GEOGRAPHICAL EDUCATION
Volume 26, 2013

BUILDING GEOGRAPHY'S NEW FRONTIER
Invitation for Papers and Notes for Contributors

An Invitation to Share

- **Geographical Education** is a refereed journal. Articles submitted to *Geographical Education* for consideration in the Refereed Articles section are reviewed anonymously by a minimum of two referees. Articles are selected by the Editor based on the outcome of the anonymous reviews and ratified by the Journal Advisory Committee. Authors of accepted articles are sent guidelines for their final submission. Contributions to other sections such as Book Reviews and Reports are not refereed. The ISSN for *Geographical Education* is ISSN 0085 0969.
- We invite your participation in producing this journal. *Geographical Education* encourages school, university teachers and all others interested in geography to share their ideas and experiences in order to promote sound practice, innovative strategies, modern developments and reflection in geographical education.
- Contributions of varying length are invited, with a maximum of 5000 words for major articles and research reports. Shorter articles of 2000 words, featuring classroom strategies, reflections on particular issues and practices in geography teaching, in-service education workshops and comments on previous articles are especially welcome.
- Lesson plans, teaching units and how-to-do-it advice on classroom and field skills are also invited as long as they have relevance for a broad range of teachers across Australia.

Presenting your Article

**Email:** Please submit your article for review to the Editor (address below). Please send as a Rich Text file or Microsoft Word document.

**Word processing:** Manuscripts should be word processed and double spaced, with margins of 2.5 cm on all sides, using 12 point size of Times New Roman (or CG Times) font.

**Title Page:** The title of the article, the name, work position, address and email of the author, and an abstract of no more than 150 words should be provided on a title page.

**Headings:** Major and minor sub-headings should be used to guide the reader and to break up the text.

**Paragraphs:** Paragraphs should start without indentation and should be separated by blank lines. All text should be left justified.

**Quotations:** These should be kept to a minimum and where over 40 words should be indented. These must be appropriately referenced.

**End/footnotes:** These should be avoided if possible.

**References:** Authors are requested to use the APA (American Psychological Association) style as shown in the exemplar at www.cqu.edu.au/referencing. All references, including internet sources, should be provided in alphabetical order, on a separate sheet. The titles of journals should not be abbreviated.

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- **Geographical Education** is published annually. As at least six months are needed for reviewing, editing, design, typesetting and printing, articles should reach the Editor by 30 July.
- The manuscript should be submitted to the Editor by email.
- Manuscripts should be submitted, in accordance with the above guidelines, and sent to geoged@officelogistics.com.au. Any queries regarding the manuscript should be directed to Associate Professor Ken Purnell, Editor, *Geographical Education*, Faculty of Education & Creative Arts, Central Queensland University, Rockhampton 4702, Australia. Email: k.purnell@cqu.edu.au
- Reviews of books, kits, electronic and other media requested by the Reviews Editor should be sent to:
  
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Geographical Education is published annually and is distributed to all members of the state and territory associations affiliated with the Australian Geography Teachers’ Association Limited.

The aims of the journal are to:
• encourage school, college and university teachers and all others interested in Geography to share their ideas and experiences;
• promote sound practice and encourage the developments of innovative strategies for teaching Geography in the classroom and the field;
• provide a forum for discussion between teachers on issues and direction of Geographical education;
• encourage reflection on the scope and purpose of Geography and its role as a medium for the education of young people;
• promote the diffusion of developments in Geography and examples of ways they may be introduced into Geography teaching;
• examine educational issues and trends in the light of their relevance for Geography teaching; and
• disseminate news of AGTA activities and information of national interest from state affiliates.

Review
Geographical Education is a refereed journal. Articles submitted to Geographical Education for consideration are reviewed anonymously by a minimum of two reviewers from the list below. Articles are selected by the editor based on the outcome of the anonymous reviews. Authors of accepted articles are sent guidelines for their final submission. Contributions to other sections such as Book Reviews and Reports are not refereed.

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Building Geography’s new frontier is the theme of this volume of Geographical Education and follows on from the very successful AGTA Conference in Perth in January this year. Indeed, two keynote speakers provided thought provoking papers for this volume.

The Chair’s report by Malcolm McInerney provides not only a rich overview of recent AGTA activities, including resource development and professional networks. High quality resources to support teachers from AGTA such as the GeogSpace website was launched this year (see http://www.agta.asn.au).

Professors David Lambert and Simon Catling from the UK gave keynotes at the AGTA Conference in January and have provided insightful papers in this volume that build on those. David provides insights from his experiences on “Who hung the humanities?” and provides a threefold answer. Simon provides very useful guidance from his reflections upon the experiences of introducing Geography in the national curriculum for England from the late 1980s to today. Thought provoking.

Nick Hutchinson’s: “World view: a heuristic device to inform the Australian Curriculum: Geography” provides a challenging perspective on the use of world views in teaching and learning. The final paper by Ken Purnell examines the challenges and opportunities afforded with the implementation of the Australian Curriculum: Geography.

Reviews of various contemporary teaching and learning resources follow these papers. Geoffrey Paterson has done a marvellous job as usual of preparing that section that should be useful as you look at some of those current resources.

From 2014, Nick Hutchinson will be taking on the role of Editor for Geographical Education and looks forward to receiving in the first half of the year submissions of papers for review on the volume 27 in 2014 theme Building teaching and learning in Geography. That theme that will be ‘Building teaching and learning in Geography’. So having been Editor since 2003 after taking over from Dr. Geoff Conolly, Ken has now passed that on to another exceptionally gifted educator in Geography. Happy reading!
Chair of Director’s Annual Report 2013

Malcolm McInerney
AGTA Limited, Chair of Directors

Putting together the National jigsaw for geography
AGTA’s work in 2013 has continued to be focused on the development of the Australian Curriculum: Geography through the work of the Australian Curriculum, Assessment and Reporting Authority (ACARA) and the creation of online resources with Education Services Australia (ESA) to support the implementation of the new curriculum. AGTA considers that both of these developments are critical for the future growth of geography in our schools and certainly warrants the energy and financial commitment AGTA has made to the process.

This year has been one of significant milestones for AGTA, with the F-10 Australian Curriculum: Geography being published on 20 May 2013 and on 5 August 2013 the senior years going live on the ACARA site. This completed the curriculum development stage of the process and meant that we now have an F-12 Australian Geography curriculum finally available for jurisdictions and schools around Australia to implement. AGTA was also very pleased to publish online the GeogSpace resource on 30 May 2013. AGTA has developed the resource with funding from ESA to support the implementation of the Australian Curriculum: Geography. Whilst this work has created an increased workload and investment from AGTA and its officers, this report will show that AGTA continues to put together the National Geography Jigsaw to promote geographical education in Australia. Our work in the second half of 2013 and beyond is a critical piece of the Australian Geography jigsaw as AGTA commences to implement the new geography curriculum in collaboration with geography teachers’ associations and jurisdictions around Australia.

In this report, I will briefly report on the key AGTA initiatives and happenings to provide an appreciation of why AGTA exists and how it is advancing the teaching of geography in Australia.

AGTA’s representative work
AGTA has an important role in representing geography teachers on a range of national committees to ensure that the voice of geography educators in schools is heard. Such roles are...
increasingly important in terms of the national focus and the national curriculum developments.

Portfolios for the purpose of representation were allocated as follows:

**Australian Federation of Societies for Studies of Society and the Environment:** Rob Berry

**Institute of Australian Geographers:** Grant Kleeman

**Australian Academy of Science’s National Committee of Geography:** Grant Kleeman

**National Education Forum (NEF):** Malcolm McInerney (Executive member of the NEF)

**National Geographic Channel Australian Geography Competition:** Lerece Roberts

**Spatial Education Advisory Committee:** Malcolm McInerney

AGTA is considered an important member of these groups and as one of the associations with a big picture view of the need for representation via national umbrella organisations. AGTA has always been prepared to invest in members of its board being represented at national meetings and to participate in national association initiatives. This attitude and perception of AGTA is especially important in terms of the new initiative by the NEF of creating the Australia Alliance of Associations in Education (AAAE) to represent all national teacher associations. At the NEF meeting in May 2013, the proposed structure for this body was passed and the new entity will be established at the November 2013 NEF meeting. It is envisaged that this new entity will give national associations, such as AGTA, a national voice of significance in collaboration with the other national associations when issues of national education are discussed. Associations want to be involved in the development of education policy impacting on learning areas and teachers, not just in consultation after policy has been drafted.

### AGTA 2013 Geography Going National Conference in Perth

The AGTA 2013 conference was successfully held in Perth from January 7–10, 2013. The conference, held at Perth College was convened by the Geography Association of Western Australia (GAWA). The convenor for the conference, the highly competent and enthusiastic GAWA President, Darryl Mitchie, developed a great program with plenty of field trips and classroom relevant workshops.

For many reasons this was an exciting and enjoyable time for the geographers attending. Professors David Lambert and Simon Catling from the United Kingdom and Professors Peter Newman and Lyn Beasley from Australia presented outstanding keynote addresses and certainly stimulated the thinking of those attending. The videos and PowerPoint’s of their presentations can be accessed on the AGTA site at [http://www.agta.asn.au/Conferences/conf2013/presentations/presentations_2013.php](http://www.agta.asn.au/Conferences/conf2013/presentations/presentations_2013.php)

The response to the conference via the evaluations was very positive and I would like to thank Darryl and his GAWA colleagues for putting together a wonderful conference and experience for the 200+ geographers attending.

### AGTA 2015 in New Zealand

After much discussion, the AGTA 2015 conference is to be held in Rotorua, New Zealand. The *Group Events* tour operator company has been engaged to organise the AGTA 2015 conference with all aspects overseen by the conference convenor, Nick Hutchinson and treasurer, Rob Berry. AGTA sees this as a great opportunity to connect with New Zealand geographers whilst providing a fantastic venue for conducting some outstanding human and physical geography during the conference. Planning is already underway and details of AGTA 2015 can be found on the Group Events website at [http://www.groupevents.com.au/index.php/destinations/conferences/agta-conference-2015](http://www.groupevents.com.au/index.php/destinations/conferences/agta-conference-2015)

### AITSL Exemplar Project

The Australian Institute for Teaching and School Leadership (AITSL) contracted AGTA in June 2011 to develop annotated illustrations of practice (exemplars) to support the National Professional Standards for Teachers. Rob Berry and Roger Smith developed four exemplars of good practice (three static and one dynamic) in geography teaching for the AITSL site. The exemplars are now published on the AITSL site at [http://www.aitsl.edu.au/](http://www.aitsl.edu.au/). AGTA thanks Rob and Roger for their very professional work on this project.

### GeogSpace launched

In March 2012, Education Services Australia contracted AGTA to develop online resources to support the implementation of the Australian Curriculum: Geography. After some planning sessions on the project at the May AGTA Board meeting, the project was named *GeogSpace*.

The Project Management Plan for *GeogSpace* states that:

*GeogSpace is a national initiative for the improvement of primary and secondary Geography education. The project focuses on increasing the amount of inquiry-based learning...*
undertaken by students and a commensurate reduction in the reliance on didactic pedagogies. AGTA considers that the development of the Australian Curriculum: Geography provides a unique opportunity to enhance the quality and status of geographical education in Australia. AGTA considers that curriculum implementation is as critical, if not more important, than the framing and development of the curriculum and that considerable support is required to ensure that teachers have the knowledge and capacity to deliver the curriculum to students. This concern is further heightened by the fact that we have a paucity of Geography-trained teachers in schools around Australia. It is also important to note that the proposed site will be a valuable resource for pre-service teachers and teacher educators.

The GeogSpace project aimed to:
• provide an online learning model for teachers to access;
• create a framework to support teachers teaching Australian Curriculum: Geography;
• develop the knowledge, skills and pedagogical capacity of teachers to teach geography;
• be supportive of the non-geographically trained, as well as the trained geography teacher;
• cater for primary and secondary school implementation of the Australian Curriculum: Geography;
• integrate ICTs relevant to the teaching of geography throughout the curriculum;
• include exemplars from F–10 directly linked into the content and skills of the Australian Curriculum: Geography;
• employ geographical inquiry and geographical thinking approaches throughout;
• be resource rich, providing teachers with access to a range of quality geographical teaching resources available around the world.

A team of AGTA GeogSpace writers and editors developed Curriculum Core and Curriculum Support units which include resource links, classroom activities, and pedagogical advice for teachers.

There was great excitement when the GeogSpace stand-alone website went live ten days after the publication of the curriculum on 30 May 2013. AGTA is confident that the GeogSpace website will provide high quality support to the implementation of the Australian Curriculum: Geography.

Already the site at http://www.geogspace.edu.au/ is getting plaudits from those around Australia and beyond.

“This is all an amazing achievement.” Professor David Lambert (former Geographical Association CEO).

Congratulations to all those who managed, edited and wrote for the GeogSpace project. AGTA looks forward to add to the resource in coming years to ensure that GeogSpace continues to play an important role in the implementation of the Australian Curriculum: Geography.

GeogSpace implementation initiative
The May AGTA Board meeting approved funds to develop an implementation strategy for the GeogSpace site. AGTA considers it is not enough to just have the GeogSpace site online, there is a need to be proactive in its promotion and use. To this end, AGTA has developed GeogSpace advertising materials and a professional learning model for the resource. In the second half of 2013 AGTA is conducting train the trainer workshops with the GTAs in each state, designed to provide a model of professional learning using GeogSpace. Such professional learning activity is the focus of AGTA’s work over coming years so that we penetrate and have traction with the many non-geography teachers around Australia who will be required to deliver the new geography curriculum. This is indeed a daunting task for AGTA but one I am sure will be met with the same professional enthusiasm that has been employed by AGTA members whilst developing the Australian Curriculum: Geography and creating the GeogSpace resource.

Student Geography competitions/activities
For many years, AGTA has been involved in conducting liaisons with the Royal Geographical Society of Queensland (RGSQ) and the Geography Teachers’ Association of Queensland (GTAQ) a range of geographical competitions and activities. These initiatives are extremely important in raising the profile of geography in the community.

The Australian Geography Competition is a joint initiative of AGTA and the RGSQ. This competition continues to grow and be a great success in promoting geography in schools around Australia (http://www.geographycompetition.org.au/). In 2012, over 80,000 students again participated in the competition Australia-wide. The U16 Final was held on the 18 June 2012 at the Foxtel Studios, Sydney. Congratulations to all the students who participated in this major Australia-wide event.

The 2012 International Geography Olympiad was held in Cologne, Germany, from 21 to 28 August. The team comprised: Anthony Chen from
Radford College in Canberra, Sarah Godman from Cootamundra High School, Sarah Naco from Canberra Girls’ Grammar School, and Kate Parrott from Hobart College.

The 2012 Geography’s Big Week Out was held on the Mornington Peninsula in Victoria. The participating students won their places through outstanding performances in the National Geographic Channel Australian Geography Competition. Thanks to Pat Beeson and the GTAV team (and as always Kath Berg and Margaret McIvor) for their great work with this outstanding and important student focused initiative. Go to http://www.geographycompetition.org.au/geography%E2%80%99s-big-week-out for more information on this event.

The 2013 Geography’s Big Week Out will be held from 29 September to 4 October 2013 at the Northern Beaches of Sydney. They will be looking at catchment management in the Northern Beaches and urban development in the study area of Northern Sydney beaches.

I would like to thank again Kath Berg (RGSQ) and the dedicated geographical educators from the GTAQ, GTAV and GTANSW for all their hard work on these geographical initiatives aimed at promoting geography across Australia.

GeoCareers Website

One of AGTA’s important promotional activities is the GeoCareers website at http://geocareers.net.au. The site, developed by Rob Berry, is proving to be an outstanding resource for educators and students, linking our discipline with potential careers. At present the major sections include Meet a Geographer, Studying Geography and Resources.

This Report Shows …

The world of geography in Australian schools continues to be a dynamic and exciting one for teachers and students. AGTA’s capacity to deliver continues to be tested by the challenges of promoting the brand of geography in the new National Education Agenda and putting together the jigsaw for the implementation of a National Curriculum for Geography. AGTA continues to meet these challenges with confidence and continues to be seen by others in the education community as an association of high standards and professionalism. Such a reputation is only possible through the support and hard work of all Directors on the AGTA Board and teacher members of affiliates.

In conclusion, I would like to thank the AGTA Board and all those involved in geography for their work over the past five years that I have been AGTA Chair. It has been a huge privilege to be involved in the work of AGTA and to have the opportunity to lead AGTA through this very exciting time for geography in Australian schools. I would also like to thank the AGTA Executive of Rob Berry (Treasurer), Rebecca Nicholas (Secretary) and Grant Kleeman (Deputy Chair) for all their support and hard work over the past five years. I would like to think that I finish my role as AGTA Chair with AGTA in a prime position to take advantage of the fact that we now have the curriculum and resources to ensure that geography grows in Australian schools over coming years. I look forward to a positive future for geographical education in our schools.
One wonders how the Australian Curriculum: Geography will be received in schools and the wider community? Tim Costello as AGTA Patron is to some extent a little partisan but he does endorse the F-10 Curriculum from an informed and well-respected NGO perspective.

Tim Costello observes, “Today, globalisation, the digital revolution, mass migration and the prospects of climate instability are triggering new concerns and making new demands on our education system. The new Australian geography curriculum looks to engage students with these powerful forces in our globally interconnected world”.


A new report from the USA outlines the importance of geography in preparing young people to address a series of global challenges, including those referred to by Costello. The North American predilection for road maps as a way of explaining complex processes is exemplified by The Road Map Project: A Road Map for Large-Scale Improvement of K-12 Geography Education, funded by a $2.2 million grant from the US National Science Foundation.

Read more at http://education.nationalgeographic.com/education/program/road-map-project/?ar_a=1

The Road Map Project mentions the introduction of Australian Curriculum: Geography as an example of a global community’s renewal of commitments to geography education.

Global challenges are also included in the Australian Senior Curriculum. They are alluded to in another US document produced by The Committee on Strategic Directions for the Geographical Sciences in the Next Decade & National Research Council. (2010).

