, recognising this may be undertaken in a variety of ways;
- Approaches to enabling learners identify, explain and share their understanding of geographical patterns and processes;

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- Fieldwork practices and geographical learning outside the classroom;
- Interaction between developments in the academic study of geography and the teaching of geography in various educational settings;
- The effects of different strategies used in teaching geography on learners' subject learning, including the impact of interventions with learners;
- Understanding learning processes and learners' attainment;
- Definitions of geography education according to the age of the students;
- Ways in which learning is assessed, formatively and summatively, and used in geography education;
- Comparative surveys and analyses and evaluations of international student assessments;
- Teaching critical thinking, values education, challenging and controversial issues in geography education.

E. *Policy, influences and historical contexts*

Examples of topics focused on research into policy, influences and historical contexts and geography education include:

- The purposes and value of geography education perceived by geography educators and others;
- The institutional, local and national status of geography education and its effect, and the impact of educational policy and provision changes on its standing;
- Geographers, geography educators and others as gatekeepers of geography education and critiques of and challenges to this role;
- Conceptions of the 'correct' in geography education, and alternative perspectives on and conceptions of geography education;
- Interaction between government policy and initiatives and geography education;
- Ways in which policy advisors, civil servants, educators within non-governmental agencies and others work to influence the nature of geography education;
- The critical theories employed to underpin justifications for, aspects of and approaches to geography education;
- Fundamental and incremental change in geography curriculum requirements and approaches to teaching; learning and resources;
- Local and national support services to enable the development and enhancement of geography in the curriculum and its teaching;
- The certification of achievement in geography education;
- The employments taken up by school leavers, graduates and postgraduates with a geography qualification;
- Geography education and equal opportunities;
- Geographies of education;
- Curriculum provision for geography in educational institutions, and the variety of influences on and decision-making involved, at local and national levels;
- The history of geography in education and of geography education;
- Theoretical approaches in geography education;
- The impact of change in educational settings on the provision for and learners' access to a geography education.
- The impacts of changes in geography education over time;
- Changes to learners' experiences of geography education;

- Comparison of aspects of geography education in the past and in the present;
- The images of geography associations and cognate organisations and agencies in portraying geography education and influencing perspectives on it.

F. *Research practices and places*

Examples of topics focused on research into research practices and geography education include:

- Philosophical contexts which influence the nature and focus of geography education research;
- Research methodologies and methods used, applied and developed within geography education research;
- The influences, opportunities and limitations of the institutions as places in which research is undertaken, be these in schools, higher education or the community;
- The selection of the samples used in research studies, in terms of their place and location in which institutions and communities, that is, how the where, why there and with whom in there of doing geography education research has an effect on the research and its findings;
- The nature of the core and extended environments that support research, such as libraries and specialist centres and bodies, the support systems and people available, and the physical environment, that is, their geography;
- The nature and quality of research papers, articles in geography education, and for whom they are intended and to what effect;
- The roles of journals of a variety of types in education, geography and related disciplines in the publication and access to geography education research;
- The ways in which geography education and its research are presented through research and professional journals;
- The impact of institutional policies, opportunities and constraints on research activity, approaches and outcomes;
- Researchers and their decision-making processes, opportunities and constraints, and the impact of these.
- The scales of research, including those of 'lone researchers' and teams of researchers within and across institutions and nations.
- The impact of research activity, findings and communication in education, the subject and cognate areas, and on decision-makers in educational settings, government and wider society;
- The contexts, opportunities and constraints affecting masters, doctoral and post-doctoral researchers and research in geography education.