

## **GEOGRAPHICAL EDUCATION**

**Rod Gerber**

*Faculty of Education, Health and Professional Studies, University of New England, Armidale, Australia*

**Keywords:** Geographical education, environmental education, citizenship, curriculum development, pedagogy

### **Contents**

1. What is Geographical Education?
  - 1.1. Geography and Geographical Education
  - 1.2. The Aims of Geographical Education
  - 1.3. The Place of Geography in the Formal Education Curriculum
  - 1.4. The Place of Geography in Non-Formal Education
  - 1.5. The Components of Geographical Education
2. How is Geographical Education Relevant to Society and Environment?
  - 2.1. The Development of Life Roles through Rediscovering Geographical Education
  - 2.2. Knowledge, Thinking Processes, Practical Skills, and Values Developed through Geographical Education
  - 2.3. Social and Environmental Action
  - 2.4. Contribution to Current Community Concerns
3. Past Trends in Geographical Education
  - 3.1. “Capes-and-Bays” Geography
  - 3.2. Teaching Regional Geography
  - 3.3. Teaching Systematic Geography
  - 3.4. An Inquiry Approach to Geographical Education
4. Current Trends in Geographical Education
  - 4.1. International Survey of Geographical Education
  - 4.2. Problem-Based Learning through Geographical Education
  - 4.3. Socially Critical Approaches to Geographical Education
  - 4.4. Developing International Understanding
  - 4.5. Developing Intercultural Understanding
  - 4.6. Promoting Environmental Education
  - 4.7. Promoting Equity of Opportunity through Geographical Education
  - 4.8. Developing Geographically Informed People
5. Current Practices in Geographical Education
  - 5.1. Learning and Teaching Geography
  - 5.2. Developing Geography Curricula
  - 5.3. Teaching and Learning Strategies
  - 5.4. Teaching Resources
  - 5.5. Information Technology in Geographical Education
  - 5.6. Standards and Assessment
  - 5.7. Fieldwork in Geographical Education
6. Challenges for Geographical Education
  - 6.1. Policy Developments in Different Countries on Geographical Education
  - 6.2. Technology and Information Expansion

- 6.3. Contributing to the Development of Active, Informed Citizens Around the World
- 6.4. Geography Teacher Preparation and Professional Development
- 6.5. Bias in Resources Used to Teach Geography
- 6.6. A Presence in the Formal Education Curriculum
- 6.7. Community Relevance
- 7. Future Directions
  - 7.1. Rediscovering Geographical Education
  - 7.2. Relevance for Lifelong Learning
- Glossary
- Bibliography
- Biographical Sketch

## Summary

A number of comments have been made about the future of geography and geographical education in recent years. These comments serve as a means for reflection on the nature and development of geographical education. They also serve as signposts for future geographical educators as they seek to improve it. These signposts have been identified as:

- (1) How well geographical educators can respond to the changing viewpoints through which people have regarded the world (e.g. scientific approaches, behavioral viewpoints, humanistic viewpoints).
- (2) Which external influences have most effect on formal geographical education (e.g. political policy decisions about education).
- (3) The strength of curriculum thinking among geographical educators in countries around the world and the extensive research that has been conducted in this regard.
- (4) Making more geographical education accessible to learners whether they are children in school classrooms or adults in lifelong education by constructing resources in usable forms and levels of complexity to suit the capacities of the learners.
- (5) Exercising cultural sensitivity in presenting geographical learning materials to people from different cultural groups to ensure that meaning is not misconstrued (e.g. perceptions of natural hazards in different societies).

The future of geographical education has also been said to depend on the extent to which:

- (1) Legal structures enable or disable the subject within the future framework of the school curriculum
- (2) Teaching of the subject continues to capture the interest of school students
- (3) The subject exhibits intellectual coherence and a persuasive rationale within the whole curriculum

Geographical education will succeed in its different forms around the world through adopting the role of a bridge between the natural and the social sciences, and through implementing pedagogic initiatives that will develop in learners, formally and non-formally, the capacity to lead social and community groups in making sensible decisions about people and their use of their environments.