Read more at http://www.nap.edu/openbook.php?record_id=12860

Further, The symposium on Producing Geographers for the 21st Century (Whalley et al., 2011) included long lists of topics to be studied including social inequality/exclusion, awareness of how global processes affect local spaces, cultural coherence (local to global), relevance of geographical understanding of world events, and globalisation and its discontents.

Across the 49th parallel, Australian-born Professor Stuart Semple has referred to renewed interest in geographic education from the Canadian Association of Geographers and he has identified the Australian Curriculum: Geography as a model for Canadian educators. Communicating via email, he praises its conceptual structure, national scope, purposefulness and thoroughness of the curriculum and is keen to follow up with access to the GeogSpace project.

Read more about GeogSpace at http://www.geogspace.edu.au

Long has the UK been in the forefront of development in national Geography curricula. However, a two year review of their national curriculum and new General Certificate of Secondary Education (GCSE) Geography to be introduced in 2014, with A level Geography introduced in 2015 has seen a dumbing down of Geography. For example, at GCSE level themes such as globalisation and sustainability are dropped in favour of a knowledge of physical geography (Fogarty, 2013, p. 6) and environmental geography is weakened such that discussion of climate change is also omitted (Hopkin, 2013, 64).

The Geographical Association (GA) is a very powerful advocacy group but even the GA appears to be left out in the cold when it comes to current curriculum change. Consider their 2011 paper Learning to be human and the English Baccalaureate – Geography and History that argues that geography is a world subject, which helps students develop knowledge and understanding of the world, our place in it, and what it means to be a human being. Through studying geography we develop knowledge, understanding and skills that enable us to understand and illuminate our
schooling is absolutely essential if this is going to happen”.


Let us hope that the Australian Curriculum: Geography gives teachers and students the opportunities to harness that power and AGTA the wherewithal to assist in curriculum making in schools.


The English Baccalaureate has now been abandoned and Geography and History are compulsory subjects at GCSE levels but the efforts of the GA appear to have been to little avail. Australian Curriculum: Geography is a much richer and forward-looking prospectus.

Geographical educators from the UK have provided valued critical input into the Australian Curriculum: Geography and they also appear to be quite enthusiastic about GeogSpace. Alan Parkinson remarked “So I wonder where the equivalent website is for UK teachers? We are getting one, right??”

Read more at blog entry Friday 31 May http://livinggeography.blogspot.com.au

Tim Costello concludes, “The next generation will make their own world. We need to give them the power to do it well. Having a substantial and really engaging geography experience as part of schooling is absolutely essential if this is going to happen”.

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- The probability that you can use the academic study as a basis for demonstrating your leadership capacity – as a subject leader, but also more generally as a curriculum leader and whole school leader.

David Lambert, MA Geography Education Programme Leader
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This module explores and evaluates how research in education is constructed. Students learn how to “read” research, situate it with the specialist subject field (such as geography or mathematics education), and make judgments about its value.

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This module is suitable for students with an interest in the relationships between academic, popular and school geographies, in the context of education. Geography is an ancient idea, an academic discipline, a school subject and an idea in the popular imagination: the module explores the relationships between these categories.

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’We are all artists and landscape architects, creating order and organising space, time, and causality in accordance with our apperceptions and predilections’ (Lowenthal, 1961, p. 260).

Abstract

The Australian Curriculum Cross-curriculum priorities and the Australian Curriculum: Geography both include the term world views. The meaning of world views, the development of world views as part of the history of geographic thought, and the adoption world of views by teachers and students, affect the ways in which geography is taught and learned about in the classroom. Particular emphasis is placed on teaching geography as a science, on polarised world views in environmental geography, and on the world views of Indigenous Peoples, particularly Aboriginal and Torres Strait Islander Peoples.

The Way the World Works

The Kogi, who live on the Sierra Nevada de Santa Maria, the coastal mountains in Columbia, call themselves the Elder Brothers of humanity, they are guardians of life on Earth. Their mountains house ancestral spirits kept alive through the work of the Mamas, the custodians of Kogi cosmological thought (McLuhan, 1994, p. 363). The Mamas are clairvoyant and omniscient. They are masters of the Law of the Mother. When Kogi spoke to British historian, A. Erira, about gold mining they “see a universe in wrenching labour and they hear the Earth groan” (Erira, 1992, p.364).

This brief description provides some insight into Kogi ontological world views, their collective beliefs about the nature of reality and being (Olafson, Schraw & Vander Veldt, 2010, p. 244). Ontologies, sometimes called meta-theories, seek to answer the question of what the world must be like for knowledge to be possible (Gregory, 2000, pp. 561–4), a branch of philosophy that studies the nature of reality or being (Hubbard, Kitchin, Bartley & Fuller, 2005, p. 5).

Dear and Flusty (2002, p. xi) explain that an ontology basically describes someone’s world view, or “the principles and assumptions they bring to knowing the world around them”. By way of illustration, an atheist and a theist have radically different world views, “totally different assumptions about our being, here on this planet”. Jews, Christians and Buddhists share the same world view, or ontology, they are all religious, but their religious persuasions can be likened to different epistemologies or different ways of knowing about the world “while they have already decided that God exists, they have selected different ways to know him/her/it” (Dear & Flusty, 2002, p. xi).

Lockton explores A Christian worldview of the geographer’s world (1990), although he more accurately examines five major geographical epistemologies, theories of knowledge, assumptions about how we can know the world (Hubbard et al., 2005, p. 5), rather than world views. Lockton examines three of his five approaches: spatial analysis, humanistic geography, and radical geography, but not regional approaches and postmodern geographies, from the perspective of a Seventh-day Adventist and concludes that, at the ontological level “the secular paradigms place humans in a primary position, people are the ultimate source of knowledge, whereas the Christian viewpoint places humans in a secondary position as God is above His created beings” (1990, p. 66).

Another Geographer, Tuan (1974, p. 4) explains the difference between perception, attitude and world views.

Perception is both the response of the senses to external stimuli and purposeful activity in which certain phenomena are clearly registered while others recede in the shade or are blocked out . . . .

Attitude is primarily a cultural stance, a position one takes vis-à-vis the world.
It has greater stability than perception and is formed of a long succession of perceptions, that is, of experience . . . World view is conceptualised experience. It is partly personal, largely social. It is an attitude or belief system; the word system implies that the attitudes and beliefs are structured, however arbitrary the links seem, from an impersonal (objective) standpoint (p. 4).

World view is an ambiguous and elusive term (Kilbourn, 1980–1, p. 3). It is all too difficult to express as an all-embracing concept while concurrently identifying its critical attributes. A more current usage might be perspectives. Kleeman (2009, p. 18) explains that “one’s cognitive engagement with the world is determined by the individual’s own perspective and interpretation”. However, more accurately Kleeman refers to an epistemological proposition rather than a world view; but it is easy to conflate the two. Referring to contact history and terra nullius, Kleeman advocates classroom strategies that enable students to reflect on and question their own world views (2012, p. 27). The difference between perspectives and world views emerges in the following sentence:

To facilitate this, teachers need to provide students with an opportunity to analyse their values and those of others, to identify how their own perspective, and those of family and peers, is shaped by external influences, and how in turn, these are shaped by the way contact history has been portrayed, particularly by the media (p. 27).

World views are holistic but they should be open to interpretation.

Norton’s (1991, p. 75) definition of world view sharpens the focus more clearly. He refers to “the constellation of beliefs, values, and concepts that give shape and meaning to the world a person experiences and acts within”. Capra (1986, p. 11) adds that world views are shared by a community to the extent that such views provide a basis for the ways a community organises itself. Kleeman’s notion of assemblage of outlooks is extended here in that a sharing of understandings is implicit in a world view. Again, this is implied in the German word for world outlook, or, Weltanschauung that is sometimes used as a synonym for world view. It can be thought of as the deep, enduring cultural patterns of a people (Heibert, 2008, p. 14). Referring to worldwide perception, Weltanschauung (Welt- ‘world’ + Anschauung -view or outlook) also refers to the nature of the world, particularly as containing or implying a system of value principles (Feagin, 1993, p. 40).

Sterling expresses the term world view more directly as a story about the way the world works (2003, p. 33). Collingwood does so more exactly when he points to persons and cultures guided by sets of ultimate presuppositions (2002, p. 194) — beliefs that take precedence over other views.

**Geographical World Views**

In human geography, a number of competing world views, with very different ontologies and incommensurable conceptions of geography as social science, jostle about in academic circles. To further compound this state of affairs in a postmodern world, “Any strongly held worldview, based on clearly defined truth claims, has been regarded with growing scepticism” (Gold, 2002, p. 224). Nevertheless, geographers working in the social sciences and the humanities have identified a number of possible world views that can be applied across the disciplinary boundaries.

By way of contrast, in physical geography most geographers work within an empirical context focusing largely on the philosophies that engage natural scientists. Castree (2005, p. 204) alludes to stereotypical gumboot wearing physical geographers as empiricists. This may well be something of an exaggeration? Nevertheless, what is alluded to here is an epistemological world view, an individual’s collective beliefs, about the nature and composition of knowledge (Olafson et al., 2010, p. 244) an epistemological stance that, in this case, often rests on logical positivism (Peet, 1998, p. 25).

Trudgill and Roy (2003) demonstrate that more holistic approaches to landscape, that involve problem solving approaches and collaboration with human geographers and other social scientists, have emerged in recent years (Remwick, 2005, 610). Moreover, it is apparent that there is no single scientific method that can be applied in a straightforward manner by physical geographers (Inkpen, 2005, pp. 27–36; Castree, 2005, pp. 204–8). To complicate matters still further, studies from school science classrooms demonstrate that a number of different ontological and epistemological world views coexist emanating from both teachers and students (Cobern, 1991, 1996; Proper, Widden & Ivany, 1988). Ultimate presuppositions are disordered, deep learning becomes problematic and intellectual progress is obstructed when there are under-theorised assumptions about knowledge and reality.

In environmental geography, the schism between the world views of egocentrics as opposed to ecocentrics has resulted in lively academic exchanges. A rather stereotypical view suggests that a postmodernist world view sees the
biosphere as ecocentric whereas a modernist world is constructed around an irredeemably anthropocentric planet (Bordessa, 1993, p. 150). Again these are completely radical alternatives of how the world can be construed in ontological and epistemological terms. These ideas will be examined in the section below . . . Environmental geography’s world views.

In human geography, a watershed in world views has been identified in the publication of David Harvey’s (1973) Social justice and the city (cited in Chalmers, Keown & Kent, 2002, p. 315), when Harvey switched from an orientation towards spatial science to social theory. Harvey is also complicit in another manifestation of this watershed when he revealed that, in 1974, “something called ‘postmodernism’ emerged from its chrysalis” (Harvey, 1990, p. 3). Some academic geographers maintain that there are two salient world views: spatial science and social theory; others identify empiricism, positivism and modernist social theory with the latter triumphant and the “others relegated to the dustbin of geographical history” (Duncan & Barnes, 1993, p. 248).

A. Maude (personal communication, 2013) argues that geographers have lost some useful insights as a consequence of the wholesale rejection of earlier phases of geographical thinking. On the other hand, Cresswell (2013, p. 15) points to the plethora of books about geographical theory that has proliferated in the last few decades. We must learn from the past, embrace the eclecticism that is revealed in geography’s history, but also be cognisant of the intellectual tumult that was apparent in the early 1970s and its impact on the formation of contemporary geographic world views.

Harvey referred to the ferment of ideas that swirled around the academy twenty years ago.

Last year it was positivism and Marxism, this year structurationism, next year realism and the year after that constructivism, postmodernism or whatever. It is easier to keep pace with the changes in Benetton’s colours than to follow the gyrations of ephemeral ideas now being turned over within the academic world (Harvey, 1996, p. 461).

Gregory (1994) presents a collage of ideas, from various postmodern authors, that express the zeitgeist of this tumult,

. . . space is dissolved into flows,” “cities become shadows,” (Castells, 1983, p. 314) and places are emptied of their local meanings; and that ever-extending areas of social life are being wired into a vast postmodern hyperspace, an electronic inscription of the cultural logic of late capitalism, whose putative abolition of distance renders us all but incapable of comprehending – of mapping – the decentred communication networks whose global webs enmesh our daily lives (p. 98).

Buttimer and Pepper

Buttimer (1993) delved more deeply into geography’s world views by drawing on Pepper (1966) to restate root metaphors or world views that underpin geographical practice. Each ontological world view projects a distinctive interpretation of reality.

The world views are

• the world as a mosaic of patterns and forms is the metaphor that informs geography’s chorological tradition, that studies the relationships between phenomena that occur in the same place (Holt-Jensen, 2009, p. 214); the map presents an assortment of patterns and forms and their forms are open to explanation as, for example, in the formation of beach cusps or the oscillation of the demographic transition model (Buttimer, 1993, p. 22);

• the world as a mechanism of causally interacting systems, best seen in geography’s spatial systems approach as illustrated by urban-rural and pull/push models, or cascading hydrological systems;

• the world as an organism, an holistic view emphasising unity in diversity, a view that is shared by environmental geographers of the ecocentric rather than egocentric persuasion (Merchant, 1992);

• the world as arena, “the stage on which spontaneous and possibly unique events
occur” (Buttimer, 1993, p. 23); the geographer becomes a participant rather than observer; “reality became interpreted as an arena of events, or mirrors and masks, of texts and reflecting contexts” (p. 201).

Johnston and Sidaway (2004, p. 403) add a fifth root metaphor, i.e. “the world as text, in which the landscape is a means of understanding its creator’s intentions and cultures”. However, the world as arena probably subsumes the world as text.

Buttimer (1993, p. 202) refers to Jackson’s ideas about paying attention to the vernacular, the work-a-day world as text:

The motel, the franchised fast-food shop, and the contemporary American house seeking to accommodate new mobile and recreational lifestyles are as authentic examples of what vernacular means as the dwelling of Pueblo Indian or Greek peasant (Jackson, 1976, p. 19)

Nevertheless, if this fifth root metaphor better admits the cosmologies of Aboriginal and Torres Strait Islander Peoples (Waitt, McGuirk, Dunn, & Burnley, 2000, p. 166) then it is a welcome addition.

One could argue that the physical geographer is more likely to practise the first two of Buttimer’s root metaphors but their teaching, and indeed their life outside the laboratory/classroom, may well be influenced by all or more of these world views. It is more than conceivable that physical geographers working in environmental geography would embrace most, if not all, these world views. Cultural geographers are more likely to start from the world as organism, arena or text but are also open to the two ontological world views that Pepper (1966) regarded as inadequate because they lack precision in dealing with individual facts and in their scope of factual corroboration (p. 118). They are animism with the human being, the person as its root metaphor, and, mysticism where the root metaphor is the “common emotion of love” (p. 133). Geography teaching that includes the world views of Aboriginal and Torres Strait Islanders Peoples should also be cognisant of these two inadequate ontological world views.

Teaching Geography: Which World Views?

Peters’ notion that “to be educated is not to have arrived; it is to travel with a different view” (Peters, 1967, p. 8) is made even more explicit because “to be educated is to have one’s view of the world transformed by the development and systematization of conceptual schemes” (1975, p. 256).

Such education takes place with teachers with differing epistemological world views, “a set of beliefs that collectively define one’s attitudes about the nature and acquisition of knowledge” (Olafson et al., 2010, p. 244). Firstly, different epistemological outlooks result in different forms of teaching and assessment practices (Schraw & Olafson, 2002). Generally, teachers with a mechanistic world view often tend to be teacher-centred, relying on lectures, concrete examples, rules and little student participation whereas teachers endorsing a world as arena or world as organism view generally adopt a student-centred approach (Schraw & Olafson, 2002). Secondly, the ontology of a teacher, the ‘who’ that is teaching (Field & Latta, 2001), “the complex and uncertain gathering of energies, words, gestures, commitments, affections, artefacts, bodily feelings, routines and habits”, as Mulcahy (2012, p. 22) puts it, affect the individual’s way of being a teacher. This teacher self adopts particular teaching practices that are affected by the ontology of the teacher.

A teacher that tends to see the world as a mechanism of causally interacting systems, an ontological realist, assumes one underlying reality that is the same for everyone (Olafson et al., 2010, p. 249), therefore the same type of didactic teaching and learning is appropriate for all. Whereas teachers with a world as arena (contextualist) world view “are not only concerned with the type of knowledge that students construct, but with the process that they use to construct that knowledge” (p. 250).

Finally, there is some evidence that different teacher ontological and epistemological world views lead to differences in achievement among students. Staub and Stern (2002) found that teachers with a contextualised, world as arena perspective, were better able to help school children’s mathematical skills than teachers who endorsed direct transmission, an understanding underpinned by a mechanistic world view.

Teaching Geography as Science

Cobern, (1996, p. 584) argues that rather than refer to a scientific world view it would be better to refer to a metaphysic for science, a scientific outlook, an endeavour to enable students to see the world scientifically – where only scientific knowledge is true knowledge. The underlying assumption is that students can be taught to adopt this outlook. However, students frequently see a mismatch between school scientific knowledge and the common sense knowledge they adopt outside the school walls.
Once the pressure is relieved (e.g., the exam is over) the walls go and the concepts revert to forms more consistent with the students’ world view or simply deteriorate for lack of significance (Cobern, 1996, p. 588).

These arguments have obvious relevance for the teaching of the physical geography strands in the Australian Curriculum: Geography.

Cobern contrasts two ontological world views of nature, the biophysical environment. A very able Year 9 science student, interviewed by Cobern an academic from Western Michigan University, essentially based her conceptualisation of the natural world on aesthetic and religious elements but her teacher saw nature as orderly and understandable. The student was alienated from the teacher’s conception of scientific learning because it conflicted with her sense of wonder about the world. Her teacher dealt with an environment in which there is located a collection of resources for knowing, understanding and reasoning (1996, p. 600). The student saw the world as an organism, a text, in mysticism and drew from animism in her assumption that physical forces of nature have a motivating force (Kilbourn, 1980-1, p. 5); the teacher saw the world as a mechanism of causally interacting systems. His was an evidence-based world.

