

Geographical education is powerful if...

Margaret discusses
the five ways in
which she believes
geographical
education can
be powerful.



Accompanying
online materials

Introduction

In making a case for a subject-based curriculum, Michael Young (2008; 2015) coined the term 'powerful knowledge': knowledge developed within academic disciplines that most students would not have access to beyond school. Young's ideas have stimulated considerable discussion about the significance of 'powerful knowledge'. I have discussed his ideas elsewhere (Roberts, 2013a; 2014). In this article I want to present my own ideas of ways in which I think geographical education as a whole could be powerful.

1. ... it enables students to make connections between their everyday knowledge and school geography

Vygotsky, through his research into children's learning in the 1920s, distinguished between two types of knowledge. He used the terms 'spontaneous' for concepts children developed through experience without instruction and 'scientific' for concepts related to academic disciplines and acquired with the support of a teacher. He found that the development of both types of concept were 'closely connected': children's acquisition of abstract disciplinary concepts grew out of related everyday concepts, and the structures provided by disciplinary concepts enabled children's everyday concepts to develop 'towards conscious and deliberate use' (Vygotsky, 1962).

Vygotsky's ideas have been very influential on education generally and everyday knowledge has been recognised as valuable at all stages of geographical education. Within the context of primary education, Catling and Martin (2011) argue that pupils' everyday knowledge and disciplinary knowledge should both be regarded as powerful. They cite research that shows everyday knowledge is not necessarily naïve and unsystematic, but that it can be rational, coherent and structured. When the two types of powerful knowledge, the everyday and the disciplinary, are brought together in the classroom, children can develop new knowledge and understanding.

At secondary level, everyday knowledge has been an essential part of several Geographical Association (GA) projects. For example, 'Valuing Places' aimed to develop students' understanding of global connectedness by building on their personal geographies of place. The Young People's Geographies Project started with the view that students bring to school valid and important knowledge based on their interests and their needs. Furthermore, the GA identifies 'student experiences' as one of the three key ingredients in the process of 'curriculum making'.

At university level, an undergraduate textbook encourages students to make connections between their everyday experiences and what they are studying. It invites them to:

'be aware of the human geographies wrapped up in and represented by the food you eat, the news you read, the films you watch, the music you listen to, the television you gaze at' and 'to think about how what you read in books or articles connects or doesn't to your everyday life and why that might be' (Cloke, Crang and Goodwin, 2005, p. 602).

Everyday knowledge is particularly relevant to the study of geography. First, it is an object of study and a source of data for some academic geographers, who have focused, for example, on young people's geographies, the geography of food and of everyday spaces. Second, students bring to school some knowledge of most themes studied in geography. From the earliest age children get to know their own neighbourhoods, they make journeys and visit shops, parks and relatives. Many visit environments different from their own on day trips or holidays. They encounter, indirectly, a world beyond their direct experience through other people, toys, stories, books, films, television and social media. They begin to develop key geographical concepts of place, space and environment.

Giving students opportunities to connect their everyday knowledge with school geography is powerful because it respects what students already know. It values what they can contribute to thinking about many aspects of geography. It helps them understand new geographical concepts and can enable teachers to correct misunderstandings that could interfere with learning. Our personal geographies develop throughout our lives, so it is valuable to have confidence in using and developing this knowledge.

My own experience of observing lessons suggests that if students' everyday knowledge does not feature in curriculum documents or in lesson plans, then it is given scant attention in the classroom. Time needs to be allocated in lesson plans to enable students to use their rich everyday knowledge and to make connections. When I have observed both students and teachers drawing on their everyday knowledge, it has had a strong impact.

2. ... it transforms the ways in which students understand the world

School geography takes students beyond their everyday knowledge. It can introduce students to the diversity of ways in which geographers think about and investigate the world. It can make them aware of the positioned nature of

geographical knowledge. It can introduce them to new concepts and theories.

Urban geography provides good examples of different ways in which geographers study the world and of the positioned nature of geographical knowledge. Massey (2007) studied the interrelationships within and between places and argued that cities could be understood only in the economic, cultural and political global networks within which they are embedded. Dorling (Hennig and Dorling, 2013) used quantitative data to examine the distribution of inequalities in particular cities, e.g. London. Wills (Wills *et al.*, 2010) used personal accounts from interviews to focus on migrant workers' experiences of London. Urban geographers who have focused on the personal experience of particular groups (e.g. young people, the elderly, the disabled, etc.) make us aware that people living in cities are not one homogeneous group about which we can make generalisations. Each of these ways of looking at cities is powerful and contributes to our understanding.