## 1. What is Geographical Education?

Geographical education is a complex concept that can be understood by explaining its relationship to the discipline of geography, detailing its aims, explaining its place in both formal and non-formal education, and considering what are its essential components. These aspects of geographical education will be illuminated in the following section.

### 1.1. Geography and Geographical Education

The study of geography may be described generally as “the study of the earth’s surface as the space within which the human population lives.” It has three key characteristics: an emphasis on location and spatial variations; an ecological emphasis on people-environment relations; and regional analysis that correlates these two emphases. In the 1960s, nineteenth-century thinking about geography was synthesized into the four traditions from which geography is derived:

- (i) the spatial tradition that is concerned with the geometry of spatial relationships and with movement;
- (ii) the area studies tradition that is concerned with the study of the essential characteristics of a place or region;
- (iii) the man–land tradition that is concerned with the interaction of people and their environment; and
- (iv) the earth science tradition that is concerned with the description and explanation of the natural features of the earth’s surface.

It was believed that these traditions reflected the work geographers do when they study the environment and the people who inhabit it. However, it was also believed that by taking these traditions in different combinations geographers could describe better exactly what they did when studying people and their environments. For example, it was believed that the combination of the first three traditions was the basis for cultural geography and a combination of traditions one, two and four constituted physical geography.

Geographers have since refined their understanding of the nature of geography by identifying a variety of approaches that indicates their orientation or focus:

- Behavioral geography is the study of geography through the results of human decisions about using the environment, including environmental perceptions as they affect decision making; attitudes and responses towards the environment; and spatial preferences in environments, including decisions where to live and where to take a holiday.
- Radical geography focuses on trying to achieve a better world through forms of social, environmental, and political change.
- Humanistic geography focuses on people interacting with other people in different environments so that they can conceive and practice living through their experiences in space and time, and respond to other people’s actions.
- Feminist geography explores the inequalities of power between men and women based on social class, race, patriarchy, and labor that may be explained in spatial terms.

- Marxist or socialist geography is based on Marxist thought concerning the struggle of forces and relations of production between different social classes, the resulting oppression of ordinary people, and the change over time to a less complex society. Places and areas are seen as expressions of social structures and political/economic systems.
- Welfare geography explores spatial distributions from the aspect of social justice through questions such as: Who gets what? Where? How?
- Systematic geography involves the study of a large number of variables in a particular area in the search for patterns, processes, generalizations, or laws.
- Regional geography focuses on describing and explaining the distinctiveness of an area when compared to other areas based on the combination of social and environmental features in each area.

The way people learned about these different approaches to geography, developed the skills to conduct geographical investigations, embraced the values associated with these approaches, and practiced them in their lives became known as geographical education. “Geography in the school curriculum involves the education of young people *about*, *in* and *for* the environment and society in which they live.” Geography becomes the medium for education. It contributes to education through:

- knowledge with understanding *about* people and environments anywhere in the world,
- fieldwork enabling learning *in* the community and *in* the local environment, and
- learning *for* the society and *for* environments that the people live in.

This relationship between geography and geographical education has varied over time, as, for example, in the British context.

- In the late nineteenth century, the issue was the relationship between geographical content, educational processes, and social issues. Geikie, for example, through geography textbooks such as *Physical Geography* (1873) and his educational book *The Teaching of Geography* (1887) saw a natural close link between the study of geography and the use of child-centered education to stimulate the imagination of young minds to promote education for the environment.
- In the period before World War II, a battle occurred between geography and geographical education through the desire of some to raise the status of school education through regional studies to minimize the “capes-and-bays” image of geography. This approach was not seen to be relevant for young developing minds.
- In the post-war years, the competition between geography and geographical education turned to countering the inroads of social studies education. Academic geographers promoted the detailed study of rural and local areas through fieldwork, with a focus on place rather than people. They used the quantitative revolution of the 1960s as a basis for developing geographical techniques that could be used in schools to implement this form of geographical education.
- Between the 1970s and the 1990s, the balance between geography and geographical education was threatened by the movement out of geographical education by many academic geographers in the U.K. (a trend that did not occur in the USA, because of the formalized Geography Alliance movement sponsored by the National Geographic Society). Many geographical educationalists downplayed the importance of the subject, and political forces distracted from the importance of geography in the school curriculum.