Clearly, the messy business of teaching and learning is more complicated than this. “Aboriginal people explained their environment, and their integral relationships with it, in spiritual terms, but they were meticulously empirical and evidence based in their observation and management of that environment” (A. Maude, 2013, personal communication). Moreover, an analysis of the ontological world view that science teachers projected in their classrooms found that an individual teacher will at times use explanations corresponding to more than one of Pepper’s four root metaphors (Proper, Widden & Ivany, 1988, p. 554). Form and mechanism were most important in physics and chemistry lessons but all four metaphors were apparent in biology (Kilbourn, 1980-1, p. 7) and earth science lessons. Further, an individual teacher at times projected each of the different worldviews (Cobern, 1991, p. 8).

The environmental geography’s world views

Environmental Geography’s World Views

“The attainment of a value-free and neutral methodology and language for geography is impossible” (Morgan & Lambert, 2005, p. 104).

O’Riordan stated that environmentalism involves the clash of two world views (1990, p. 143) choosing the terms technocentrism and ecocentrism to describe these epistemological modes of thinking (Merchant, 1992, used the terms egocentric and ecocentric).

The former epistemological world view is often regarded as the dominant social paradigm (Feagin, 1993, p. 42) while ecocentrism is more radical and is associated with non-government organisations and green politics arguing for a fundamental alteration in existing economic and social uses of nature (Castree, 2000, p. 221).

Bayliss-Smith and Owens (1994, 120) regard ecocentrism as part of a much more complex epistemological world view not restricted to environmental issues but supportive of many of the non-material objectives of the trade union movement and typical of middle class people employed in the service sector. Thus, middle class geography teachers addressing rural students about environmental issues may well experience a fundamental and irreconcilable clash of world views. On the other hand, when Maude (2013, personal communication) asked his first year university geography students a series of paired questions in an attempt to ascertain their environmental world views, the results were inconclusive. Students held an assortment of epistemological world views from the eco-centric to the technocentric/anthropocentric, with a marked skew towards ecocentric world views.

In ontological terms, the great debate in environmental geography revolves around a transition from a mechanistic world view, where it is assumed that explanation of phenomena can be reduced to the interactions among discrete particles, which are real by virtue of specific location in time and space (Kilbourn, 1980-1, p. 6; Pepper, 1966, pp. 186–231), towards the world as an organism, whereby successive degrees of truth culminate in absolute truth found in the organic whole (Kilbourn, 1980-1; Pepper, 1966, pp. 280–
The basic tension is one between the parts and the whole. The emphasis on the parts has been called mechanistic, reductionist or atomistic; the emphasis on the whole holistic, organismic, or ecological”.

In fact, this may be regarded as a return to an earlier ontological world view. Modernity signalled a break from traditional world views that emphasised the interconnectedness of all living and non-living things, the importance of divine will and provenance, and the virtue of things remaining the same. Greek and renaissance Europe regarded the cosmos as a living organism with a nurturing female earth at its centre. Such organic world views generate respect for nature and contain much traditional and local wisdom that serves to limit its non-sustainable uses (Huckle, 1996, p. 5).

A subsequent change from a powerful ethic empowered by mechanistic and reductionist science to an organic ontological world view based on “interconnectedness, process and open systems” (Merchant, 1994, p. 17) has been difficult to accept by many proponents of rationality and scientific reason. “So powerful is the mystique of reason as instrument in the control of nature and human bodies that it banishes other modes of participating in the world to the periphery of society” (Merchant 1994, p. 4).

A shift towards the world as organism is a very significant turning point for people and societies imbued with a mechanistic world view (Capra, 1982). And the world as organism ontological world view inclines towards much more complicated systems thinking. Meadows (1982, p. 101) states: “The world is a complex, interconnected, finite, ecological-social-psychological-economic system. We treat it as if it were not, as if it were divisible, separable, simple, and infinite. Our persistent, intractable, global problems arise directly from this mismatch”.

Psychologist, Heron (1992, p. 251) explains, Today, a significant minority have abandoned the Newtonian-Cartesian belief system in favour of some elaboration of a systems theory worldview. But it may be that they, and certainly the majority of people, still see the world in Newtonian-Cartesian terms. It is a big shift for concepts to move from being simply beliefs held in the mind to beliefs that inform and transform the very act of perception.

Some would go further. Bateson suggests that most of us are governed by epistemologies that we know to be wrong (1972, p. 461). Keeney discussed the difficulties involved in affecting an epistemological change of views because, “A change in epistemology means transforming one’s way of experiencing the world” (1983, p. 7). Sterling (1993, p. 72) maintains that the case against the dominant mechanistic world view is that it no longer constitutes an adequate model of reality–particularly ecological reality.

Clearly, this recent shift in ontological and epistemological world views is an awe-inspiring one, “as profound as any paradigm shift in the history of science” (Davies & Gribbin 1992, p. 230). Furthermore, Sterling (2003, p. 36) implies that such a participatory world view can lead to an embrace of animism and mysticism whereby “meaning and mystery are restored to human experience, so that the world is again experienced as a sacred place” (Reaon 1994, p. 10). As Huckle observed, “Newtonian science eliminated concepts of hierarchy, value, purpose, harmony, quality and form from older organic descriptions of nature, leaving only matter and force” (1996, p. 5).

**Aboriginal Cosmologies**

Geography first embraced Aboriginal and Torres Strait Islander cosmologies through humanistic geography. “Cosmology is a term applied to holistic views regarding the origins of the universe, the earth and place of self, people and the earth’s environment in the universe” (Waitt et al., 2000, p. 166). Tuan refers a conception of space wherein people experience topophilia, “the affective bond between people and place or setting” (1974, p. 4), leaving room for the ontological world views of animism and mysticism.

Kohen (1995) begins the second chapter of his book on Aboriginal environmental impacts by reference to the foundations of his world view. He clarifies that he was brought up in a Eurocentric, Christian society and trained as a scientist. It is
his right, within an egalitarian society, to hold to a particular world view.

In the same way Aboriginal people have a right to maintain their culturally and socially determined beliefs, one of which deals with their origins and creation. Indeed, it may be said that the belief in the Dreaming extends far beyond an explanation of their origins and existence of everything in the world, everything in the past and everything in the future (Kohen, 1995, p. 9).

Silas Roberts, first Chairman of the Northern Land Council, stated

Aboriginals have a special connection with everything that is natural. Aboriginals see themselves as part of nature. We see all things natural as part of us. All the things on Earth we see as part human. This is told through the ideas of Dreaming. By Dreaming we mean the belief that long ago, these creatures started human society. These creatures, these great creatures are just as much alive today as they were in the beginning. They are everlasting and will never die. They are always part of the land and nature as we are. Our connection to all things natural is spiritual (Rose, 1996, p. 26, quoting Neidjie, Davis, & Fox, 1985, p. 13).

The immediate impression is the fusion of spirituality with the world as organism view. There is a powerful sense of interconnection. Kombumerri woman Mary Graham explains:

Although Indigenous people everywhere are westernised to different degrees, Aboriginal people’s identity is essentially always embedded in land and defined by their relationships to it and to other people. The sacred web of connections includes not only kinship relations and relations to the land, but also relations to nature and all living things (Graham, 1999, p. 112).

Jugan-Yawuru woman, Pat Mamanyjun Torres, recalls the lessons of her childhood:

This extensive array of knowledge that was linked to land, people, the cosmos, and our spirituality, was taught to us on a daily basis by our kinfolk and reinforced on our land whenever we passed sites of significance or animals, plants and people with which we were interrelated. Each season meant new experiences linked to new knowledge-building and our increasing age gave us access to increased levels of complexity of knowledge.

Ritualised ceremonial activities were followed by my family while they were still being practiced in the Broome region. I remember being taken by my mimi to one of the last Yawuru ceremonies on the edge of the Dampier Creek floodplains near Rinjamarn Burru, not far from Garnin, and its effect on instilling great respect in me for our Indigenous cultures and my experiencing its amazing psychic energies to dream and receive visions (Torres, 2006, p. 25).

There are many different Aboriginal and Torres Strait Islander ontological world views but it is appropriate to conclude that Aboriginal world views tend towards the holistic rather than the mechanistic. Typically, Aboriginal people examine elements of their surroundings in terms of how they relate to each other (Fleer, 1999, p. 122). In the Ngujakura, the Dreaming of Yalinji People, a past and present state, ancestral beings made the country and left stories that define Aboriginal Law. Alma Kerry, a Yalinji elder shares this fire story:

In the beginning, at Buru, Kija the moon had started a fire. Dabu are those little bees that make wild honey in the rainforest. Dabu didn’t want the fire to spread out. That fire was too hot, they were frightened Kadar the wallaby would burn his feet. Dabu cut some branches and leaves to put out the fire, by beating on it. Dabu was singing out “don’t make too much fire”. But the fire didn’t stop. So he ran away from the fire, he flew away and ended up near the mangroves down there. There’s yirmbal, a spirit now at the place where Dabu went. No-one can go near it or touch it. You’re not to go near the mangroves, or eat anything from that area, shell, mussel, or walk around there (Hill et al., 2004, p. 53).

Aboriginal ontological world views involve spiritual, mythic and totemic aspects but they are also rational and subjective views (Waitt et al., 2000, p. 167). Graham explains that Aboriginal Law can be seen as both a science and a religion (1999, p. 115). It can be seen to embrace all six of the world views identified by Pepper except, perhaps, mechanism, where the entire universe is like a machine. Graham explains, “It is a religion in that it explains both the origins and meaning of the cosmos (including the observer), and it is a science in that it does so rationally, and with empirical support” (1999, p. 115). When a teacher adopts a somewhat mechanistic world view, “in which human appetites and weaknesses are out of the picture” (Christie, 1991, p. 27), to teach Aboriginal children, the consequences can be somewhat unpredictable. A non-Aboriginal
teacher was teaching a science unit on living things, wrote the word *bird* on the blackboard and asked the students to brainstorm their responses. They responded with stings, eggs on leaf and buzzing. The Anindilyakwa term wurrajija is often loosely translated as bird but the term actually refers to any kind of flying animal, including birds, bats and insects (Fleer, 1999, p. 127). The students were responding rationally and providing empirical support for their responses. Their response was ecologically based and contextualised; their response exemplified a world as arena view.

Christie and Perrett (1996, pp. 60–61) describe a community research project conducted by Yolngu teacher education students at Yirrkala. Two of the trainees acted out the nature and origin of their Yolngu languages for the benefit of school students and Balanda (non-Aboriginal teachers). They referred to sites and totems in their territory and spoke of likan and bundurr, literally referring to the words for elbow and knee but metaphorically referring to the linkages within a Yolngu epistemological world view.

They are what keep the Yolngu cultural “body” moving. They can be understood as naming the connecting and articulating points within the complex web of relatedness in which stands every individual, group, totem, song, plant, animal and piece of land, and into which everything is born (1996, p. 61).

The existence of the world as organism is clear in many of the extracts above but so too is the world as arena. There is much emphasis on an act in its context; there is much emphasis on personal involvement and learning in the real world; there is much action involved in collecting bush tucker, the meetings of elders and the conduct of ceremonies.

Consider the personal geographies of this young person:

It’s dry season in the Maningrida region and a young Djinang girl listens to her aunty as they hunt for long-necked turtles at the swamp’s edge. She looks down as aunty explains how the angle of the sun and a tell tale mark in the mud reveals the turtle’s breathing hole. “All the while her aunty sang softly. I later learned she was teaching the girl a song-line for the area” (Fogarty, 2012, p. 89). Rock paintings and ceremonial stories indicate that Aboriginal people in the Maningrida region have been harvesting northern long-necked turtles for many generations. The young girl is developing her personal geography as she “learns through country” (Hutchinson, 2013).

All the discussion so far has tended to stress the four ontological world views that Pepper maintains are evidence based. Mysticism, whether seen in Pepper’s work or subsumed in Johnston and Sidaway’s (2004, p. 403) world as text ontological world view, is a relevant perspective for many Aboriginal people. Here truth is revealed in mystical experiences which are immediate, totally uninterpreted, certain, and emotionally ecstatic (Kilbourn, 1980-1). Yuin elder, Max Dulumunmun Harrison speaks of Sydney red gums, *Angophora costata*.

Angophoras, they are old female trees. If you look at a tribe of angophoras that’s sprouted out from some rocks you will see they are so huge and how they twist and turn and are embracing everything. Once you start looking at those old grannies as we call them, then you know “Whoa, there’s a women’s place somewhere about here”, because they are used as a signpost’ (Harrison, 2009, p. 141).

Animism assumes that physical aspects of nature have a motivating force similar to that perceived by humanity but truth in animism is “ultimately determined by the absolute authority of the spirit or its designate often in the form of holy books” (Kilbourn, 1980-1, p. 5). In its former conceptualisation, animism can be identified in the world views of many Aboriginal people. Most often spirituality is expressed in the land: “. . . every rock and every landform, every plant and every animal had its own consciousness, just as people did. Everything was ‘alive’ ” (Sveiby & Skuthorpe, 2006, p. 4).

Bill Neidjie, a Gagadju elder, explained how the stories passed on in an oral tradition are linked to the welfare of the land:

The stories and the land go together. If the land stays the stories stay, if you give ‘em story all the time. But if story he go, because he got spirit with him, dead, dead people, like spirit he’ll go, and story goes down, down. You know, the land he couldn’t be worse (Williams, 2006, p. 130).

Animism can be seen in the acceptance of totems:

What is meant by Totemism in Aboriginal Australia is always a mystical connection, expressed by symbolic devices and maintained by rules, between living persons, whether as individuals or as
groups or as stocks, and other existents—their “totems”—within an ontology of life that in Aboriginal understanding depends for order and continuity on maintaining the identities and associations which exemplify the connection (Stanner, 1979, pp. 127–8).

Tex Skuthope, a Nhunggabarra painter and storyteller, is of the sand goanna totem, which is made up of all sand goanna totem people of Australia.

The Nhunggabarra of all totems had to maintain and improve the habitats of all the plants that the animals fed from. They learned this by observing animal behaviours from a young age. Knowledge and rules of behaviour were also embedded in stories, dances and ceremonies (Sveiby & Skuthorpe, 2006, p. 11).

Lisa Buxton, a Munaljahi woman, and co-author of Guyunggu . . . An Aboriginal Way of Being, Teachers’ Notes presents the Rhythms of the land for teachers of primary students:

Aboriginal people, in connecting to the land in their particular “country”, learn the different rhythms that exist at different times of the year. On a surface level, these rhythms show themselves through food seasons, when plants flower and produce their fruit. In understanding the connections between every living thing, Aboriginal people know that certain fish will be running along the coast in their area when a certain plant flowers in the mountains. This understanding means people travel their country to the rhythms of the land.

On deeper levels, it is also known that certain ceremonies and rituals are to be performed at various times of the year to help keep the country vital and healthy and in doing so, help keep everything in balance: Land, People and Spirit (Edwards & Buxton, 1998, p. 92).

Here we have a crux of an Aboriginal ontological world view: Land, People and Spirit, three interconnected strands that resonate with personal geographies, empirical realities, and mythical space and place.

What Kinds of World Views are Alluded to in the Australian Curriculum: Geography?

An holistic world as organism view is explicit in the Aboriginal and Torres Strait Islander cross-curriculum priority with the world as text view implicit in this statement:

Aboriginal and Torres Strait Islander communities are strong, rich and diverse. Aboriginal and Torres Strait Islander Identity is central to this priority and is intrinsically linked to living, learning Aboriginal and Torres Strait Islander communities, deep knowledge traditions and holistic world view (ACARA, n.d. a).

The sustainability cross-curriculum priority appears to adopt a plethora of world views in the following:

Education for sustainability develops the knowledge, skills, values and world views necessary for people to act in ways that contribute to more sustainable patterns of living. It enables individuals and communities to reflect on ways of interpreting and engaging with the world (ACARA, n.d. b).

The world as organism is implicit in this statement: “World views that recognise the dependence of living things on healthy ecosystems, and value diversity and social justice are essential for achieving sustainability” (ACARA, n.d.b).

Scale and commitment are implicit here but no specific world view is signalled: World views are formed by experiences at personal, local, national and global levels, and are linked to individual and community actions for sustainability’ (ACARA, n.d.b).

The curriculum certainly encourages an engagement with world views and tends to favour the world as organism although the other three – the world as a mosaic of patterns and forms, the world as a mechanism and the world as an arena – of Pepper’s world views are integral to the subject. The world as text, animism and mysticism are not prominent:

Geography enables students to develop an holistic understanding of human dependence on the environment. It provides opportunities for students to integrate their study of biophysical processes with investigations of the attitudinal, demographic, social, economic and political influences on human use and management of the environment. It enables students to explore how world-views influence these relationships and interactions with the environment (ACARA, 2012).

In Year 6, a content descriptor requires students to learn about “The world’s cultural diversity,
including the diversity of the world’s Indigenous Peoples” and an elaboration suggests that students “investigate world views, environmental practices and connection to land of Indigenous Peoples globally” (ACARA, 2012). Here is a direct invitation to engage with the world views associated with Indigenous Peoples.

In Year 10, a content descriptor requires students to learn about “The environmental world views of people and their implications for environmental management” and an elaboration suggests that students reach an “understanding of the role of people’s environmental world views, such as human-centred and earth-centred, in producing different attitudes towards environmental protection” (ACARA, 2012). There is a direct invitation to engage with the world views of environmental geographers.

In Year 10, a content descriptor requires students to learn about “The application of human–environment systems thinking to the causes, consequences and solutions of the environmental change being investigated” and an elaboration suggests that students could be “reflecting on the influence of people’s environmental world views on their attitudes to environmental issues and programs” (ACARA, 2012). Another invitation to engage with the world views of environmental geographers.

**Conclusion**

Galarwuy Yunupingu, Aboriginal leader and the former chairman of the Northern Land Council asserted:

> We want our ceremonies, we want our language, we want our stories told to our children, we want to sing, we want to dance. And why do we do it? We want to talk to our land and the land talk to us (Davis, Muecke, Narogin, & Shoemaker, 1990, p. 338).