Although urban areas are influenced by some common processes, these processes play out differently in different parts of the world. Geographers studying Asian and African cities, e.g. Drakakis Smith (2000), recognise that these have been influenced by very different historical, social and political processes from those in the west. Most knowledge about urban areas has been produced by geographers working in North American or European contexts. Massey has argued that 'our knowledge of the world is always from a certain standpoint. We see it from here rather than from there' (Alan and Massey, 1995, p. 2). Geographical knowledge is positioned, influenced by the lenses through which geographers have viewed the world, framed by the questions to which they give attention.

Many of the concepts that are important in thinking geographically, such as nature, sustainability, globalisation, development, etc. are used with different meanings. Castree (2005) has argued, for example, that geographers have no one understanding of what 'nature' is and that geography 'produces a diversity of knowledges about nature' (p. 244) that are constructed and contestable. In order to deepen their understanding of a concept, students need to encounter different definitions and usages and to discuss their meaning. Similarly, there are different ways of thinking about development and how it is measured. Willis (2014) identifies three main theoretical approaches: modernisation (Rostow's model), Marxist analysis and post-structuralism. They differ from each other in their definitions, their explanatory power and the questions they raise. Students' understanding of development would be limited if they studied only the Rostow model.

Giving students access to geographers' different ways of thinking about the themes and places they study in geography and about different meanings of key geographical concepts can be transformative. This is powerful not only for their thinking and understanding of school geography, but could have an enduring impact on the way they understand the world.

3. ... it enables students to be aware of the values dimension of decisions that affect local, national and world geography

The big issues of our time, such as climate change, ensuring future supplies of water, food and energy for the world's growing population, the global gap between rich and poor and global trade imbalances, are more likely to be studied in school in geography than in any other subject. The values dimension of these kinds of issues has long been recognised. Sir Keith Joseph, Secretary of State for Education (1981-86), in relation to issues of pollution and inequality, wrote in 1985:

'To my mind, teachers do no service to their pupils if they give them the impression that such problems are easily defined, that the processes involved are well understood so that their occurrence can be straightforwardly explained and that there are always practicable solutions available. Issues such as the ones I have mentioned are matters of legitimate dispute precisely because there are often strong disagreements about diagnoses, goals and strategies' (Joseph, 1985, p. 294).

Rittel and Webber wrote in 1973:

'The kinds of problems that planners deal with, societal problems, are inherently different from the problems that scientists ... deal with. Planning problems are inherently wicked' (p. 160),

They stated that 'wicked problems' had the following characteristics:

- There is no definitive formulation of a wicked problem.
- Every wicked problem is essentially unique.
- Every wicked problem can be considered to be a symptom of another problem.
- Solutions to wicked problems are not true or false but good or bad.
- There is no ultimate test of a solution to a wicked problem.
- There is no opportunity to learn by trial and error.

The kinds of issues studied in school geography, global, national and local, share the characteristics of 'wicked problems'. There are different ways in which issues can be formulated. For example, titles and images on covers of books on climate change draw attention to different aspects of the issue: loss of biodiversity (images of polar bears); loss of human habitats (images of desertification); concerns about energy supply (images of oil refineries); economic interests ('the economics of climate change') or threats to cities (images of flooded cities). Decisions and possible solutions are related to how the issue is perceived.

Issues are controversial because people have different views about how they should be resolved. The stakeholders involved put different emphases on economic, social, environmental, cultural and political values. For example, those against the construction of Hinkley Point nuclear power plant in Somerset emphasised economic considerations related to cost, or environmental arguments related to possible pollution and problems of waste-disposal.

Those in favour emphasised social arguments related to employment, and environmental arguments related to the need for carbon-free energy supplies. There were also political arguments related to the UK's diplomatic relationship with the two countries involved: France and China.

There is an ethical dimension of issues studied in geography. Some situations, e.g. those related to inequalities, raise issues of social justice and might be judged to be absolutely morally right or wrong. Students should have opportunities to discuss the ethical dimensions of the issues they study.

Students, through activities such as public-meeting role-play and decision-making exercises, can develop a better understanding of current issues and a more critical evaluation of arguments used for and against viewpoints. Students can become aware of the ethical dimensions and begin to form their own opinions. They can learn to probe underlying ideological assumptions, e.g. related to market forces or of the role of government. They can think more critically about how issues are presented in the media. They can become aware of who has the power to make decisions. Through studying current issues, they can be made aware that the present geography of the world didn't just happen; it has been shaped by decisions many of which were disputed in the past.