- From the 1990s, there was a formal attempt by geographers and geographical educators to unite to put geography back into geographical education. This resulted in the formation of the Council of British Geography—COBRIG—to advance the interests of geography. Despite a stronger alliance between geographers and geographical educators, only modest success was achieved in having geography recognized as a core subject in the school curriculum.

This sequence in trends in the U.K. can be replicated in countries around the world, indicating that the nexus between geography and geographical education fluctuates according to the extent to which geographers and geographical educators are similarly focused and the current political agenda.

## 1.2. The Aims of Geographical Education

The *International Charter on Geographical Education* identifies the aims of geographical education in terms of the knowledge, skills, and attitudes and values people will develop through its study and practice. These aims are detailed below.

(1) The knowledge and understanding people develop through geographical education are:

- (i) locations and places to establish a framework for geographical events and to understand basic spatial relationships;
- (ii) major natural systems of our planet to understand how ecosystems interact;
- (iii) major socioeconomic systems of our planet to develop a sense of place;
- (iv) the diversity of peoples and societies to understand the cultural richness of humanity;
- (v) the structure and processes in regions; and
- (vi) understanding global interdependence.

This knowledge is expressed in the form of facts about places; key concepts that guide geographical inquiry (e.g. location, pattern, and region); and generalizations that explain patterns, evaluate consequences, and solve social and environmental problems.

(2) The skills developed through geographical education are:

- (i) thinking processes required in solving geographical problems and making spatial decisions;
- (ii) using verbal, quantitative, and symbolic data forms such as text, pictures, graphs, tables, diagrams, and maps; and
- (iii) practical, physical skills associated with conducting studies in the field.

Geography offers the main educational medium through which people learn to understand and communicate spatial information in map and graphic forms.

(3) The attitudes and values developed through geographical education are:

- (i) an interest in and a curiosity about the natural and human features on the earth's surface;
- (ii) an appreciation of the landscape in which people live;
- (iii) an empathy for the different living conditions of people around the world;
- (iv) a readiness to use geographical knowledge and skills adequately and responsibly in private, professional, and public life; and
- (v) respect for the rights of all people to equality.

These attitudes and values influence the way people use geographical knowledge. They can influence how we seek solutions to local, regional, national, and international

problems that focus on society and environment. Also, they influence how the effect of people's behavior and that of their societies enables them to make sound decisions about using their environments.

### **1.3. The Place of Geography in the Formal Education Curriculum**

Subjects are normally included in the curricula in different levels of formal education because they are deemed by policy makers to be relevant to the goals of the particular society. Geography has traditionally been a subject that has been included in school, college, and university curricula. However, it has varied as a mandatory subject at different levels. For example, in many countries and states, geography is integrated in a broader subject such as social studies or humanities in primary schools. However, in many secondary or high schools geography is a mandatory subject for one or more year levels. In colleges and universities, it is usually a separate optional subject.

These generalizations suggest that geography may be treated as an important subject in the curricula of formal education. Reasons for this claim have been echoed in various curricular documents from around the world. For example, the United States *Guidelines for Geographic Education* sees the distinctive value of geographic inquiry for school curricula as that “its unique perspectives and skills gained from its five fundamental themes [location, place, relationships within places, movement, and regions] can clarify knowledge about the earth and its peoples, enrich the social sciences, and the humanities, and provide a spatial dimension to the physical sciences.”

It may be argued also that geography has an important relationship with other subjects that often appear in school curricula. For example, it helps to explain historical events, political processes, spatial relationships, cultural developments, and scientific processes. A further reason why geography is in formal education programs is that it is excellent for preparing people for the world of work. The distinctive technical and practical knowledge and skills from using remote sensing and Geographic Information Systems (GIS) are excellent preparation for careers in allied fields such as environmental analysis, resources management, land-use planning, meteorology, business, and surveying. The range of themes covered in formal geographic studies assists students in their problem-solving roles in later life. It is to be hoped that it also promotes active questioning of social and environmental decisions and helps understanding of how conflicts over space or areas can be resolved.

### **1.4. The Place of Geography in Non-Formal Education**

The place of geography in education is much more complex than its role in formal education.