I look to a geography enriched by an investigation of world views. I would like geography teachers and students to study suitable aspects of people’s lives: a spatial take on place, environment, interconnectedness, beliefs and cosmologies. I am convinced that evaluations of world views should be drawn from deep engagement with the history of geographic thought. I favour world views that tend to be nature-centric and holistic but acknowledge that these ends can be arrived at through evidence-based reasoning. I believe that world views should encompass those of Indigenous People, particularly Aboriginal and Torres Strait Islander Peoples. I strive see at last that, “Every image and idea about the world is compounded, then, of personal experience, learning, imagination, and memory” (Lowenthal, 1961, p. 260) and trust that an examination of world views will enrich teaching and facilitate learning about the Australian Curriculum: Geography.

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Australian Curriculum, Assessment and Reporting Authority (2012). *Revised draft F-10 Australian Curriculum: Geography*. Sydney: ACARA


Abstract

This paper is partly based on a lecture given at the AGTA conference in Perth in January 2013. It argues for a progressive subject based curriculum in which geography plays an essential part. This is based on an analysis of why and how subjects like geography, as part of the humanities, have been undermined and diminished in recent times. In a way the paper offers a challenge: are we ready the grasp the opportunities that a subject based curriculum provides?

There is a huge popular appetite for human creativity and endeavour, through for example geography, travel, poetry, and history and yet it appears that the life force of the humanities in education has been fading over a period of many years. Thus geography and history have in recent years become less prominent in many education systems, including in England and Australia. Do we just put this down to the gradual shift away from a liberal education tradition? Does the re-emergence of subjects such as geography in national curriculum specifications, as has happened in both England and Australia, signal a significant new direction?

These are serious questions: it matters that the humanities subjects have become impoverished in education and it matters that there may be an opportunity, if we can grasp it, to re-establish them as significant high status subjects in schools. In this article, I focus mainly on geography, usually classified in school as a humanities school subject in England although I acknowledge in other systems this may not be so as the social studies and even the biological sciences are closer cousins in some jurisdictions.

Geography concerns the ancient and fundamental human curiosity about how we live on earth: in this way geography is, as Alastair Bonnett (2012) has said, ultimately always about human survival. For this reason alone, it is an important school subject. We should welcome its return to Australian schools. But before we do, let’s ponder for a moment: I find it interesting to wonder why collectively we have allowed geography and geographical enquiry to be undermined and marginalised in schools.

So, who hung the humanities (including geography)? My answer is in three parts.

1. It is not helpful to align education to a narrow set of goals to do with employability and economic growth.

I don’t think I need to rehearse the arguments here in much detail. I track this back, in the UK context at least, to the so-called great debate of the late 1970s and then the emergence of ‘TINA’ – in effect, that ‘there is no alternative’ but to submit to the demands of global capital. This was the beginning of the modern day surge in globalisation, the period when education policy (around the world) became a key element of economic policy. What this means has been cemented in various ways over the years, not least by the Organisation for Economic Co-operation and Development whose education guru promotes flexible skills and learning to learn. In England, the so-called big picture, that was the design template for the Key Stage 3 (11–14 year olds) National Curriculum introduced in 2008, seemed to treat subject content as simply the stuff to fill in the cracks between all the themes and dimensions and skills that teachers had to cover. For me, this demotion of subject knowledge as inert filler is dangerous as well as mystifying. A national curriculum based on themes and skills avoids (ironically) the key curriculum question which is what shall we teach? At least it does if we think, as I do, schools are concerned with knowledge and how we come to know: this is what makes schools such special places. It is therefore interesting to have, just five years later, a national curriculum revision in England which is overtly and unambiguously knowledge led (see table 1).

I make two observations about this apparent about-turn from skills-led to a knowledge-led national curriculum. First, we are learning that the implementation of a school curriculum based on transversal skills is very hard to put into practice. As David Leat and colleagues have recently shown, to do this successfully requires a different mindset (Leat, Thomas and Read, 2012). The talk of failure, in a range of countries which presumably now includes England, resulting from what they call an epistemological fog – in other words from teachers not knowing what they were doing! Secondly, when schools are encouraged to innovate in the curriculum (with integrated programmes, themes and learning to learn) it is usually the humanities subjects that suffer – they are seen as soft and loosely framed in comparison...
to mathematics or science, and more readily manipulated. Or possibly, just considered to be less important. However, a problem that may now emerge is that when the system reverts to a subject-based, knowledge-led framework particular problems are faced in the humanities and perhaps geography in particular. Where, for example, are the subject specialist teachers who are able to draw from specialist subject knowledge to interpret the curriculum and to teach geography well?

2. It is debilitating and tendentious to regard subjects, as they often seem to be, as traditional, old fashioned and out of time.

This is to caricature subjects as nineteenth century and irrelevant to the modern day (even though geography as an idea is much older than that!). It is done sometimes in subtle ways – as in the case of the Confederation of British Industry Director-general on the agenda-setting BBC Today programme, who referred to academic subjects as chalk and talk. What is that meant to imply? He also, by the way, coined a new catch phrase – advocating a rounded and grounded education – grounded being a new code word it seems for relevance. I find this a tricky word. Tempting though it may be to get down with the kids, or stay resolutely in the real world of day-to-day experience, for shaping a school curriculum (as conceptually distinct from its pedagogy) it is a slippery and inadequate idea. Again, when we try to modernise the curriculum to incorporate relevance, as in recent years with deep and genuine concerns about community, citizenship, environment and identity, it is usually the humanities subjects that have to do it. This undermines them as disciplinary resources. It undermines any teacher wanting to engage in professional development that is subject/discipline focused (often it becomes more mission focused instead). In the end, we risk inadvertently shielding children from the depth and richness of the dynamic and constantly developing subject of geography. We go for the quick win rather than possibly the more challenging prospect of engaging pupils with abstract, more theoretical

Table 1. Geography in the national curriculum for England, for first teaching September 2014.

<table>
<thead>
<tr>
<th>National Curriculum For England: Geography</th>
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<tbody>
<tr>
<td><strong>Purpose of study</strong></td>
</tr>
<tr>
<td>A high-quality geography education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. Teaching should equip pupils with knowledge about diverse places, people, resources and natural and human environments, together with a deep understanding of the Earth’s key physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge provides the tools and approaches that explain how the Earth’s features at different scales are shaped, interconnected and change over time.</td>
</tr>
<tr>
<td><strong>Aims</strong></td>
</tr>
<tr>
<td>The national curriculum for geography aims to ensure that all pupils:</td>
</tr>
<tr>
<td>• develop contextual knowledge of the location of places, seas and oceans, including their defining physical and human characteristics</td>
</tr>
<tr>
<td>• understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time</td>
</tr>
<tr>
<td>• are competent in the geographical skills needed to:</td>
</tr>
<tr>
<td>1. collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes</td>
</tr>
<tr>
<td>2. interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS)</td>
</tr>
<tr>
<td>3. communicate geographical information in a variety of ways, including through maps and writing at length.</td>
</tr>
</tbody>
</table>

– and in Michael Young’s terminology – more powerful knowledge (Young 2008; 2010). Why would we want to do that?

To summarise so far: I am arguing that two very big and important ideas (Geography and Education) have been undermined and eroded in school systems around the world, including in both England and Australia. The geographer David Wadley (2008) has characterised this broad setting as the global vibrant city of neoliberalism, and suggests that geography as a discipline (and, I argue, as a school subject) could be imagined as creating a certain kind of calm space within the vibrant city for imaginative and critical inquiry about ourselves in it – a kind of garden of peace in which clear headed deliberation can take place.

This is what disciplines (and school subjects) are for and, in the case of geography, a reason why it can and perhaps should be imagined as a key component of a curriculum of survival (see Lambert 2013).

So, on to my third point.

3. It is not healthy for a veritable chasm to have opened up between geography in schools and the wider discipline.

Few academic geographers pay much regard to schools, the curriculum and what is taught. There are notable exceptions of course including Noel Castree (Castree, Fuller, and Lambert, 2007), Peter Jackson (Jackson 2006) and Doreen Massey (Massey 2006). And such is the nature of academic advancement in geography – fragmented, sometimes arcane, often cross-disciplinary – few teachers have the means to keep up a meaningful relationship with the discipline outside the form it takes in school (shaped by the national standards and examinations specifications). This is a problem because it weakens the disciplinary underpinning of the subject in school – to the extent that Margaret Roberts has written recently about the alarming absence of geography in geography lessons (Roberts, 2010). Fifteen years ago, Bill Marsden (1997) wrote on taking the geography out of geography education – supplanted by good causes and an over-emphasis on learning at the expense of the harder question of what to teach (and what is learned).

What to do about the chasm that divides school geography from the wider discipline is, I think, one of the hardest questions we face. I do not advocate that school geography somehow follows the discipline – as in some ways it did do in the 1970s in England, adopting wholesale the models and quantification of geography as a positivist science. There needs to be a relationship, of course, and this may manifest conceptually, as the means specialist teachers use to interpret and develop national curriculum requirements and standards. However, it is important to note two points. First, that school geography actually predates the establishment of a university based discipline: university departments were set up in the first instance mainly to prepare would-be teachers in the early years of the twentieth century. Secondly, once established, the discipline of geography gradually acquired the main purposes of a discipline – to create, gather and organise new knowledge. This is emphatically not the main purpose of geography as a school subject: the main purpose here is education.

 Granted, this may be accomplished by inducting or initiating young people into geography as a discipline, but the relationship between school geography and the wider discipline is not a straightforward one.

To conclude

I am strongly in favour of geography as a discrete subject in schools. I like to think of the best geography lessons as being part of the metaphorical garden of peace within the vibrant city: where, to use David Wadley’s (2008) words, we can “think for and beyond ourselves” (p. 650) to address some of the basic curiosities and questions that most of have had growing up (see the Table 2 for examples of these). Geography as a school subject draws from its disciplinary resources to help deepen and extend how we understand and respond to these questions. Thus, growing up and being educated is a disciplined activity: that’s why we send children to schools and geography should be part of the mix (see Table 2).

I regret the undermining of geography as a humanities subject in school in the recent past (and indeed its capacity to link across to scientific inquiry and the arts). I welcome geography as a national curriculum subject in Australia – and in England with its renewed focus on knowledge. But, I am also against poorly taught geography.

I think far more attention needs to be paid to teachers’ work as curriculum makers (Geographical Association [GA], 2012a). I think far more emphasis needs to be paid in teacher education and training to the subject resources – and the significance of geographical knowledge in the development of geographical thinking (GA, 2012b) in the education of young people.
Table 2. Some basic question. Geography offers disciplinary resources to deepen our understanding of these questions and our response to them.

<table>
<thead>
<tr>
<th>1. THE PHYSICAL ENVIRONMENT</th>
<th>3. IDENTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the world (and this place) made of?</td>
<td>Who am I?</td>
</tr>
<tr>
<td>Why do things move?</td>
<td>Where am I from?</td>
</tr>
<tr>
<td>What becomes of things?</td>
<td>And my 'family': what is their story?</td>
</tr>
<tr>
<td></td>
<td>Who are those people?</td>
</tr>
<tr>
<td></td>
<td>What is their story?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. OUR PLACE IN THE WORLD</th>
<th>4. SOCIETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where do I live?</td>
<td>Where do people live/work?</td>
</tr>
<tr>
<td>How does it look?</td>
<td>How do people live/work?</td>
</tr>
<tr>
<td>How is it changing?</td>
<td>Who decides on who gets what, where and why?</td>
</tr>
<tr>
<td>How might it become?</td>
<td>What is fair? Why care?</td>
</tr>
</tbody>
</table>

(Source Lambert and Owens, 2013).

References


Abstract
This article provides an insight into the development of primary geography since the inception of the national curriculum in England in the late 1980s. It is hoped this is informative as the Australian Curriculum: Geography Foundation to Year 12 is introduced to and implemented in primary schools. It draws out various matters which have affected geography in primary schools in England for good and ill and indicates that developing primary geography to a good and high level of teaching and learning is as yet an unfinished project, after two decades of development. Among the matters which affect good geography teaching are teachers’ understanding of geography, their focus on subject teaching, access to useful resources, and the impact of government changes in policy and practice. Effective support in their school and opportunities to develop their geography teaching skills will make a positive difference. The active engagement of children in their geographical learning through their experiences and awareness can be used to take their learning beyond both the immediate and their current knowledge and understanding. In good primary schools geography is evident and enticing.

Keywords: primary geography, national curriculum, Australian curriculum, teaching and learning, high quality geography, children’s engagement.

Introduction
The introduction in 2013 of Australian Curriculum: Geography Foundation to Year 12 (Australian Curriculum, Assessment and Reporting Authority, 2013) with its detailed year by year descriptions of content mirrors the initiation in 1991 of England’s National Curriculum Geography programs of study which was structured in four age phases: the 5–7, 7–11, 11–14 and 14–16 age ranges, known as key stages 1 to 4 (Department for Education and Science [DES], 1991). In both nations geography became a required subject for children to study, in Australia’s Years F to 10 and England’s Years 1 to 11 (5–16 year olds), though in England this was soon revised to be compulsory only for Years 1 to 9 (5–14 year olds). What was new, and exciting, was the inclusion of geography as a named foundation subject in the curriculum for all primary children in England from their first year in school¹. While geography may have been an aspect of young children’s curriculum between 5 and 7 years old before, it was not necessarily the case. This was an important change for the youngest school children; it extended their geographical learning beyond the local to other places and the wider world and began to engage them in studies of geographical themes, such as environmental concern. Since 1991 the primary elements of England’s national curriculum geography have been through two revisions, both implemented: in 1995 (Department for Education [DfE], 1995) and 2000 (Department for Education and Employment/Qualifications and Curriculum Authority [DfEE/QCA], 1999). These did not substantially change the focus of primary geography, though there were reductions in what was included in the programs of study. A review of the primary curriculum in 2008–2009 (Rose, 2009) led to a redrafted curriculum proposed for schools to follow from 2011 (Department for Children, Schools and Families/Qualifications and Curriculum Development Authority [DCSF/QCDA], 2010), but it was withdrawn on the change of national government in the UK in 2010. This revision took a more integrated approach to the primary curriculum, linking geography in an area of learning entitled historical, geographical and social understanding. [It had already been distinguished from secondary geography, which had been revised for its third time in 2007 (QCA, 2007).] A fourth rewriting of the geography programs in 2012–2013 for introduction from 2014 led to reshaping geography in a more knowledge-focused curriculum (DfE, 2010, 2013a). This knowledge-turn has been one of the reasons behind the subject’s developments in Australia, though it is not without its critics (Ewing, 2012), as in England in relation to primary schooling (Alexander, 2010). Discussion of these changes and the knowledge-turn in geography (Lambert, 2011) is not the focus of this paper, nor is a review of the changes to geography in the
primary curriculum. However, a couple of matters are worthy of brief note before other lessons are drawn from the English experience of the 1990s and 2000s.

The 1988 Education Reform Act in England (Her Majesty's Government [HMG], 1988) set the national curriculum in place from 1989, though the development of the programs of study for each of the subjects followed in a staged process from 1990 to 1993. As in Australia, geography was not among the first tranche of subject programs, which for both nations were English, mathematics and science (1990 in England and 2011 in Australia). In England in 1991 geography, with history, appeared in the second set of subjects, whereas in Australia history had preceded geography as part of the first set in 2011. That science in England was published before geography meant that aspects of earth science – or physical geography – appeared already to be claimed in the science curriculum (DES 1990), which constrained what was finally included in the geography programs of study, though there was overlap in such aspects as rocks and soils, weather and the water cycle (DES, 1991). This overlap was heavily trimmed by 1995 and virtually non-existent by 2000, reducing studies in physical geography in primary education to a particularly weak level. Two lessons can be drawn initially. One lesson, arising from national curriculum developments in England, is that this is a process of continuous, if not consistently timed, revision linked with government reviews, related in part to concerns about the over specification of and overload in the curriculum (Dearing, 1994) but also to government interests in what a curriculum specification should be for (DfE, 2010, 2013a). Across the years this has affected geography as much as the other subjects in primary education (Hopkin, 2013). A further lesson is that the sequencing of national curriculum drafting can affect the school curriculum content of a subject, its interrelationships with other subjects and its future revisions.

The introduction of geography as a compulsory subject in the primary school curriculum brought a number of challenges for primary schools and teachers. It seems the case that similar challenges face geography's introduction in Australian primary schools. This paper considers a variety of these, noting the developments and concerns which occurred over the subsequent two decades for geography in England's primary schools. Inevitably the focus is on England. To draw positive lessons, those aspects of primary geography teaching which seem to foster high quality experiences and learning for younger children are identified. None of this is to infer that such high quality teaching and learning in geography has not been in place in many Australian primary schools. Rather, the purpose is to identify what lessons can be learnt and applied from implementing geography in England's primary schools over the 1990s and 2000s, anticipating that some of these are of interest and value to teachers and head teachers in Australia's primary schools.

The State of Primary Geography: England and Australia

The teaching of geography is and was not new to primary schools in Australia and England (Walford, 2000; Marsh, 2001), though it has had a chequered history. In the twenty years leading to the introduction of England's national curriculum, geography tended to be subsumed within a broad-based topic-work approach in primary schools and often linked with local environmental studies (Her Majesty's Inspectors of School (HMI), 1989). In Australia, geography since 1991 has been a subject in what are variously called studies of society and environment (SOSE), humanities or social studies in different States, where the focus has been strongly on place studies and education for sustainable development; it has an evident environmental focus (Reynolds, 2009, 2012).

Introducing National Curriculum Geography

When geography was introduced as a compulsory subject for all primary school children in England in 1991, it faced several challenges. Historically schools in England had been subject to visits from HMI, who published reports periodically about the state of subject teaching. Their overview of geography in primary schools was published as work began on drafting the geography national curriculum programs (HMI, 1989). It made salutary reading, its opening statement reading: “overall standards of work in geography were very disappointing” (p.11). It was noted that children’s work was satisfactory or better in just 25% of primary schools. Geography was rarely taught as a separate subject; it was integrated with other subjects in topic work where it often lost subject distinctiveness. In a minority of primary schools it was not taught at all. Where it was included it tended to have a lower allocation of time than comparable subjects. Geography was often inadequately planned; indeed, only half of primary schools had curriculum policies for geography. Where HMI saw geography taught across primary schools, they noted that it tended to be of better quality with the youngest children. In many schools there was limited, if any, work on the UK or other countries and parts of the world; there was a sense of too parochial a perspective in its teaching. Equally, there was little sense of
the key ideas of geography, such as place and spatial understanding. Yet, when there was a teacher who coordinated geography across the school the quality of continuity and progression in teaching and learning frequently was better. Where geography was well taught, studies of the locality developed children’s ideas about places; they undertook fieldwork and considered topics such as pollution and conservation; they investigated other parts of the world exploring cultural diversity. Such studies were noted to be motivating across the age ranges, particularly when children engaged in practical, investigative learning. These studies tended to be well recorded by the children using a wide variety of approaches, from photos and maps to sketches, diaries, drama and 3-D models. However, teachers’ record keeping of their learning and achievements was rare. In such schools there was usually a good range of appropriate resources which enabled better quality geography teaching and learning.