Enabling students to study the values dimension of issues is powerful because it relates to their interests; research has shown that young people are interested in issues that will have an impact on the future of the planet and on their own lives. It is powerful because during their lives outside school they will become aware of many issues with geographical dimensions, will be confronted with arguments for and against a particular solution and will become aware of injustices in the world. School geography has the power to enable students to think more clearly about issues they encounter both now and in future.

Figure 1: Enquiry skills that can be developed in school geography.

- Formulate appropriate geographical questions
- Develop techniques for collecting primary data in the field
- Research secondary evidence from a wide range of sources
- Analyse quantitative and digital data using numerical and statistical skills
- Interpret qualitative data from a range of sources: interviews; textual and visual
- Evaluate the accuracy, reliability and validity of data used as evidence
- Recognise bias and assumptions
- Relate data and findings to existing theoretical understandings
- Identify patterns and relationships
- Form reasoned arguments and qualify them
- Justify conclusions using evidence and reasoned arguments informed by wider theory
- Present findings using cartographic, graphical, communication and literacy skills
- Reflect on the investigation: assess the extent to which questions have been addressed and evaluate the strengths and weaknesses of the methodology, data and conclusions.

4. ... students develop the skills needed to deal with the complexity of geographical knowledge and to develop understanding

The skills students need in order to make sense of the world include those particularly associated with geography, such as map reading and GIS, and generic skills related to enquiry (listed in Figure 1) and critical thinking. Although enquiry skills can be developed in other subjects, school geography can make a major contribution to their development because of the range of questions it addresses, its varied sources of information presented in different formats, sometimes from different viewpoints, and its use of different analytical and interpretive techniques.

Everything studied in geography in the classroom and in the field requires the use of some skills. Curriculum documents and lesson plans should identify opportunities for students to develop skills that are relevant to what they are studying so that they can become competent in their use through continual application. If well developed in the classroom and the field, enquiry skills incorporate critical thinking skills which emphasise rigour, questioning and not taking something at face value.

These skills are powerful because they enable students to interrogate, analyse and interpret information. They are powerful because through using them, students can develop critical understanding of how geographical knowledge is constructed and represented. This should enable them to make more sense of representations of the world they encounter not only in school geography but also in their everyday lives.

5. ... students take an active part in learning

If geographical education is to be powerful, then it demands a powerful pedagogy. Pedagogy is influenced by what are considered to be the purposes of education and by ideas about learning. I consider that the key purposes of geographical education are to enable students to think geographically and to develop a critical understanding of the world.

My ideas about learning have been influenced by Vygotsky and by those who have researched language and learning in the classroom. I believe that, in order to learn, students need to be actively engaged in the construction of knowledge and that this can be achieved through the use of an enquiry approach and through classroom talk. In an enquiry approach students are, with varying degrees of support from a teacher, involved in considering questions, collecting and using varied sources of data, analysing and interpreting, developing reasoned arguments, reaching conclusions and reflecting on the learning process (Roberts, 2013b).

There has been considerable research on classroom talk and its role in learning. Mercer has described talk as 'the most important tool for guiding the development of understanding

and for jointly constructing knowledge' (Mercer, 2008, p. xi). Barnes (2008) has emphasised the importance of students 'relating new ideas and ways of thinking to their existing understanding' (p. 4) and the value of exploratory talk in helping students 'work on understanding' (p. 4). Alexander, through his research, has developed and advocated the concept of 'dialogic teaching' in 'contrast to the familiar question/answer/feedback routines' typical of classroom talk (Alexander, 2008, p. 26). The characteristics of dialogic teaching are listed in Figure 2.

Dialogic teaching requires a shift in the culture of the classroom. Instead of teacher talk being dominant, students are encouraged to participate in discussion. Instead of the main emphasis on students understanding what is in the teacher's mind, both teachers and students listen to each other carefully and try to understand each other's thinking. This shift is difficult to achieve, particularly in an educational culture that values pace and frequent changes of activities. Socratic questions, used by both teachers and students, can provide a useful framework for promoting dialogic talk and can help students think geographically. Socratic questions are categorized according to the type of thinking they encourage (Figure 3).

If geographical education is to be powerful then the culture of the classroom needs to value an inquisitive approach to learning and student involvement in purposeful activities, discussion and critical questioning.