From their early years, children seek to explore their worlds and environments. *The Geography of Childhood* captures not only the rationale for children's behavior in environments, but also the effect it has on their actions and environmental attitudes. The curiosity of youth must be fostered in these years of development as they move around in their local worlds. Parents have been positive facilitators of geographical education for their children as they explore these spaces. Their offer of environmental freedom to their children is an important catalyst to promote learning about and through geography.

The extent to which such freedom is available to today's young children depends on the increasing tendency of parents to restrict the range of movement of young children by transporting them to and from places. This is due to concerns for the security of their children and the greater flexibility people have to move around their worlds because of private vehicle ownership. Evidence is beginning to emerge that girls are more restricted in their movement around their local environments than are boys. However, even if their parents drive them around their local areas, it is clear that these children can still develop geographical understandings as long as they observe the environment that is traversed.

The environmental curiosity in young children's minds is still present in adult minds. It may not be as active a physical curiosity, but it is certainly a very strong mental curiosity. This kind of mindful behavior is expressed in older people using secondary sources such as television, videos, and magazines to appreciate and understand spatial variations and changes over time in environments through human activities. Television news broadcasts and documentaries about social and environmental struggles in different parts of the world provide information for people to develop meaning for these events. Through these mental exercises, people use geographical knowledge and skills to make sense of such events.

### **1.5. The Components of Geographical Education**

Taking a lead from geographers and geographical educators in the USA, the components of geographical education consist of three interrelated components: subject matter, skills, and perspectives. When people study geography, they do so in three ways: as a physical object, as a physical environment, and as a human place. In statements about standards to be reached in the study of geography in education, these experts identified six essential elements of the subject matter of geography. These elements are the building blocks of knowledge in the study of geography:

- (1) the world in spatial terms;
- (2) the study of places and regions;
- (3) the understanding of physical systems that shape the earth's surface;
- (4) the understanding of human activities that help to shape the earth's surface;
- (5) understanding how human activities modify the surrounding physical environment;  
and
- (6) understanding the uses of geography for knowing the relationships between peoples, places, and environments.

It has been said that "geographic skills provide the necessary tools and techniques for us to think geographically." They also help us to make reasoned political decisions and assist in the development of persuasive arguments for and against matters of public policy. These skills are actually the processes involved in making successful geographic inquiries.

Two distinctive perspectives are used to interpret the meaning of the data gathered in a geographical investigation: the spatial perspective and the ecological perspective. Each acts as a lens for interpretation and explanation. The spatial perspective (the issue of "whereness?") assists people to understand the context of the spatial relationships in which people interact with their environments. The ecological perspective involves

people understanding the earth as a complex set of interacting living and non-living elements and focuses on how people interact with and use ecosystems for resources such as food, water, and land. These two perspectives can also be augmented by other perspectives in different kinds of geographical investigations. Sometimes, a historical perspective can be used to explain changes in an environment over time. On other occasions, an economic perspective is used to support the geographic perspectives to help explain how people produce and exchange goods and services to fulfill basic needs such as shelter and transportation.

## **2. How is Geographical Education Relevant to Society and Environment?**

The relevance of geographical education for a better understanding of our society and environment and those of peoples elsewhere in the world is necessary if it is to be considered seriously as contributing to improving our world. This relevance may be demonstrated through understanding how geography contributes to the development of key life roles; how the knowledge, skills, and values developed in geography can be used to enhance human occupation of our world; how social and environmental action can be enhanced through geographical education; and how geographical education contributes to current community concerns. These aspects are explained in the following sections.

### **2.1. The Development of Life Roles through Rediscovering Geographical Education**

Geographical education offers people opportunities to explore different life roles as they make decisions about geographical questions, issues, and problems. For example:

- as learners, people can acquire knowledge, understand how to interpret it and make decisions about society and environments;
- as citizens, people learn about responsible behavior and actions toward other people and their environments;
- as producers, people learn about where to find work, the effects of various modes of travel, and the costs and benefits of environmental controls on industry;
- as consumers, people learn about the human use of resources including where to shop, alternative modes of transport, and the consumption of food in different countries;
- as recreators, people choose where to go for a holiday and the best ways to use their leisure time to be of benefit to their community and environment;
- as people, they develop their personal geographies, which consist of the ways they see and feel about different environments; and
- as social beings, people learn how others in different countries organize themselves in social clubs, political parties, and ethnic groups.