These findings were reinforced by a range of sample studies across England (Naish, 1992), which also identified the pressures that the introduction of the geography programs of study for key stages 1 and 2 (5–7 and 7–11 year olds) placed on primary teachers. Given the introduction of ten subjects to the primary curriculum between 1990 and 1993, primary teachers were noted to be suffering from innovation fatigue after the introduction of six (p.44). They needed to understand and interpret the new requirements and to revise or, more likely, develop new curriculum plans for classes and across schools in every subject, not only geography. There were few specialist geographers in primary schools to help in this process, with the geography coordinator not usually a geographer (HMI, 1989). A very real need for professional development in geography was noted. But it was found that, as the new geography programs were introduced in 1991, more geography was being taught and teachers were making strenuous efforts to provide and resource their geography teaching, a point noted in the restructured inspection system for schools (Office for Standards in Education (Ofsted), 1993); but this early report indicated the demanding challenge most primary schools had to meet to provide better than satisfactory geography for their children, a situation similar for other subjects, including history (Ofsted, 1994).

The 2008 study of geography teaching in Australian schools in Years 3 to 10 provides an interesting comparison (Erebus International, 2008). Its basis is very different from the schools’ inspection system in England, which was based on school visits; it drew on a literature review, State/Territory curriculum documents and interviews with stakeholders, including the Australian Geography Teachers’ Association (AGTA) and others involved in geographical education provision. While the report provides a view across Years 3 to 10, it is possible to extrapolate a number of the challenges which face geography in Years 3 to 6 in Australian primary schools as the subject became compulsory in 2013. It is clear that many, but perhaps only a minority, of primary schools have been developing geography in their primary curriculum within the context of studies of society and environment. Indeed, one challenge is to disentangle and make geography clearly evident from or within a SOSE or humanities structure. This involves, as in the English context, a primary school’s leadership and staff in recognising and valuing geographical learning for their children and in giving geography demonstrable status in the primary curriculum. Whether integrated with other subjects or not, the report noted the need to focus on the key ideas, knowledge and skills of geography, as well as to ensure adequate time for its teaching and learning. It was noted that there was a need to provide more engaging learning, in which children recognise and understand the geography they are taught. It suggested that this would be helped by having a teacher responsible for the geography curriculum in the primary school, as well as the provision of in-service professional development in primary geography for teachers. This reprises the situation in England in 1991.

The report identified several ways in which children’s geographical learning could be promoted (Erebus International, 2008). The key point was that teachers needed to show they enjoyed teaching geography and were positive about the subject. In this context, they needed to be informed about the subject and to be up-to-date. As vital was developing in geographical studies – or cross-curricular studies in which geography was evident – connections which children could see to their own lives, experiences and futures. Such studies could well involve local investigations and community contributions. The need for fieldwork was stressed as one of a variety of teaching approaches to use, including problem solving and thinking skills approaches and new technologies. Working through the Australian Curriculum: Geography Foundation to Year 12 primary years requirements, teachers should develop in children a sense of local and national identity, linked with global knowledge and an appreciation of their interconnectedness with the world, in part by investigating physical and human features and processes, the impacts they have and people’s responses to these, alongside place studies. Doing this required schools to allocate adequate teaching time for geography.
Developments over Time: England since 1991

Since the introduction of national curriculum geography in England in 1991, there have been a number of developments. During the following two decades children's standards in geographical learning improved markedly. By 2002, it was clear that while geography was taught satisfactorily across the large majority of primary schools, good and high quality geography teaching and achievement was evident now in a third of primary schools (Ofsted, 2003). By 2010, this had improved to children’s achievement being at good or excellent standards in almost half of primary schools (Ofsted, 2011), with overall improvements in geography teaching good or better in two-thirds of schools by 2012 (Iwaskow, 2013). This compared well with other subjects, with which geography had been playing catch-up for most of its first twenty years. It had tended to be the most satisfactorily taught subject, with lower good and outstanding teaching and learning. The differences with subjects such as design and technology and RE were quite small, though they were greater with history and PE (Catling, Bowles, Halocha, Martin, & Rawkinson, 2007). It was easy to attach more significance to the apparent gaps than they warranted and to indicate that concerns about geography were greater than reality indicated. It was more complex than this. A reading of the various subject reports over the 1990s and 2000s indicates that many of the same issues affected the other foundation subjects, just as many of the positive developments in these subjects were similar to those in primary geography (see: www.ofsted.gov.uk/resources/ to read copies of subject inspection reports from the later 1990s to the present). This tends to belie the impression that geography was the hardest subject to teach and that subjects such as history or art were more straightforward. Quite often teachers’ confidence in their subject knowledge and teaching skills in the range of foundation subjects, including geography, were equally of concern to school inspectors and equally praised where good.

There had been a marked rise in good quality geography teaching in 2005 (Catling et al., 2007), which has continued since, though outstanding geography teaching remains low, at less than ten percent (Ofsted, 2011). This rise in standards related to improved teaching quality in studies in local and other environments, as well as to a focus on sustainability and on map work skills. But it was largely enabled through primary teachers’ good general teaching skills, rather than by specific skills for geography teaching or by primary teachers necessarily having good geographical knowledge (Catling & Morley, 2013). The evidence indicates that where geography is valued in schools it has and continues to improve. This is underpinned by teacher development and subject monitoring across the school. It has taken twenty years to reach this point, yet a number of concerns remain. These underpin the challenges to improving satisfactory geography teaching and the consistency of good practices.

A key weakness for many primary teachers is their limited understanding of geography, both of its key ideas and their knowledge of its content and information related to this, such as about environmental processes and their locational knowledge. Primary teachers appear to be more secure teaching geographical skills than concepts and information, and what they teach may well link more to their personal preferences than to developing children’s sense of the subject in a rounded way. This lack of embedded geographical knowledge undermines confidence in teaching geography, inhibiting the capacity to respond effectively to children’s questions and to use questioning, for instance, more effectively to develop children’s learning. It also inhibits high quality teaching about real and topical issues, in that these are not often based on good case studies. It can be an issue in map teaching too, when children do not use good maps of real places, and is a reflection that many primary teachers are uncertain as to what good geographical examples and resources are. Limited confidence in teaching geography affects the assessment and recording of children’s learning; this was a widespread weakness, with children given little guidance on how to develop or improve their geographical understanding and skills. Where effective assessment occurred, it focused on geographical skills, which teachers felt more comfortable in doing. There are, however, well informed and thoughtful primary teachers who keep effective records of children’s geographical achievement, though this practice relates to their approach in all their teaching.

Yet, while many children’s geographical vocabulary and their understanding (for instance, of geographical patterns and processes), have developed, progress in their learning is often uneven across classes in the same school. All primary schools have long and medium term geography plans, but it seems that too frequently the medium term plans are dipped into rather than developed well. In many classes, such plans are not developed or adapted by the teacher but taken off the peg from commercial or other sources. They lack good local reference points which take account of the school context and the children’s lives and experiences, and they are not informed by local and community connections. In part, this relates to a move towards more cross-curricular approaches to the curriculum (Department for Education and Skills (DfES), 2003; Ofsted, 2011).
though such approaches may retain discrete subject elements rather than be fully integrated topics. Where planning in geography is limited to skills development, much of the knowledge dimension of geography is lost. Indeed, in too many schools medium term plans are incomplete or poorly thought through (Iwaskow, 2013). Even in skills focused geography, fieldwork is less well developed, though working outside the classroom has been strongly encouraged for a number of years (Waite, 2011), and fieldwork has been and remains a requirement in England’s geography programs of study since 1991 (DfE, 2013a).

The government has recognised that too often demanding form-filling has constrained taking children out of school to study and is encouraging field trips and other out-of-classroom working by reducing the paperwork and other demands which appear to inhibit teachers (DfE, 2013b).

In classes and schools where there is good or outstanding geography teaching, this is sustained by a well developed geography curriculum. The teaching emphasises active, practical approaches to learning, involving fieldwork, problem solving, using digital technologies in and outside the classroom, and the evident engagement of the children in developing their geographical inquiries. Yet in 10% of primary schools, geography teaching is hardly present or is non-existent (Ofsted, 2011). The contrast is startling, as is the continuing difference in the standards of teaching and learning between 5 to 7 year olds and 7 to 11 year olds. Quality remains higher for the younger children – first noted in the late 1980s – and it appears to be linked to making increased and better use of geographical studies outside the classroom (Ofsted, 2011).

During the 1990s, a key concern was the considerable demands which it was felt the geography programs of study in key stages 1 and 2 made on the timetable: it simply could not be taught. This led to revisions to the geography requirements and apparent reductions in their content between 1991 and 2000 (DfE, 1995; DfEE/QCA, 1999). While this has seemed to create a less demanding curriculum, there remain problems in teaching it fully in many schools, not least related to cross-curricular approaches gaining ground, which has led to increased selectivity from the geography programs (Ofsted, 2011). A heightened focus on literacy and numeracy in the late 1990s led to a drop in the time given to geography (Ofsted 2001), which in some schools has never been regained. Yet as teachers became increasingly familiar with the geography curriculum, improvements in the 2000s emerged. This familiarity may well have been supported with a stillborn redraft of the primary curriculum in 2009/10 (Rose, 2009; DCSF/QCDA, 2010). This revision never materialised since a change in the UK’s government moved the rewriting of the English curriculum subjects to strongly knowledge-focused statements of content (DfE, 2010, 2013a). The revised knowledge requirements for key stages 1 and 2 make new demands on teacher’s knowledge of the geography involved, for instance in relation to North and South America and climate, aspects about which they are less well informed. This issue was recognised in 1991 with the development of government funded in-service programs in geography for primary teachers. These lasted for six years during the mid-1990s before the investment was redirected to literacy and numeracy professional development. As school inspectors noted, this in-service programme had a very positive impact on raising the quality of the teaching of geography (Ofsted, 1998), though it reached only about a quarter of primary schools nationally. Given the changes being undertaken in England in the 2010s, this need has arisen again. But many primary teachers start from a weak background in geography. Some fifty percent of primary teachers recruited in recent years gave up geography at fourteen. In initial teacher education courses there is very limited time to introduce novice teachers to teaching primary geography. It is often linked with history and other subjects in the same course module. Between 2006 and 2013 contact time for geography, for instance, in primary initial teacher education postgraduate courses in English universities, was reduced by twenty-five percent; a geography unit averages just under 8 hours tutor contact time, while varying between 2 and 16 hours (Catling, 2006, 2013a; Willy and Bowles, 2013). During the past two decades, there has also been a marked reduction in initial teacher education primary courses for specialist geographers, limiting primary schools’ capacity to appoint them, and inhibiting the potential for good advice for their staff.

Emergent Lessons from the English Experience

There are a number of lessons to take from this review of the English context for primary geography over the past two decades which may be pertinent to the future for geography in primary education in Australia. There are several positive points which are vital to note and keep in mind. The introduction of geography as a compulsory subject in English primary schools meant that schools had to develop long-term plans for the subject and implement them, as well as appoint geography or humanities subject leaders; this happened. It had the effect that publishers produced a wide range of new resources for schools, which were
revised, dropped or added to during the 1990s in particular. While the government provided additional funding to support new purchases and primary schools budgeted to improve resources across the curriculum during the 1990s, such funding has declined since 2003. The inclusion of fieldwork led to an increase in out-of-classroom investigations, and in many schools geography became better monitored by staff and progress in children’s learning improved, such that there were good standards in two-thirds of schools by 2012, though assessment and recording remain concerns (Iwaskow, 2013). While this was uneven across classes and schools, the quality of teaching and learning had risen overall, though in a small minority of schools it fell or was lost. There was provision for teachers’ professional development in the initial phase of development in the 1990s, though this reduced afterwards and has been further undermined by the reduction of local authority support services in the 2010s. Yet the Geographical Association (GA) and Royal Geographical Society have worked to provide new lines of development, such as through the government funded Action Plan for Geography between 2006 and 2011 (GA, 2011), which spawned a number of supportive development projects in primary geography of value for online professional development (GA, 2008, 2010a, 2010b, 2010c, 2010d).

However, a number of problems remain. A core issue is teachers’ confidence in their knowledge and understanding of geography, compounded by its introduction and its most recent and drastic revision (Catling & Morley, 2013; DfE, 2013a). Another is the issue of equitable time to teach geography compared to other subjects, in part compounded by an integrated curriculum approach in which geography’s distinctiveness is lost (Ofsted, 2011; Iwaskow, 2013). A third concern is the decline in access to good quality professional development for primary teachers, though this may begin to improve as teachers and schools rebalance their in-service approaches to undertake face-to-face work with geography specialist colleagues in secondary schools and make use of increasing online provision, such as that through the GA’s website. This involves investment, which is problematic in a tight resource environment for primary schools; but a key to this is joining the appropriate subject association, such as AGTA, to gain access to advice, support and resources, for instance through its GeogSpace website (AGTA, 2013). Additionally, in many schools, there is a need to redraft long and medium term plans for geography, not least to enable getting to grips with the new requirements and identifying where staff development and teaching resource needs are. These are all concerns for Australian primary schools.

The case for introducing subject specialists to work alongside, or in place of, generalist primary teachers has circulated for some time in England (Alexander, Rose, & Woodhead, 1992) and has been raised in Australia (Ardezejewska, McMaugh, & Coutts, 2010). It relates particularly to the concerns about the nature and quality of primary teachers’ subject knowledge and specialist teaching approaches. Given the concerns about many primary teachers’ subject knowledge in England and in Australia, it is a reasonable topic to raise, and there is a fair case for improving access to knowledgeable and capable teachers for subjects like geography through the use of specialists, particularly with older primary children. However, there are some very real constraints which inhibit taking this route. These include, first, the current and foreseeable lack of geography specialists who might be available to work in primary schools. Second, the size of and resources available to smaller primary schools prohibit employing enough teachers to cover the range of specialisms needed. Third, the perspectives held by very many primary teachers and headteachers about the nature, value, benefits and primacy of generalist class teaching appear to inhibit very many schools from appointing a balance of subject expertise across their staff on whom they can draw for guidance (Alexander, 2010). It assumes that the use of specialists to teach a subject like geography to younger children solves the knowledge problem, that it is the same sort of need for geography as in a subject such as music. Yet the evidence from England is that too often students in their first two or three years of secondary schooling are taught by either non-specialists, or by teachers who have less interest in quality geography teaching than their other responsibilities, and the students are frequently not well taught (Ofsted, 2008, 2011). Subject specialist teaching, per se, does not resolve the problem. There are similar issues in Australian secondary schools (Erebus International, 2008). The appointment of primary teachers with geography expertise, then, appears not to be a practical solution, except perhaps in very large urban primary schools, though in England this solution has rarely been adopted in such schools. The lack of appointments might reflect the limited standing of geography and other non-core subjects (except for music and in few cases art and aspects of PE, where the argument is for very specific and well honed skills and knowledge) in those primary schools, but it is more likely because the view is that the vast majority of primary teachers can or should be able to teach geography perfectly satisfactorily and better. There seems to be an implicit view that teaching geography to younger children does not require specialist or even well-honed teacher capability. Appointing primary teachers with a strong
geography background seems particularly unlikely without access to a large and high quality pool of primary geography specialists, and this is not a reasonable possibility though for some it might be desirable. It is not being pursued in England, though concerns about teachers’ knowledge of geography persist (Ofsted, 2011).

Geography in England’s primary schools has come a long way since 1991, but the journey is not over. Not all children yet receive a good quality geography education; indeed, for a small minority it remains poor. However, considerable progress has been made. The lesson for Australian primary schools is that there is no magic bullet which provides a sudden shift to high quality primary geography teaching. It will take resolve, effective school and subject leadership, in-service development for teachers to develop knowledge and confidence, investment in new resources, and clarity about and enthusiasm for geography in the curriculum. Where there are good local outdoor geographical and environmental studies, where the State/Territory and national context and the wider world are aspects of children’s learning, where children engage with environmental concerns and sustainability, and where children are introduced to and have developed their understanding of the physical and human aspects of geography by informed and enthusiastic teachers, Australian primary schools will be able to make strong progress; where this is lacking schools will need to develop these aspects of their geography provision.

In England, this challenge has largely been risen to and in many schools it has been a success, though it has taken many years for some to achieve this. In this sense the Australian Curriculum: Geography Foundation to Year 12 is an aspiration for which to aim high. It is clear that well taught geography is highly motivating and stimulating for primary age children (Ofsted, 2008, 2011; Erebus International, 2008). There is no reason why the Australian geography curriculum should be any less invigorating and exciting. There will be much to learn in developing provision and practice. Some of the travails and challenges that have occurred in England’s primary schools and geography curriculum will, no doubt, be part of that experience. What is vital is to respond and make progress, addressing issues and building on successes, sharing concerns and achievements. In this way Australian primary children’s geographical learning will be of real value for their own and the nation’s futures.