Conclusion

I have argued that geographical education is powerful if it values students' everyday knowledge, enables them to see the world in different ways, makes them aware of the value-laden nature of issues studied in geography and equips them with the skills to make sense of geographical knowledge. It is powerful if the transformative effects of geographical education on students' thinking endure beyond school into adult life.

Essentially, however, all this depends on a powerful pedagogy, which in my view should give a prominent place in the culture of the classroom to promoting thinking and critical understanding and to promoting students' active involvement, through investigative approaches and classroom talk, in the construction of geographical knowledge and understanding.

References

- Alan, J. and Massey, D. (1995) *The Shape of the World: Explorations in Human Geography*. Oxford: Oxford University Press.
- Alexander, R. (2008) *Towards dialogic teaching: rethinking classroom talk* (4th edition). York: Dialogos.
- Barnes, D. (2008) 'Exploratory talk for learning' in Mercer, N. and Hodgkinson, S. (eds) *Exploring talk in school*. London: Sage.
- Castree, N. (2005) *Nature*. Abingdon: Routledge.
- Catling, S. and Martin, F. (2011) 'Contesting Powerful Knowledge: The primary geography curriculum as an articulation between academic and children's (ethno-) geographies', *The Curriculum Journal*, 22, pp. 317–35.

Dialogic talk is:

- **collective** – participants address learning tasks together, distinct from 'question-answer-tell'
- **reciprocal** – participants listen to each other and consider alternative viewpoints
- **supportive** – students speak freely, without fear of embarrassment over wrong answers, and help each other to reach common understandings
- **cumulative** – participants build on answers... and chain them into coherent lines of thinking and understanding
- **purposeful** – although open and dialogic, talk is also planned and structured with specific learning goals in view.

Figure 2: The characteristics of classroom talk in dialogic teaching. Source: Alexander, 2008.

Socratic questions:

- seek clarification, e.g. *Is your main point ...? Could you give me an example ...?*
- probe assumptions, e.g. *Does your reasoning depend on the idea that ...?*
- probe reasons and evidence, e.g. *What are your reasons for saying ...? Are these reasons a good enough explanation?*
- consider viewpoints and perspectives, e.g. *What different ways are there of looking at it? Who benefits from this? Who loses?*
- probe implications and consequences, e.g. *What effect would ... have?*
- ask questions about the question, e.g. *Why is this issue important? How can we find out ...?*

Figure 3: Categories of Socratic questions and some examples.

- Cloke, P., Crang, P. and Goodwin, M. (2005) *Introducing Human Geography* (2nd edition). London: Hodder Arnold.
- Drakakis Smith, D. (2000) *Third World Cities* (2nd edition). Abingdon: Routledge.
- Hennig, B. and Dorling, D. (2013) *Inequalities in London*. London: Trust for London.
- Joseph, K. (1985) 'Geography in the school curriculum', *Geography*, 72, 3, pp. 290–297.
- Massey, D. (2007) *World City*. Cambridge: Polity Press.
- Mercer, N. and Hodgkinson, S. (2008) *Exploring talk in school*. London: Sage.
- Rittel, H. and Webber, M. (1973) 'Dilemmas in a general theory of planning', *Policy Science*, 4, pp. 155–169.
- Roberts, M. (2014) 'Powerful knowledge and geographical education', *The Curriculum Journal*, 25, 2, pp. 187–209.
- Roberts, M. (2013b) *Geography through Enquiry: Approaches to teaching and learning in the secondary school*. Sheffield: Geographical Association.
- Roberts, M. (2014) *Powerful knowledge: a critique*. Available at: www.youtube.com/watch?v=DyGwbPmim7o (last accessed 18/11/2016).
- Vygotsky, L. (1962) *Thought and Language*. Cambridge, MA: Massachusetts Institute of Technology.
- Willis, K. (2014) 'Development: Geographical perspectives on a contested concept', *Geography*, 99, 2, pp. 60–66.
- Wills, J., Datta, K., Evans, Y., Herbert, J., May, J. and McIlwaine, C. (2010) *Global Cities at work: Migrant divisions of labour*. London: Pluto.
- Young, M. (2008) *Bringing knowledge back in: From social constructivism to social realism in the sociology of education*. Abingdon: Routledge.
- Young, M. (2015) *The curriculum and the entitlement to knowledge*. Available at: www.cambridgeassessment.org.uk/Images/166279-the-curriculum-and-the-entitlement-to-knowledge-prof-michael-young.pdf (last accessed 19/11/2016).

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