The development and practice of these roles can take place on local, national, and international and global scales depending on the experiences people have. For these life roles to be effective, people need to be actively involved in their community and engage directly in their environment. In addition, they should develop the capacity to reflect on these environmental experiences to become more skilled in their life roles.

-  
-  
-

TO ACCESS ALL THE 25 PAGES OF THIS CHAPTER,  
Visit: <http://www.eolss.net/Eolss-sampleAllChapter.aspx>

### **Bibliography**

Australian Geography Teachers' Association (AGTA) (1988). *Geography in Secondary Education*. Brisbane: AGTA. [A seminal policy statement made by the AGTA that is still current in the Australian context.]

Bailey P. and Fox P. (1996). *Geography Teachers' Handbook*. Sheffield: Geographical Association. [The first of a number of handbooks prepared for British teachers to help them become more effective geography teachers.]

Bednarz S. et al. (1994). *Geography for Life: National Geography Standards*. Washington, D.C.: National Geographic Research and Exploration. [The definitive U.S. statement on the purpose of geographical education for school children and how the study of geography can develop more informed citizens. A close linkage between the content, skills, and perspectives of geography with standards of performance by children at different year levels forms the main content of this publication.]

Coburn-Staeger U. (1995). Interkulturelle einer multikulturellen Gesellschaft. *Praxis Geographie* **25**(7–8), 12–15. [A detailed statement clarifying the linkage between intercultural and multicultural studies in geographical education.]

Cox B. (1990). Geography for education. *Geography in Society* (ed. R. Gerber), pp. 65–68. Brisbane: Royal Geographical Society of Queensland, Australia. [A succinct, applied statement on the role of geographical education for improving our society.]

Fien J. and Gerber R., eds. (1988). *Teaching Geography for a Better World*, 200 pp. Edinburgh: Oliver and Boyd. [One of the earlier compilations that demonstrated how humanistic and socially critical approaches to geographical education can be achieved in classroom practices.]

Fien J., Gerber R., and Wilson P., eds. (1989). *The Geography Teacher's Guide to the Classroom*, 418 pp. Melbourne: Macmillan. [A seminal publication on the training of geography teachers that has been used in many countries around the world to improve geographical education practices.]

Fitzgerald B. (1974). *Developments in Geographical Method*, Science in Geography, Vol. 1. Oxford: Oxford University Press. [One of the earlier British pedagogic publications for improving the methods that geographers use in their professional practice.]

Geikie A. (1873). *Physical Geography: Science Primers Series*. London: Macmillan. [One of the first English geography textbooks that was used at the higher levels of education to demonstrate how to conduct physical geographical studies.]

Geikie A. (1887). *The Teaching of Geography*. London: Macmillan. [Another seminal textbook from the nineteenth century that instructed teachers and university tutors on methods to teach geography in formal educational settings.]

Gerber R. (2000). The state of geographical education in countries around the world. *International Research in Geographical and Environmental Education* **10**(4), 349–362. [A report of an international survey of geographical education in more than 30 countries. This survey was conducted at school, college, and university levels of formal education.]

Gerber R. (2001). Attitudes to geography in Australia. *Australian Geographer* **32**(2), 221–240. [The report of a nationwide study conducted to find out what people in the wider community, including

businesspeople, practicing professionals, government employees, and the general public, feel about the relevance of geography in contemporary Australian society.]

Gerber R. and Goh K., eds. (2000). *Fieldwork in Geography: Reflections, Perspectives and Actions*. Amsterdam: Kluwer. [A volume in the Kluwer Geolearn Library of studies in geography. This volume focuses on the theme of fieldwork as a central approach in the study of geography and in geographical education.]

Gerber R. and Lidstone J., eds. (1996). *Developments and Directions in Geographical Education*, 236 pp. Clevedon: Channel View Publications. [A recent publication that presents the thoughts of a set of experienced, international geographical educators on what have been recent notable developments in the field of geographical education and includes some projections of future directions for geographical education.]

Graves N. (1975). *Geography in Education*. London: Heinemann. [A seminal publication on the nature of geographical education from a British perspective in the 1970s.]