Aiming for High Quality Geography

Essential to developing geography’s place and quality in primary schooling is the development of a clear geography curriculum and high quality practices in teaching and learning. Underpinning good quality primary geography in England lies a variety of characteristics of good teaching and leadership (Catling et al., 2013; Ofsted, 2008, 2011; Iwaskow, 2013). At the heart of strong geography teaching lies the geographical understanding of the teacher. This is often stated in terms of the teacher’s geographical knowledge, but the teacher’s strength may more lie in knowing where to seek and how to direct children to investigate geographical topics, while exercising a clear criticality in considering and checking information and concepts. This is not to diminish the need to know about geography and for the teacher to have a good sense of what geographical questions, information and ideas are; rather it is about the expectations a teacher holds of herself in terms of her preparation for her geography teaching, whether in a subject context or in integrated studies, so that she is able to explain effectively geographical knowledge, to direct the children in their geographical questioning, and can anticipate misconceptions and misunderstandings. Key to this attitude is the teacher’s enthusiasm for geography and her commitment to children learning the subject effectively; this tends to rub off on the children! There are concomitant aspects which support this. Teachers need to hold high expectations of their children, planning for their strengths and needs in geography. This links essentially to knowing their children’s background in geographical studies and in making effective connections to children’s lives (Catling and Martin, 2011), which means moving beyond the local and parochial to their foster their understanding of the wider world and geographical themes, topicality and issues. This is about enabling children to see meaning in their studies and to explore the relevance to themselves and their communities. It relates, also, to escaping parochialism and to embracing, being fascinated by, wondering at, appreciating and valuing the world at large.

Essential here is teachers’ planning of their geography teaching. Well planned and linked activities in and between lessons, effectively sequenced to enhance understanding, using a good range of resources, are vital. It is important that children have a clear sense of the focus of their learning through the topic, their lessons and the activities they do; valuable in doing this is their involvement in discussing and developing the lines of study, and fostering their ownership of their work. Good teacher planning engages with flexibility, rather than eschewing opportunities and children’s contributions. The key is to focus
learning through inquiry and investigation, whether through fieldwork, using published desk-based materials or through the internet. This must involve children in seeking information in response to their questions, with the teacher critically engaged, challenging and seeking reasoned explanations, and providing taught inputs as necessary. In doing this, geographical studies will involve integrated approaches to applying skills to gather knowledge, placing them in meaningful contexts. This does not imply that a geographical skill cannot be disentangled and focused on appropriately, but it infers that using maps, photographs and fieldwork, for instance, are means to work through, not ends in themselves. Well developed geographical topics use a variety of approaches in teaching and learning such as those already noted, as well as opportunities for discussion to reflect on and deepen understanding, role play, modelling, re-enactment, challenges such as information to gather for a later activity, and oral, textual and visual displays and presentations. High quality geography needs to be purposeful, to be problem oriented, a puzzle, topical or issue based, to be structured through inquiry, involve active engagement with the world, with children working cooperatively in their investigations, and being stimulated by good quality resources, among which is the outdoor environment.

The quality of leadership in geography in a primary school is vital to its success (Catling et al. 2007; Ofsted, 2008, 2011). The head teacher’s support for geography throughout the school and, in particular, for the geography subject coordinator is paramount. It gives status and a higher profile to geography. High quality coordination requires time, and a time allocation to undertake the role effectively, that impact being monitored by the head teacher. Subject leaders need time to bed into their role and to build their experience and confidence in working with colleagues; to be effective this role is not a quick-fix or short-term responsibility. Geography coordinators do best when they have built up their personal subject knowledge and understanding, supported by professional development courses in primary geography, for instance by attending subject association workshops and conferences. Their approach to their responsibilities is fundamental. It must include auditing the state of geography, its teaching and learning and resources through the school, so that the coordinator knows the state of play, in particular colleague teachers’ competence and skills, strengths and weaknesses in teaching geography. They will have considered their school’s geography policy and whole school long-term plans, perhaps revising these in discussion with colleagues periodically, learning from their practices. They will monitor and evaluate regularly the nature and quality geography throughout the school and should involve colleagues in sharing views and aspirations about the quality of the children’s work and ways in which to improve plans, topics, resources, teaching and learning, and assessment and recording. Where they identify matters to address they will work with colleagues to develop strategies and actions to redress limitations in learning, such as knowledge of places around the world or the quality of children’s geographical questions. They should periodically provide whole school, or group or individual, staff development to develop progress.

Running parallel to the introduction of the national curriculum in England in 1987–1988, the GA, the UK’s equivalent of AGTA, set out to support and attract membership from primary schools and teachers. The result was the publication of its third subscription-based journal, Primary Geographer, specifically aimed at the primary education market, which first appeared in 1989. Both its readership and the membership of the GA expanded rapidly, such that by the mid-1990s the association had more than 11,000 members, the majority of whom were in the primary membership category. The GA’s provision of teaching advice to inform and enhance geography in primary education over the next decade and a half continued to provide high quality guidance for primary teachers, such as through its primary handbooks (Carter, 1998; Scoffham, 2004, 2010). As developments occurred in digital media and with the World-Wide-Web, the GA added CD-ROMs to its products and created web support for primary teachers. Additionally, it supported primary geography teaching through conferences and courses to develop teachers’ understanding of the curriculum requirements and to show-case resources and good practices and approaches which primary teachers were using. It provided posters elaborating activities for Geography Week, engaged primary teachers in participating in and sharing the outcomes of funded primary practice projects, and through publishing and promoting new classroom resources to use with children. The GA website, www.geography.org.uk, is an excellent source for ideas and new developments which might be adapted and extended by AGTA and state and territory geography teacher associations. The GA has also worked on helping primary schools to help themselves. Nonetheless, it is worth bearing in mind that school and teacher commitment to membership of the GA after the initial impetus of the national curriculum declined, as has membership overall, though the revisions for 2014 sparked new interest and a rise in primary membership. For a subject association it might be argued that constructing and reconstructing a national curriculum brings benefits. The GA’s open access services and
publications have proved resilient and attractive. This is a positive and important message for AGTA’s members and non-members. One particular initiative by the GA is worth looking at more closely. To participate, it is necessary to become a member, and this is happening to the benefit of the association, teachers, children and schools.

To encourage schools in England, the GA developed the Primary Geography Quality Mark (GA, 2013). Its purpose is to provide a means for schools to benchmark their geographical planning and teaching while aspiring to improve children’s experience and learning in and of geography. In that it offers a gradation of awards, it is also a way to recognise a school’s progress and achievements. A number of questions to guide Australian primary schools are prompted by the approach of, and criteria employed in, working towards and evidencing achievements for the Quality Mark. These are an appropriate and strong focus for setting clear directions to develop primary geography, which can be well supported by the GA’s guidance for developing geography subject coordination across the school (GA, 2013; Owens, 2013).

• Has the school a clear vision for geography, which influences the way it is planned for and taught? Is there in place a whole school long-term plan for geography, covering Years F to 6? In which ways does this enable geographical inquiries? How does this support curriculum making in primary geography and enable teachers to take responsibility for their medium term planning, from which to develop good lessons?

• What evidence is there to show that the school values geography? Is it clear that the children enjoy and value their geographical experiences and learning through the school? How do teachers articulate their enthusiasm for geography? In which ways is this clear to parents and others who visit the school?

• How are high expectations for, and achievements in, children’s geographical learning shown in relation to their age, ability, strengths and previous experience? How does teaching positively influence children’s geographical learning through its approach and their engagement with distinctly geographical experiences and activities? How are children’s achievements in geography assessed and recorded, and in which do these involve the children?

• Is there a good range of up-to-date resources for teaching geography, including digital technologies, which are used effectively by teachers in children’s learning? How is work outside the classroom used and integrated meaningfully into geographical studies?

• Is there clear school leadership for geography teaching and learning throughout the school? How does the geography subject coordinator positively influence geography’s teaching across the classes?

• Is there effective staff development in geography? In what ways does it have an impact on geography teaching and learning which directly affects its focus and improvement?

Conclusion

An implicit theme throughout this article has been the notion of curriculum making. It is fitting to use it to draw together a number of influences on the development of high quality geography teaching and learning. In Australia, teachers’ curriculum making will be supported by the guidance and resources provided particularly by AGTA on its GeogSpace website (AGTA, 2013). Other useful guidance and examples of good practice can be garnered from such initiatives as the Australian Sustainable Schools Initiative, www.environment.gov.au/education/aussi/, and advice provided on planning and teaching geography in primary schools by the states and territories.

While not a new approach, the GA has promoted curriculum making as the way forward for teachers of geography in primary and secondary schools to act in their full professional role. Curriculum making emphasises the role of class teachers in planning their class geography topics, derived from their whole school geography plan, as the basis for their lesson plans (GA, 2012; Catling, 2013b). It provides the opportunity for teachers to take creative action in their planning, in topics which are true to geography, providing purpose and focus for their geography teaching, while bringing to bear children’s geographical experiences, attitudes and understandings. It uses teachers’ pedagogic knowledge, skills and choices to provide motivating and engaging geography, in which the children are directly involved. Its explicit intention is to take children’s learning beyond their current experiences and understanding through increasing the breadth and depth of their knowledge, while connecting with their lives and interests. It may well involve challenging and even reshaping children’s perceptions and ideas and leading children into unchartered waters, opening their eyes to new possibilities. An example is a study planned in outline by a teacher of 6–7 year olds focused on the local area in which the children lived. He planned to introduce them to concerns about their locality, explore the idea of environmental hazards, and awaken their sense of place and...
recognition that geography explores issues and environmental themes, while using maps and technologies (Catling, 2011a; GA, 2008). Through a local study, based around making a film of a local journey which encountered various dangers in the local environment, these young children extended their perception and understanding of their place, developed their skills in using maps for recording, and recognised and expressed their views about real concerns, while working together on fieldwork, in deciding on the route and key sites to use in their film making, and in appreciating the dangers hazards, such as broken glass, can play in our environments. Their study of the area, realisation about its hazards and focus on pointing out local dangers influenced the development of this investigation and its outcomes. With their teacher they participated in its curriculum making.

This living geography project was one of several undertaken in the GA's Young Geographers Project (GA, 2008). The project's evaluation identified several dimensions in curriculum making which were important to the success of the various class studies (Catling, 2011b). One dimension was the underpinning attitudes of the teachers; the other was their decision-making and organisation in curriculum making (Catling, 2013b). The key underpinning attitudes to emerge involved teachers' self-confidence:

- in their capacity to create their geography curriculum;
- in themselves as teachers of geography;
- in the children as knowledgeable learners and in their being inclusive of the children; and
- as active developers of their own geographical understanding.

Alongside these attitudes were capabilities in decision making and organisation which enabled the teachers to:

- be clear about the purpose of their geography topics;
- limit their planning of their geography topics so as to provide leeway and opportunities for in-topic development, while also giving the geography topic an evident focus and direction;
- recognise and draw upon their children's geographical experience, potential and engagement during and in developing the topic;
- use and extend their range of geography teaching approaches and skills;
- provide active and experiential geographical learning for the children; and
- be open to discussion and debate about the development of the topic and approaches to inquiry within it with the children.

The teachers involved in the Young Geographers Project and a number of other projects and professional development activities led by the GA (GA, 2008, 2010a, 2010b, 2010c) were not all geographers by background. What they brought to their individual class topics was their enthusiasm for the subject, a desire to learn through active teaching, an openness to risk-taking and trial and error in their teaching, and their sense that children had a core role in their own learning. One reflection by several of these teachers was that they had not realised how much the children could bring and apply to the geography topics from their own experience and understanding, how they would become involved and enthusiastic, and how their geographical learning would be shown by their increased confidence to others in their schools, positively affecting other classes. While there may be tribulations ahead in developing Australian Curriculum: Geography Foundation to Year 12 in the primary years, perhaps the lessons from the Young Geographers Project are the ones to focus on, underpinned by the questions implicit in the Primary Geography Quality Mark. Implementing the geography curriculum is likely to be a bumpy journey in the years to come, replete with debates, concerns and modifications; but there is real value in this for teachers and children, great stimulation, and vital learning about our world and its future, essential to and for the lives of young Australians.

Endnotes
1 In the English National Curriculum, from 1989, the core subjects have been: English, mathematics and science; and the Foundation subjects have been: art and design, design and technology, geography, history, information and communications technology, music, and physical education.

References


A Note about the Author

Simon Catling is Emeritus Professor of Primary Education at Oxford Brookes University, UK, though he is still employed there. A Past President of the UK's Geographical Association, he is author of many books, chapters and articles on primary geography, having written classroom materials for children and teachers and published many professional articles and research papers. He has been engaged with national curriculum developments in England since the late 1980s and has run primary geography in-service courses across four decades. His particular fascination is with maps published as postcards, which provide much insight into places, geographies and cartography and are a fun teaching resource!
Abstract
The introduction of Geography as a compulsory learning area from Foundation year, such as Kindergarten, to Year 8 in Australia provides new opportunities for learning and teaching. Opportunities, in part, will be driven by challenges associated with the introduction of this learning area. Key challenges are about variability: in take-up of the curriculum; teacher expertise in geographical education; and resourcing. These challenges are examined in the context of the opportunities they afford for focused teaching and learning in Geography that draws upon teacher expertise and quality resourcing. The importance of designing and implementing high quality learning experiences for students, based clearly on the Australian Curriculum Geography, is discussed using an exemplar.

Introduction
Most of us have viewed the devastation of beaches on the Gold Coast in 2013 and the resultant loss of amenity, threats to property and the negative impacts on tourism and the local economy (Australian Broadcasting Corporation, 2013). Basic geographical knowledge and understanding of, for example, the three parts to a beach system that interact during periods of high energy waves (the beach face, foredune and offshore bar), that may inform possible planning and engineering solutions, may go some way to addressing such issues as people interact with their environments. The litany of stories where geographical understandings and dispositions would enhance our interactions with our world is testimony to the importance of geographical education for all.

All Australian school students aged 5 to 14 – from Foundation to Year 8 – will be studying Geography for about an hour per week associated with the Australian Curriculum (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2013). Some students will elect to do more intensive studies of Geography until Year 12 (about age 18). Advice regarding time allocations for the Geography learning area from the Queensland Studies Authority (QSA) is, on average, about 30 minutes a week from Prep to Year 2, an hour a week in Years 3 to 6, and about an hour and fifteen minutes per week from Year 7 to 10 (personal communication, T. Gallagher, July 2013). One might anticipate that the numbers of school students electing to study Geography beyond Year 8 may increase as a result. Time will tell.

How students perceive their experiences of Geography to Year 8 will influence their choice to study the learning area as an elective in Years 9 to 12 (or parts thereof). The curriculum content for learning and teaching in Geography in Australian schools has been approved and is available for schools (ACARA, 2013). That curriculum content provides details, on paper, that include the rationale for studying Geography, content descriptions and organisation from Foundation to Year 10. Students will be assessed on their learning of the content descriptors of Geography (or at least the end-of-year achievement standard – see ACARA, 2013), and reports on a five-point scale – typically A to E – provided to parents/carers twice a year. So clearly, Geography now has a new frontier in Australian schools as a compulsory learning area. What is interesting though, is that firstly, jurisdictions and schooling authorities and schools have wide views of what Geography will look like in practice, and secondly that there are few specialists in Geography likely to be teaching that learning area in Primary schools.

As a result of the introduction of Geography as a learning area in an unprecedented way for all Australian school students in the 21st Century, there are at least three potential challenges that provide opportunities for higher quality learning and teaching. These are inter-related and are:

1. variability in take-up of the Geography Curriculum by jurisdictions (states and territories), schools, and individual teachers;
2. teacher expertise to teach Geography; and
3. resources for the teaching and learning of Geography including relevant, high quality
teaching resources, and timely and effective professional development for teachers.

These three challenges are examined and solutions explored. An exemplar learning experience plan is then provided that may support teachers in making informed professional decisions associated with implementing the Australian Curriculum.

The Challenges and Opportunities

Firstly, there is variability in the take-up of the Australian Curriculum.

The eight jurisdictions of the Australian states and territories, such as NSW and ACT, State, Catholic and Independent schooling sectors, schools, and individual teachers naturally, for various reasons, have a non-uniform approach to implementing the Australian Curriculum (Drabsch, 2013). For example, education is a responsibility that the states and territories share with the Federal Government and thus different positions develop given histories and other matters; teachers also have a variety of professional understandings and dispositions. At the jurisdiction level, that is evidenced with some taking up the Australian Curriculum verbatim like Queensland, and others adding parts they wish to existing curriculum. Some jurisdictions are simply putting what they consider common and agreed into existing curriculum frameworks that typically have eight areas including English, Science and Humanities. The ACARA-developed curriculum will result in a curriculum of 16 learning areas in upper primary – what many would view as a cluttered curriculum – an issue in the United Kingdom discussed by Drabsch (2013). Indicative hours of teaching time in the areas vary from 20 to 270 hours per year. And then there is the required twice a year reporting on a five-point scale for each learning area.

The year of commencement varies too between jurisdictions. So some like Queensland, as a result of a Queensland Government decision to be early adaptors, that State has developed curriculum, assessment and reporting advice and guidelines based purely on the Australian Curriculum. Others are taking a different approach such as bolting on aspects to existing curriculum documents and associated policies and procedures. Given the potential for a curriculum with 16 learning areas for Years 5 and 6, a ‘Purposeful integration project’ is being looked at in Queensland. That will likely see the Inquiry mode used as an integrating tool for learning areas – so, for example, Deserts may be an inquiry in which primary teachers, for various learning areas, have an integrated inquiry that addresses a number of learning areas simultaneously.

Those two positions – full and minimal take-up – are at either end of the spectrum with most jurisdictions in between. However, as a result of the introduction of the Australian Curriculum there have developed opportunities to closely examine existing curriculum, assessment and reporting requirements and to make informed decisions about curriculum renewal as well as relevant changes to standards based assessment and reporting on an A to E (or equivalent five-point scale), twice a year as required (see the National Education Agreement (2012) – Student reports Schedule E; Schools Assistance Act 2008 – Funding agreements – reporting to parents, etc. in Part 3, Division 3, Subdivision 3, Item 20; and Schools Assistance Regulations 2009 – Student reports in Part 5). The responsibility for assessment and reporting lies directly with the eight jurisdictions – such as the NSW Board of Studies for NSW and the QSA for Queensland – to determine for their areas. This provides opportunities for innovation and renewal in assessment and reporting as well as curriculum that will directly impact on schools and ultimately, student learning. As an example, in the standards based assessment required in the Australian Curriculum, some jurisdictions have provided exemplar assessments with task specific standards in the advice and guidelines to schools and teachers (QSA, 2013a).

Similarly, there are differing approaches of the different schooling authorities in the states and territories. And indeed, school decisions differ widely too. When we get to the teacher level – the people who teach what the students are to learn in the Australian Curriculum – there are high levels of variability of, at one end, early adaptors of the Australian Curriculum keen to implement it directly in their classrooms, to others with an attitude of something akin to this too will pass.

The complexity of real human activity is enormous in this area of take-up of curriculum documents. The views of different sectors and those of ACARA seem to be divergent as evidenced in Professor Bob Lingard’s research (personal communication, R. Lingard, November 2012). Overall, the politics at the school level and elsewhere are such that there is unlikely to be a utopia of settlement. Nor should there be. Education with its history and politics in Australia provides for a rich diversity with continuous quality improvement in practice. Whether that is as a teacher in your classroom, or the Federal Government promoting reforms like ‘Gonski’ aimed at further improving teaching and learning Australia-wide (see, for example, Ferrari & Le Grand, 2013).
Secondly, teacher expertise in Geography varies.

This is especially the case in Primary schools where non-specialist Geography teachers will be teaching that learning area. Some Primary teachers may have studied Geography at school as student themselves but most have not. From about 2015, a number of beginning preservice teachers entering primary education will likely study geographical education as part of their degree. However, most teachers are in service and there will be a significant time-lag of several years before new graduates with expertise in geographical education may be teaching beside them. At the other extreme, there are a few teachers who have a long professional association with geographical education and meet the highest level of national standards for teachers of Geography (for Standards see AGTA, 2013a; GEOGstandards, c.2010; Kriewaldt, 2010). The reality is that some learning areas, new to the primary school curriculum, will be taught by teachers without specialist knowledge in those learning areas. Fortunately in the case of Geography, teachers typically have some expertise in aspects of Geography as a result of their own experiences including travel, TV documentaries, magazines with geographical content, and other sources. Most significant is, of course, the professional learning opportunities provided by AGTA (AGTA, 2013b), ACARA (n.d.) (see, for example, introductory movie on Geography by the Chair of AGTA, Malcolm McInerney at ACARA [2013], and schooling authorities and schools as well as bodies such as QSA with free state-wide workshops. In Queensland, for example, the QSA Geography workshops have been oversubscribed and additional ones now planned. Such interest by teachers, schools and others for professional learning in Geography is most encouraging.

It is important to recognise that the experiences of people and how they perceive those experiences is critical in memory formation and thus a person’s knowledge and understanding and skills (Doidge, 2010). Indeed, brain plasticity required for this is fundamental in all learning including professional learning by teachers (Johnston, 2009). What teachers bring to the table in interpreting the Australian Curriculum Geography in terms of their professional understandings is essential (Lane, 2009; Purnell & Harrison, 2011; Schulman, 2005a, 2005b). Reading and interpreting the Australian Curriculum Geography, and having substantive professional conversations amongst teachers, is fundamental in determining what to teach as well as aspects of how to teach it. Such an understanding allows teachers to make informed professional decisions to design and implement learning experiences for students “and enables individuals and cohorts to take different routes through the terrain” (Luke, Weir, & Woods, 2008, p. 15). It is not enough to simply listen to interpretations of the curriculum by others. First hand knowledge of it needs to be developed and then to have shared understandings with other teachers is critical. As Luke, Weir and Woods (2008, p. 38) observe, Shulman’s work recognised the centrality of teacher overall knowledge of disciplinary knowledge (e.g., maths, art, literature, sciences, history), but it argued that this is necessary but not sufficient for effective teaching and learning. He maintained that knowledge of the school subject (e.g., the official curriculum), knowledge of learners, and pedagogical strategies relevant to content and subject were also significant components of teacher professionalism.

Experienced teachers generally have that expert pedagogical knowledge and knowledge of learners that they bring to the table. Further developing that expertise into specific pedagogical content knowledge for Geography is essential (Lane, 2009).

Luke, Weir and Woods (2008, p. 94) went on to contend that:

Content knowledge includes knowledge of the substance and structure of the academic discipline. Pedagogical content knowledge involves an understanding of pedagogical representations and instructional strategies, and of students’ pre-conceptions with respect to particular curriculum topics at particular grade levels. By means of this knowledge, the teacher transforms his or her disciplinary content into “forms that are pedagogically powerful and yet adaptive to the variations in ability and background presented by students” (Shulman, 1987, p. 15). In contrast, curricular knowledge involves an understanding of the curriculum and the instructional materials available for teaching a subject at various grade levels.

It is clear that teacher familiarity with the actual curriculum – not merely interpretations by others (albeit well meaning) – and targeted professional development that supports teacher use of that curriculum are essential in quality teaching and learning in Geography. Such professional support has been successful in implementing new curriculum in areas such as Geography (see, for example, Ofsted, 2011, QSA, 2012, 2013c).

In learning from others, it is now almost 25 years since the national curriculum in Geography commenced in the United Kingdom and the standards of teaching and learning in Geography have achieved continuous improvement (Catling, 2013; Catling, Bowles, Halocha, Martin, &
Rawlinson, 2007; Ofsted, 2011). Indeed, there are numerous examples of quality practice to consider from the UK experiences such as those at Corsham Primary School (Ofsted, 2013). Such resources can provide further insights into quality teaching and learning in Geography.

There is no magical tablet to introduce new curriculum into schools, especially in Primary schools where Geography as a subject has not been taught by current teachers. Nor is there one size fits all form of professional development for teachers. Each one of us has unique particular expertise derived from our experiences such as our preservice and in-service teacher education, and our interactions with students, classes, colleagues and others as well as the professional dispositions we use in our informed professionalism as teachers.

What is needed is a multi-pronged approach using a variety of strategies. Above all, from evidence-based research we know that what teachers know and can do matters in achieving learning gains with students (Bantick, 2010; Darling-Hammond & Bransford, 2005; Department of Education, Science and Training [DEST], 2005). For example, DEST (2005, p. 21) stated that “highly effective teachers and their professional learning do make a difference in the classroom. It is not so much what students bring with them from their backgrounds, but what they experience on a day-to-day basis in interaction with teachers and other students that matters”. In a nutshell: quality learning is directly related to quality teaching – where quality teachers focus on the priority of achieving learning gains with students using their informed professional knowledge, skills and dispositions (Purnell & Muldoon, 2012). There is an emphasis too of the Australian Government in educational reforms aimed at providing resources to further improve the quality of teaching and learning.

Thirdly, resourcing in Geography varies.

This includes both high quality teaching resources and professional development for teachers. There are some first class resources for teaching Geography in schools available. These include GeogSpace (AGTA, 2013b), units of work and other resources for the Australian Curriculum Geography (see, for example, QSA, 2013b), and a range of new textbooks specifically related to that curriculum. Some of these form what might be considered the second wave of curriculum where textbooks and other resources are specifically designed and produced to meet perceived teacher and student needs for the new curriculum. No doubt some of these will be judged to do that well and be very valuable. Resources that are purpose built for the Australian Curriculum Geography are more likely to be of use to teachers than others where pre-existing resources have been tweaked – sometimes effectively and sometimes not – to meet the demands of the new curriculum. As noted above, bolting on to existing artefacts may be useful, as can starting with a fresh slate. The concept of being fit for purpose is critical as old wineskins are not fit to store new wine – they burst. So making professionally informed, on-balance decisions in the context of the specifics at each level – national to classroom – is critical.

The actual use of resources in a professionally informed way to teach Geography, and the opportunity for resourcing teachers further through professional development that is both effective and timely, is likely to need attention at all levels. Some jurisdictions, schooling authorities and subject associations are investing heavily in face-to-face and online professional development in geographical education related to the Australia Curriculum Geography. They are also investing in resources developed specifically for the Australian Curriculum Geography from Foundation to Year 10 (see, for example, AGTA, 2013b; QSA, 2013c). Typically, such professional development needs to be both ongoing and timely for teachers to maximise their professional knowledge, understandings and dispositions. The neuroscience tells us that effective professional development will be just in time as teachers need it and preferably specifically related in meaningful ways to their particular work needs.

In summary, the variability of take-up, teacher expertise and resourcing for the Australian Curriculum Geography, while creating challenges, also provides opportunities for a richer, high quality experience of Geography for all Australian students Foundation to Year 10.

Learning Experience Plan

In this section, an example of a Learning experience plan is provided (see Figure 1). This may be of use to teachers as they implement the Australian Curriculum to consider the specifics associated with content, standards and the like.

Should teachers choose to use this (or a similar) Learning experience plan, it should be noted that using the plan identifies: relevant ACARA content descriptors, the end picture of what the student knowledge and understanding should look like at the end of the year, and skills (after the Wiggins & McTighe, 2005 Backward design process in Figure 2 below). It also notes which of the ACARA (2013) three cross-curricula priorities across the learning areas at each year level F–10, and the seven general capabilities across the learning areas at each year level F–10 are addressed. The prior knowledge and understandings and skills at
Figure 1: Learning experience plan (LEP) template

Australian Curriculum: Learning area(s): Year(s):

Acknowledgements; QSA staff and website resources at www.qsa.qld.au; ACARA web resources at www.australiancurriculum.edu.au

<table>
<thead>
<tr>
<th>School name &amp; teacher</th>
<th>LEP title</th>
<th>Duration of LEP</th>
</tr>
</thead>
<tbody>
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</table>

**LEP outline**

**Identify curriculum**

<table>
<thead>
<tr>
<th>Content descriptions to be taught</th>
<th>General capabilities (7) and cross-curriculum priorities (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and Understanding</td>
<td></td>
</tr>
<tr>
<td>Skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✉️ Literacy</td>
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<tr>
<td></td>
<td>📈 Numeracy</td>
</tr>
<tr>
<td></td>
<td>🕒 ICT capability</td>
</tr>
<tr>
<td></td>
<td>🧠 Critical and creative thinking</td>
</tr>
<tr>
<td></td>
<td>🕯 Ethical behaviour</td>
</tr>
<tr>
<td></td>
<td>👤 Personal and social capability</td>
</tr>
<tr>
<td></td>
<td>🌍 Intercultural understanding</td>
</tr>
<tr>
<td></td>
<td>🇲 🇲 Aboriginal and Torres Strait Islander histories and cultures</td>
</tr>
<tr>
<td></td>
<td>🌏 Asia and Australia’s engagement with Asia</td>
</tr>
<tr>
<td></td>
<td>🌿 Sustainability</td>
</tr>
</tbody>
</table>

**Achievement standard:** By the end of the year students
### Relevant prior curriculum

<table>
<thead>
<tr>
<th>Curriculum working towards</th>
<th>Links to other curriculum areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

### Teaching and learning

<table>
<thead>
<tr>
<th>Supportive learning environment</th>
<th>Adjustments for needs of learners</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching strategies and learning experiences</td>
<td>Section 6 of the <em>Disability Standards for Education</em> (The Standards for Curriculum Development, Accreditation and Delivery) states that education providers, including class teachers, must take reasonable steps to ensure a course/program is designed to allow any student to participate and experience success in learning. The <em>Disability Standards for Education 2005</em> (Cwlth) is available from: &lt;www.ag.gov.au&gt; select Human rights and anti-discrimination &gt; Disability standards for education. See resources at <a href="http://www.qsa.qld.edu.au/10188.html">www.qsa.qld.edu.au/10188.html</a></td>
<td></td>
</tr>
</tbody>
</table>

**Either,**

### Assessment – make judgments and use feedback

<table>
<thead>
<tr>
<th>Evidence of learning to be gathered.</th>
<th>Category / Technique</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

### Assessment

<table>
<thead>
<tr>
<th>Make judgments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the assessment</td>
</tr>
</tbody>
</table>
### Assessment

<table>
<thead>
<tr>
<th>Identify the evidence of learning that will be gathered during this LEP. Concisely describe the purposes of the assessment. State the conditions of the assessment, including the format, length, scope and resources required.</th>
<th>Specify when assessment will occur.</th>
</tr>
</thead>
</table>

### Make judgments

- Focus of student learning within assessment in this LEP.
- List task-specific descriptors of quality. These include statements of desirable features in student work.

### Use feedback

<table>
<thead>
<tr>
<th>Ways to monitor learning and assessment</th>
<th>Identify feedback strategies/comments as relevant</th>
</tr>
</thead>
</table>

- Teachers meet to collaboratively plan the teaching, learning and assessment to meet the needs of all learners in each LEP.
- Teachers create opportunities for discussion about levels of achievement to develop shared understandings; co-mark or cross mark at key points to ensure consistency of judgments; and participate in moderating samples of student work at school or cluster level to reach consensus and consistency.

<table>
<thead>
<tr>
<th>Feedback to students</th>
<th>Teachers strategically plan opportunities and ways to provide ongoing feedback (both written and informal) and encouragement to students on their strengths and areas for improvement. <em>Students</em> reflect on and discuss with their teachers or peers what they can do well and what they need to improve. <em>Teachers</em> reflect on and review learning opportunities to incorporate specific learning experiences and provide multiple opportunities for students to experience, practise and improve.</th>
</tr>
</thead>
</table>

| Reflection on the LEP | Identify what worked well during and at the end of the LEP, including: activities that worked well and why, activities that could be improved and how, assessment that worked well and why, assessment that could be improved and how, and common student misconceptions that need or needed to be clarified. |
|---|

*Teachers* and *students* reflect on and review learning opportunities to incorporate specific learning experiences and provide multiple opportunities for students to experience, practise and improve.
the previous year level, as well as the curriculum being worked towards at the next year level are stated – where students have come from and are going to in the curriculum. Stated too are any links to related curriculum, the specific teaching strategies and learning experiences, and support including resources and procedures to cater for the diverse range of students, as well as the assessment evidence and making judgments of standards evidenced in student responses. This may be useful to teachers as they consider the specifics of their classes and make informed professional decisions.

The Learning experience plan above may be useful for teachers as they engage with the Australian Curriculum. Completed examples of plans for units of work that are similar are provided by the QSA (QSA, 2013b) and the Queensland Department of Education, Training and Employment (2013).

Figure 2 overviews the Backward design process (Wiggins & McTighe, 2005) used extensively in curriculum design, and informs the Learning experience plan above (Figure 1). Firstly, a teacher identifies what the students should know and understand and the skills that they should have at the end of a learning experiences (whether an hour, a unit of work, a year or several years of schooling) – a picture of what the students should look like; then the teacher identifies what evidence is needed that is acceptable to determine whether the students have arrived at that picture or not; then having that end picture and acceptable evidence in mind, the teacher develops relevant learning experiences that will assist the student to achieve that picture and provide the evidence of how well they have achieved the end picture (the standards of A to E). In particular, some teachers are using the year level Achievement Standard as the main driver of their planning. For example, if teaching Year 6 Geography then the Year 6 Achievement Standard is:

By the end of Year 6, students explain the characteristics of diverse places in different locations at different scales from local to global. They describe the interconnections between people and places, identify factors that influence these interconnections and describe how they change places and affect people. They describe the location of selected countries in absolute and relative terms and identify and compare spatial distributions and patterns among phenomena. They identify and describe alternative views on how to respond to a geographical challenge and propose a response.

Students develop geographical questions to frame an inquiry. They locate relevant information from a range of sources to answer inquiry questions. They represent data and other information to identify and compare spatial distributions, patterns and trends, infer relationships and draw conclusions. They present findings and ideas using geographical terminology and graphic representations in a range of communication forms. They propose action in response to a geographical challenge and describe the expected effects of their proposal. (ACARA, 2013.)

Learning experiences and assessment and reporting all primarily align with that end of year Achievement Standard for such teachers. The evidence provided in student work chiefly focusses on that Achievement Standard. In Figure 2, such a backward design process is overviewed. The Learning experience plan requires teachers to identify what students will look like at the end of the year in terms of the relevant ACARA Achievement Standard: The 1. Identify desired results in

Figure 2: Backward design process

Figure 2. It also requires a clear focus on assessment at the outset of planning (not an afterthought), called 2. Determine acceptable evidence in Figure 2. From that end picture, including what sort of evidence is acceptable that the students have arrived, then planning is done for the various learning experiences to get the students there. The ACARA end of year Achievement Standards may be very useful as drivers of assessment, reporting and learning experiences across the year.

Conclusion

Moving from the various spaces that teachers are in as a result of their professional knowledge, skills and dispositions using the reform of the implementation of the Australian Curriculum Geography provides some challenges, but more importantly, opportunities. In this paper, it has been argued that the challenges facing the implementation of the Australian Curriculum Geography provide opportunity to build teacher capacity. These relate to variability in curriculum implementation, teacher expertise and resourcing. While these may be problematic, as argued, they also provide a potential catalyst for further continuous quality improvements in the teaching and learning of Geography.

The pathway forward involves using teacher expertise and quality resources to maximise the quality of learning experiences in Geography for school students. The use of planning instruments that give a clear focus on what is to be taught and learnt (see Figure 1), and high quality resources such as GeogSpace (AGTA, 2013b) will contribute to that ongoing capacity building for teachers.

Endnote

It is recommended that readers may care to read Drabsch (2013) which provides an informed view on the move to a national curriculum as well as international comparisons.

References


Shaping a nation: a geology of Australia.
Edited by Richard Blewett.
Canberra: Geoscience Australia and ANU E Press,
2012, 571 pages, hardback,
ISBN 9781922103437.
www.ga.gov.au
A free PDF download is available at http://epress.anu.edu.au/titles/shaping-a-nation

The title of this large and lavishly illustrated volume reflects the perspective from which it was written. Shaping a nation: a geology of Australia devotes its 571 pages to arguing, through reviews and case studies, that the geological framework of the Australian continent and surrounding oceans have had a pivotal influence on the Australian people, the national character, and the economy. This argument is hard to dispute, given the economic importance of bulk raw materials and energy, and the influences that geological history has had on climate, the availability of water, and the development of soils and biota.

In building a case for this major theme, the 11 chapters detail the broad physical environment of the continent as a backdrop to human occupation, the evolution of living organisms both terrestrial and marine, the legacies of Gondwanan events, the widespread regolith or cover that poses challenges for mineral exploration, the coastline, groundwater resources, mineral deposits, geothermal and other energy sources, and the place that geological factors may have in sustaining or driving changes in the Australian economy in coming decades.