Graves N. (1997). Some thoughts on the education of geography teachers. *Geography and Education* (ed. A. Convey and H. Nolzen), pp. 111–118. Munich: Munich University Press. [A set of recent reflections by Graves after 25 years of educating geography teachers in the U.K.]

Gregory D. and Walford R., eds. (1989). *Horizons in Human Geography*, 426 pp. London: Macmillan. [A collection of key papers on human geography that became one of the key compilations to support humanistic approaches to geography.]

Hartshorne R. (1939). *The Nature of Geography* (Association of American Geographers, Annals, Vol. 29, No. 3–4), 482 pp. Lancaster, Pa.: Association of American Geographers. [The definitive article on the nature of regional geography as explained through areal differentiation.]

Haubrich H. (1996). International understanding and cooperation through geographical education. *Innovation in Geographical Education* (ed. J. van der Schee, G. Schoenmaker, H. Trimp, and J. van Westrhenen), pp. 219–234. Amsterdam: Free University. [A comprehensive statement made by a very experienced German geographical educator on the nature of the concept of international understanding and how it can be developed through geographical education.]

Herbertson A. (1905). The major natural regions of the world. *Geographical Journal* **25**, 300–310. [An early definitive statement on the concept of regional geography that proved to be very influential in the study of geography in the early twentieth century in the Western world.]

Hill A.D., ed. (1992). *International Perspectives on Geographic Education*. Boulder: Rand McNally. [A compilation of specially prepared articles by international geographical educators for the 1992 conference of the International Geographical Union's Commission on Geographical Education. This was presented at the Boulder conference.]

Hodgkinson K. (1987). Standing the world on its head: a review of Eurocentrism in humanities maps and atlases. *Multicultural Teaching* **5**(2), 27–31. [An important article on multicultural approaches to geographical education. The focus is on Europe-centric approaches as represented in maps and atlases.]

International Geographic Union Commission on Geographical Education (IGU.CGE) (1992). *International Charter on Geographical Education*. Brisbane, Australia: IGU.CGE. [The seminal charter by the International Geographic Union for international geographical education.]

Kirk W. (1963). The problems of geography. *Geography* **48**, 357–371. [An article that explains a problem-based approach to geography.]

Johnston R., Gregory D., Haggett P., Smith D., and Stoddart D. (1983). *The Dictionary of Human Geography*, 411 pp. Oxford: Blackwell. [A key source of definitions in the area of human geography compiled by some of the major theorists in the area.]

Joint Committee on Geographic Education (1984). *Guidelines for Geographic Education*. Washington, D.C.: Association of American Geographers and the National Council for Geographic Education. [The seminal statement from the USA on the role of geography in education in the 1980s.]

Langer E. (1989). *Mindfulness*. Reading, Mass.: Addison-Wesley. [A very interesting psychological statement on the concept of mindfulness and how people can use it throughout their lives to remain open to new forms of thinking and ideas.]

Marsden W. (1976). Stereotyping and third world geography. *Teaching Geography* **1**(5), 228–231. [An instructive article that critiques the concept of stereotyping of people around the world and offers suggestions for reducing such approaches to improve geographical education.]

Marsden W. (1995). *Geography 11–16: Rekindling Good Practice*. London: David Fulton. [A pedagogic volume that sets forth many ideas on how to improve teaching in geography in the secondary years of education. A strong historical approach is used to ground these ideas.]

Marsden W. (1997). On taking the geography out of geographical education. *Geography* **82**(3), 241–252. [A provocative article that questions whether geographical education has remained faithful to the concept of geography or whether it has drifted into just another form of education.]

Martin F. and Bailey P. (1996). Evaluating and using resources. *Geography Teachers' Handbook* (ed. P. Bailey and P. Fox), pp. 235–248. Sheffield: Geographical Association. [A thorough statement on the role of evaluation in geographical education. Key ideas are presented on how to use evaluation techniques effectively in geographical education.]

Mosidi S. (1998). Curriculum confusion? Environmental education or geographical education. A look at the South African outcomes-based curriculum development. *Geography Education in Multicultural Societies* (ed. M. Smit), pp. 15–24. Stellenbosch: University Press. [A provocative statement from South Africa that challenges thinking in the environmental and geographical education debate.]