Though the book is very well written and produced, there are errors and omissions. For example, several chapters present differing estimates of the average elevation of the Australian continent, and the rate of recent national population growth. The book contains useful fact boxes that provide interesting asides or supplementary information. But the one on the SydHarb unit of volume contains significant errors (for instance on p.24, 1 megalitre is 1000 cubic metres, not 10 cubic metres!). A surprising omission from the book is any mention of the orbital (Milankovitch) influences on the planetary and Australasian climate systems and the glacial-interglacial cycles. However, the Milankovitch rhythms do creep in occasionally. For instance, Chapter 3 discusses the behaviour of fire in the Australian landscape on orbital timescales, and the 20 ka, 40 ka, and 100 ka worlds reflecting orbital precession, obliquity and eccentricity are shown schematically (though without comment) in Figure 3.13. The environmental hazards that exist in the Australian region are also allocated little attention. There are two scant pages on this topic in the final chapter, and scattered comments elsewhere. These hardly do justice to the topic, neglecting in particular much of the geography of environmental hazards, and the critical role of societal vulnerability and resilience as influences that are in some ways more important than the threatening environmental processes themselves.

There are some courageous claims in the book, such as that the Australian dollar will remain high for years (it has fallen dramatically since the book was published) and that the solutions to the many challenges that will be faced in coming decades can be found in the realm of geoscience. Though there is certainly some truth in the latter claim, illustrated by the potential development of cleaner and more sustainable geothermal power sources, the case is pushed a little hard. Population policy, for instance, or the debate about the allocation of water – for the environment, for crops, or for towns and cities – will require expertise from areas well beyond the geosciences, if they are to be managed wisely and successfully.

Readers of this book may be unclear about some of the nomenclature – such as terranes and basement terranes (as distinct from terrains), heat flow provinces and geothermal plays (none is in the index), or the basis for using terms such as Pleistocene (epoch) and Quaternary (period). However, these and a few other concerns (such as the use of the American spelling sulfur, and rare typographical errors) do not detract from what is a wonderfully readable overview of the place of tectonics and the solid earth processes in the building of the Australian landscape, environment, and nation. The book reflects an enormous and ongoing investment in field and analytical work by generations of geoscientists. Though clearly much remains to be learned, the scope of what has been revealed about the long development of Australia and its region is a striking tribute to their labour. The book can be recommended strongly to all those with an interest in things geological, or those with related interests who would like an up-to-date overview, written by a catalogue of experts from Geoscience Australia, universities, the CSIRO, the Australian Museum, and other organisations. The book has an abundance of excellent diagrams, photographs, and maps – national and larger scale – that present some of the available geoscience data sets that allow Australia to be viewed in fresh and informative ways. These by themselves make Shaping a nation a must-have.

Associate Professor David Dunkerley
Monash University Clayton, Victoria
I recommend this text to primary teachers, teacher educators and anyone who is interested in promoting high quality geographical teaching and learning in primary and early childhood contexts.

Dr Lou Preston
Deakin University Waurn Ponds, Victoria

Teaching secondary geography as if the planet matters.
By John Morgan.
Abingdon: Routledge, 2012, 183 pages, paperback
ISBN 9780415563888.
www.routledge.com

This teacher resource book has three sections – Contexts, Themes and Practices – each of which contains extremely well referenced chapters.

The text asserts that “in its present form, the simple models of people and environment found in school geography serve to inhibit understanding of the causes of environmental problems”. As an example the author argues that climate change should be not taught from a scientific fact and individual responsibility perspective but as part of the terrain of how capitalism works and the relationship between economic expansion and climate change.

The Contexts section provides a history and focuses on the UK secondary geography curriculum and its relationship to environmental and sustainability education. There are parallels evident with the development in Australia of New Wave Geography in the late 1980s.

More recently, the influence of current UK Geography is also apparent in the new Australian Curriculum: Geography, thus providing an excellent reference for developing courses.

The majority of the book’s content is in the Themes section with five chapters delving into the most commonly taught UK school geography topics and issues. These include food, cities, climate change, personal geographies, and mobile lives.

The Practices section acknowledges that teachers have lost control over curriculum development and assesses the prospects of regaining control in relation to an approach that draws on ‘advances in human and environmental geography that help students to understand the contemporary world’. This is sadly a very brief section. More teaching examples are required to guide the practicalities of developing this curriculum approach and implementing curriculum consistent with his arguments.

Stephen Latham
Geography Teachers’ Association of Victoria, Camberwell South, Victoria

Endnote
Rivers, a very short introduction is the 311th in a series of books that aims to provide a brief, informative and accessible introduction into a variety of subjects from all walks of life. Other titles in the series of interest to geographers include Deserts, Geopolitics, Landscapes and Geomorphology, Global Warming, and Globalization.

Written by Oxford University academic and prolific author Nick Middleton, Rivers provides a concise coverage of the roles rivers have played in the development of landscapes and the complex interactions humans have had with rivers over time. The influence of rivers in relation to human settlements, political boundaries, industrial developments and the transport of goods is discussed as are human actions designed to tame, modify and exploit rivers across the globe.

The book contains numerous concise examples to support points made and these examples are global in nature from the Mississippi to the Danube, Yangtze, Murray/Darling, Ubangi and Amazon rivers. In fact, Middleton uses more than 40 rivers across the globe to cleverly illustrate salient points throughout.

This book will be a very useful resource for teachers and students who would like to get a better insight and introduction into how rivers work and how rivers differ in the way they are used by humans in different locations. It is written in language that is easy to understand and is accessible at a number of levels.

For those in Victoria doing VCE Unit 3 Geography, the last chapter on tamed rivers gives some excellent comparisons that will allow teachers and students to see that issues with river regulation in the Murray-Darling Basin are not an isolated occurrence.

The book will also be a useful reference for those writing courses for the new Australian Curriculum: Geography at many levels. This includes: Year 7 Water in the world, Year 8 Landforms and landscapes, Year 9 Geographies of interconnections, and Year 10 Environmental change and management.

Andrew Chisholm
John Monash Science School, Clayton, Victoria

This book presents a detailed account of uses of and attitudes to coasts and shorelines from the Stone Age to the present, an ambitious but highly interesting coverage. This work contains a lot of material including a large number of examples and references to other works. In focusing on coastal not inland areas, the author presents, as stated in the Introduction, a challenge “to the conventions of terracentric history”. For geography teaching, I see this as a book for teachers and senior students, and particularly useful during the preparation of extended essays.

Six major periods of coastal history are covered in six chapters respectively, with an introduction, conclusion and an extensive list of endnote sources. In brief, the first chapter examines the existence of coastal Stone Age societies, and how this richer and healthier ecotone gave impetus for Homo sapiens to develop sedentary communities, trade and communications. The coastal zone and (the then) dry land bridges were then used to spread eastwards from Africa to India and beyond. The next three chapters follow phases of subsequent migration and seaboard development. Over the course of extension laterally along the shore, coasting rarely out of sight of land, and trans-oceanic voyaging settlement extended to islands and edges of the Indian Ocean, the Pacific and the Atlantic. From marine hunter-gatherer societies developed seaborne trading empires and eventually today’s fuller settlement and modern coasts with drainage, birth of ports, and other engineering works.

In the final two chapters, the author turns to the second discovery of the sea – i.e. its dangers, wilderness attraction, therapeutic value and recreational use, and its adjacent real estate development. He concludes that we have come to live on coasts, forgetting how to live with them, and emphasises our need to recognise and adapt to the natural systems operating there.

In addition to change over time and other spatial concepts, there are global, regional and local scale examples in this history that could be used in geography work. These include migration, urbanisation, port development and decline, site recycling, resources, recreation, seaboard engineering, the fishing industry, and natural systems. As most examples are from the Northern Hemisphere, teachers and students here might usefully discuss the extent to which particular recent examples and some of the general observations apply to Australia.

Barry Pemberton
Hampton, Victoria
At a time when school-based geography curriculum change appears almost universal, Debates in geography education provides both geography teachers and teacher educators with essential reading regarding contemporary geographic education themes and issues.

Structurally the book is composed of three sections concerning policy debates, classroom debates, and subject debates. The section on classroom debates, incorporating curriculum and pedagogy, is given greatest emphasis, and the main but not sole focus is on geography at the secondary school level. The editors have deliberately chosen contributions from teachers, teacher educators and researchers in the field of geographic education, ensuring a balance of experience and perspectives are represented. Although the contextual setting for the book is UK based, the debates address important issues of direct relevance to geography teachers globally.

The twenty-three comprehensive, evidence-informed, rigorous debates address issues of importance including: what constitutes geographic knowledge; understanding conceptual development; constructing the curriculum; linking assessment to progress; the contribution of fieldwork and outdoor experiences; impacts of technology and media; dealing with controversial issues; what geography contributes to global learning, and the like. The strength of having the chapters presented in debate format is the content not only informs discussions but provokes thought, reflection and asking of critical questions when examining our own practice. For the busy teacher each debate is stand-alone in nature. An added bonus for practitioners and researchers wishing to delve further is the recommended key readings and extensive reference sections provided at the end of each debate.

I have no hesitation in recommending Debates in geography education particularly for geography teachers and educators wishing to broaden their understanding regarding the current issues and concepts shaping their practice.

Murray Fastier
University of Canterbury, New Zealand

The World until yesterday is a fascinating account of Diamond’s efforts to appreciate the nature of indigenous life in Papua New Guinea and what can be learnt from such life. This contribution to the cultural geography literature while largely based on fieldwork in PNG also refers to traditional societies in Africa and North America. Its focus, however, is Diamond’s ‘fascination with the different ways in which other peoples have organized their lives’. As such, the book is not one that has direct relevance to most school geography study, although the case studies of group lives could well be very useful material for student use.

This large book begins by using the nature and experience of the airport as the device by which one moves from one’s own society to a different human society and even here Diamond identifies features of his own life and compares them with the other lives he is fascinated with.

Following this introductory section discussing the nature of traditional societies and their use of space, The world until yesterday focuses on four features of human life and experience – Peace and War, Young and Old, Danger and Response, and Religion, Language and Health. The book concludes with conclusions about the advantages of the modern world and the traditional world. In each of these features, Diamond provides case studies of how the traditional world manages the challenges that are embedded in that aspect of human life and, by comparison, critiques the ways modern or western life manages them.

Diamond’s perspective is not a through-rose-coloured-glasses one. One of his key conclusions is how his analysis demonstrates that we should be thankful for many of the features of western society, but just as pertinently he points up many ways in which our modern life is contradictory and that there is much that we can learn from traditional societies.

Diamond’s substantial study deserves to have a place in school libraries if only to provide a resource to which questioning young people can be referred when discussions about the nature of human life arise. Diamond’s analysis, as he conjectures about what he has learnt from his studies, throws up so many insights and questions about the meaning of human experience that would be good for our young students to grapple with.

Bill Stringer
Balwyn North, Victoria
Do not judge a book by its cover. This book’s plain cover belies the wealth of visually attractive, and creatively and imaginatively presented material that is located inside. Not to mention the thorough and detailed text.

The main theme is about planning for Australia’s cities and regional centres with populations projected to be between 33.7 and 62.2 million by the year 2012. This is as far as the Australian Bureau of Statistics will go with its population predictions. Contributions come from writers with backgrounds in architecture, planning, economics, design and development. In the preface, the authors state that “This book is intended as a resource and a provocation to encourage reasonable and imaginative debate about the future”.

The book is divided into five sections with clearly identified subsections: 1. Big Cities, Big Ideas: Big Australia; 2. Australian Cities 2012–2056; 3. Australian Cities 2101?; 4. Essays; and 5. Designs. There is an analysis of the national landscape and then an examination of major development proposals for each capital city and for a number of regions.

The concepts in the Australian Curriculum: Geography are certainly addressed very well especially, place, space, change, interconnections, sustainability and environment. Ideas presented in this book are applicable to most units in the new curriculum.

The book’s real strength, as a resource for geography teachers, is its wide range of visual materials, especially the maps, graphs and photographs. It has a way of presenting familiar material in an unfamiliar way. The writers do not just simply state a statistic but support this with a map or graphic which effectively supports their case – for example, Arable land in Australia is 6% of Australia’s total landmass is shown by overlaying a small map over a large map of Australia, occupying 6% of its area.

Made in Australia: the future of Australian cities is a very thorough, comprehensive and thoughtful resource. It is definitely a teacher resource, especially for teachers who are looking for inspiration from maps and creative presentations or are interested in finding out more about some of the major issues of sustainability and resource management facing Australia today and in the future.

John Ramsdale
Montmorency, Victoria

The collaboration between three authors whose primary discipline interest is history (Taylor, Fahey and Boon) and one author who is a geography discipline expert (Kriewaldt) is an eclectic response to curriculum developments in Australia in particular.

Both disciplines have suffered a declining presence in schools and higher education over a period of several decades that can be traced primarily back to the introduction of the more generic curriculum developments associated with Studies of Society and Environment (SOSE).

Whilst some teacher training courses retain the discipline methods course, nowadays pre-service programs tend to package the disciplines into methods courses for Humanities where they compete for time with a proliferation of other content areas including media studies, health, civics and citizenship studies. Either way the time allowance for non-geographers and non-historians (or graduates without discipline majors), who need to complete these methods courses for pre-entry into primary teaching (and some middle schooling programs), is embarrassingly brief. The net effect is graduates enter teaching with a near absence of the discipline backgrounds from their schooling and pre-service training.

When confronted with the task of teaching the discipline-based curriculums in schools, the temptation to seek guidance through reflection on personal learning experiences must be considered a pragmatic survival option. The danger with this solution is two-fold. First, with the best intentions alive the role models from one’s past may be well and truly flawed. Second, advances in technology have opened up infinite possibilities for imaginative, innovative and creative applications of the core concepts of the disciplines. To attain the best of the new opportunities now available for schooling, teachers need discipline expertise. Who can doubt the centrality of place and time in our lives? We live in real and imagined places and the living is associated with a moment in time. Scholars of history are the acknowledged experts in piecing together events from the past – a perspective on time in a place. Scholars of geography are acknowledged experts in the interpretation of space and place with capability of noting changes in space and place arrangements over time. Hence, the complementarity of the disciplines and the enrichment each brings to our understandings of our complex world. This book sets out to achieve this target. It offers a useful guide for pre-service teachers, a set of valuable tips, plus resources.
The book is arranged in 19 chapters set out in four parts. The Preface explains the rationale for the book with particular reference to curriculum developments within Australia that have taken place with the revamping of the Australian Curriculum. The authors seek to offer a two part solution for history and geography. One is an integrated approach to the teaching of the disciplines and the other is a discipline specific approach. Whilst these are two significant demands for one volume and run the danger of confusion, there is also a little reality in the sense that the same teachers are likely to be teaching both disciplines – especially in primary schools – and they need some sense of the relationship(s) between the disciplines. Amidst a call for evidence-based learning, there may be justification for seeking solutions to problems or inquiry-based learning that can piece together artefacts from the past to explain the present social, political and economic events, and simultaneously grasp network flows amidst the built and natural landscapes. My caution here is that as the book strives to achieve recognition of the singularity of each discipline the authors may have muddied the waters by attempting any kind of assimilation. Put simply, geographers and historians view the worlds of time and place differently.

Chapter 1 provides an introduction that tells us the book targets three questions. What is entailed in a disciplinary approach to teaching and learning history and geography? How do children and adolescents learn geography and history within a disciplinary framework? What are the characteristics of effective practice in teaching and learning geography and history? The book is then divided into four parts. Part 1 consists of three chapters related to geography matters, history matters and Aboriginal and Torres Strait Islanders respectively. The latter is a chapter written by Harry Van Issum that argues the importance of all Indigenous content in all studies. Like the last chapter (Chapter 19) related to sustainability, there is the sense that these two themes, along with reference to the digital economy, warrant integration into the Introduction chapter. Still the key point is that Indigenous interests are given just significance. So too is the matter of sustainability and the importance of digital technologies (see Chapter 6).

Part 2 consists of ten chapters under the banner title of Understanding the teaching and learning of geography and history. The focus of all these chapters seems to be critical thinking and the value of inquiry based learning. As a collection, each chapter offers a contribution for teachers to consider in the context of each discipline and includes historical overviews of relevant pedagogical developments. For instance, Tony Taylor offers an introduction to inquiry-based learning (see Chapter 8) which is followed by applications in each of the disciplines (Chapters 9 and 10). Each of these chapters contains a variety of useful activities and suggestions for teachers. Next comes a series of chapters related to planning, curriculum related issues, progression and assessment (Chapters 11–14).

Part 3 consists of two chapters related to big picture issues and the classroom. Experiential learning, fieldwork and the application of technologies are included. Part 4 follows with three chapters related to Investigating perspectives in the teaching and learning of geography and history. Values education, global perspectives and sustainability are the themes of these chapters respectively.
Shaping a Nation: A Geology of Australia

Shaping a Nation tells the story of a continent’s geological evolution and fortune, as seen through the lens of human impacts. The book summarises the latest thinking about Australia’s geological history, describing the significance of its mineral and energy reserves, the development of its coastal and groundwater systems and the evolution of life across the continent. In revealing how these factors have impacted on Australian society over time, Shaping a Nation also explores some of the modern challenges and opportunities they offer us.

Superbly presented in hard cover and accompanied by full colour photography and illustrations, this book offers both a compelling interpretation of and spectacular visual journey through Australia’s geological past.

Bonus DVD

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Book Reviews
Edited by Geoffrey Paterson

Geographical Education is published annually and is distributed to all members of the state and territory associations affiliated with the Australian Geography Teachers’ Association Limited.

The aims of the journal are to:
• encourage school, college and university teachers and all others interested in geography to share their ideas and experiences
• promote sound practice and encourage the development of innovative strategies for teaching geography in the classroom and the field
• provide a forum for discussion between teachers on issues and direction to geographical education
• encourage reflection on the scope and purpose of geography and its role as a medium for the education of young people
• promote the diffusion of developments in geography and examples of ways they may be introduced into geography teaching
• examine educational issues and trends in the light of their relevance for geography teaching
• disseminate news of AGTA activities and information of national interest from state affiliates.

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