Nabham G. and Trimble S. (1994). *The Geography of Childhood*. Boston: Beacon Press. [An innovative reference book that challenges all people to give their children the opportunity to explore their environment and to develop a thirst for the physical and cultural environments in which they live.]

National Academy of Sciences (1997). *Rediscovering Geography*. Washington, D.C.: National Academy Press. [A key reference book and policy statement from American geographers that was responsible for increasing the status of geography in their land in the late 1990s.]

Pattison W. (1964). The four traditions of geography. *The Journal of Geography* **63**, 211–216. [A historic article that posed the theory of four traditions in geography. This became a key article in the thinking on geography around the world in the 1960s and 1970s.]

Peet R. (1998). *Modern Geographical Thought*. Oxford: Blackwell. [A key text that made clear summaries of the main forms of geographical thought in the second half of the twentieth century.]

Pepper D. (1993). *Eco-socialism: From Deep Ecology to Social Justice*. London: Routledge. [A key reference book on the main thinking by radical geographers in the last quarter of the twentieth century.]

Rohwer G. (1996). How to encourage intercultural learning in geography lessons. Innovation in geographical education. *Proceedings of Commission on Geographical Education* (ed. T. van der Zijpp, J. van der Schee and H. Trimp), pp. 36–40. Amsterdam: Free University. [An insightful article that demonstrates the nature of intercultural education and how it can be developed effectively in geographical education.]

Slater F. (1995). Geography into the future. *Geographical Education* **8**(3), 4–6. [An interesting article that searches for future directions for geographical education.]

Smith D. (1974). Who gets what, where and how: a welfare focus for geography. *Geography* **59**, 289–297. [A seminal article on the nature of welfare geography as one trend in human geographical thinking.]

Stoltman J. (1990). *Geography Education and Citizenship*. Boulder: Social Science Education Consortium. [A key statement made in 1990 on the nature of citizenship education and how geographical education can play a crucial role in the education of all people.]

Tilbury D. and Williams M., eds. (1997). *Teaching and Learning Geography*, 336 pp. London: Routledge. [An important recent collection of writings by international geographical educators on the themes of teaching and learning in geography.]

Walford R. and Haggett P. (1995). Geography and geographical education: some speculations for the twenty-first century. *Geography* **80**(1), 3–13. [A series of speculations by two very senior geographers on how geographical education will unfold in the twenty-first century.]

Wise J. (1966). *Geography and the Teacher*. Brisbane: Jacaranda. [One of the older geographical education pedagogic textbooks from Australia from the 1960s.]

Wridt P. and Boehm R. (2000). The influence of environmental exploration on geographic performance among adolescents: a gender and cross-cultural analysis. *International Research in Geographical and Environmental Education* **9**(3), 211–222. [An informative article on the influence of gender in the ways boys and girls explore their local environments.]

Wright D. (1982). Colourful South Africa?: an analysis of textbook images. *Multiracial Education* **10**(3), 27–36. [A key earlier statement on the use of stereotypic images of people in geography textbooks.]

Wright D. (1989). Changing images of Australia in U.K. geography textbooks. *Geographical Education* **6**(1), 43–44. [A second key statement on the use of images of people to stereotype cultures and races from different regions.]

### **Biographical Sketch**

**Rod Gerber** is professor and dean of the Faculty of Education, Health and Professional Studies at the University of New England, Armidale, Australia. He has an extensive record in the study of geography and geographical education. This has involved him in a wide range of secondary school and university teaching activities mainly in geographical education and research methodology. Rod has just completed a 12-year term on the International Geographic Union Commission on Geographical Education. From 1996 to 2000, he was chair of this global body. He has an extensive research and publication record in geographical education. This includes a range of teacher education text and reference books, a range of edited books, refereed journal articles, reports, school textbooks, and atlases. Rod has presented a large number of invited international conference presentations in countries around the world. These have focused on the role of geographical education locally, nationally, regionally, and globally. He has held leadership roles in several professional geographical organizations in Australia and has been an assistant examiner for the International Baccalaureate for a decade. He has been coeditor or a member of the editorial advisory panel for five national or international professional journals in geography and education.