



What is Powerful Knowledge and Can It Be Found in the Australian Geography Curriculum?

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The concept of powerful knowledge has been debated by British geography educators for several years (Catling, 2014; Catling & Martin, 2011; Lambert, 2014a; Lambert, 2014b; Morgan, 2011; Roberts, 2014). However, the debate has been mostly about philosophy and pedagogy, and little has been written about what powerful geographical knowledge might actually look like. In this paper I will explain the concept, interpret what it might mean in geography, and discuss examples from the Australian curriculum that represent powerful knowledge. It is an idea that could be of value in school geography. First, the concept might help teachers who have not been trained in geography, and some who have, to see beyond the content descriptions in the curriculum to higher levels of thinking and conceptualisation. Second, it might help students to see some structure and order in our subject, rather than a mass of unconnected information. Third, it could be a way of explaining to others what geography is about, and how it adds to school education because of the distinctive and significant knowledge it teaches. Given the widespread lack of understanding of the subject in the community and amongst education administrators this is crucially important.

The concept of powerful knowledge was introduced into educational debates nearly a decade ago by Michael Young, a British sociologist of education. He contends that the main purpose of schools is to teach knowledge that enables students to understand and think beyond the limits of their own experience, and describes this knowledge as *powerful*. In one of his early papers on the subject he writes:

Powerful knowledge refers to what the knowledge can do or what intellectual power it gives to those who have access to it. *Powerful knowledge* provides more reliable explanations and new ways of thinking about the world and ... can provide learners with a language for engaging in political, moral, and other kinds of debates (Young, 2008, p. 14).

Young has also explained powerful knowledge in these ways.

'Powerful knowledge' is powerful because it provides the best understanding of the natural and social worlds that we have and helps us go beyond our individual experiences (Young, 2013, p. 196).

Knowledge is 'powerful' if it predicts, if it explains, if it enables you to envisage alternatives (Young, 2014a, p. 74).

These statements describe powerful knowledge as knowledge that enables young people to go beyond the limits of their own experience; better explain and understand the world; think about alternative futures and how to influence them; learn new ways of thinking; and follow and participate in current debates of local, national or global significance. These are all types of knowledge that give young people intellectual abilities that they are unlikely to learn from their everyday lives, and are therefore the knowledge that schools should be teaching. Another that is implied in the literature is the ability to acquire and evaluate knowledge. The rest of the paper discusses these different types of powerful knowledge, and illustrates them with examples derived from the Australian geography curriculum.

Type 1. Knowledge That Provides Students With 'New Ways of Thinking About the World.'

Ways of thinking can be powerful because they may change a student's perceptions, values and understandings, the questions they ask and the explanations they explore. They may even change their behaviour. In the Australian Curriculum, geography's ways of thinking are embedded in the major concepts, and on the Australian Curriculum, Assessment and Reporting Authority (ACARA) website these are explained at some length in the section on *Concepts for developing geographical understanding*. This section can be found by opening the Overview to the geography curriculum at www.australiancurriculum.edu.au/humanities-and-social-sciences/geography. The concepts are further described in the Glossary, which can also be found in the Overview. Geography has by far the most extensive

explanation of its concepts of any of the ACARA curriculums.

These are not substantive concepts like *city* or *climate*, but can be described as meta-concepts, which are concepts about concepts. Their role is “to generate, at the meta-level, conceptual tools that inform the development of concepts, substantive theories and explanatory schemes, and that underpin the design of empirical studies”(Sibeon, 2004, p. 13). They are consequently difficult to define in a single sentence because they have more than one dimension.

Place is perhaps the most fundamental of these concepts. While places are parts of the Earth’s surface that have been defined, named and given meaning by people, the concept of place is about ways of thinking about the meaning, significance and effects of places. Creswell (2004, p. 11) calls place a way of “seeing, knowing and understanding the world”.² The following statement is an example of a way of thinking based on the concept of place.

Each place is unique in its characteristics. As a consequence, the outcomes of similar environmental and socioeconomic processes may vary between places, and similar problems may require different strategies in different places.

This statement says that because places vary in their environmental and human characteristics, the outcomes of similar processes may differ because of their interaction with these varying characteristics. It also says that strategies to address similar problems need to take account of the distinctive characteristics of each place, which could be environment, culture, economy, leadership or past experience. This is the core of geography’s contention that *place matters*. Everything exists in a place, including us, and every event happens in a place, and the varied characteristics of these places influence what exists and what happens. This is a fundamental part of thinking geographically, and it is powerful because it leads to questions about how to explain, and to thinking about strategies to address problems. An illustration of the value of this way of thinking can be found in a recent article by Kirby (2014) on teaching about sustainability and cities. He argues that geography’s understanding of the uniqueness of individual urban places equips it to develop the highly localised responses needed for the problems they face.

Space is also a fundamental concept in geography, and one aspect of spatial thinking is expressed in this statement.

Spatial distributions have environmental, economic, social and political consequences.

The statement suggests that spatial distributions are worth understanding because they have consequences, a point that is often neglected in school geography curriculums and textbooks. Students are frequently asked to explain a spatial distribution, but less frequently to think about its consequences, so they don’t get to understand the environmental, economic, social or political significance of a spatial pattern. In Australia, for example, the spatial concentration of the population into just five cities has environmental consequences, because of the concentration of pollution or the construction of water storages, and political consequences, because of the influence of urban voters on governments.

Environment is another major concept in geography curriculum, and one of its dimensions is described in this statement.

Humans are dependent on the biophysical environment for their survival. It supports and enriches human life by providing raw materials and food, recycling and absorbing wastes, maintaining a safe habitat and being a source of enjoyment, inspiration and identity.

This summarises the four functions of the environment for people, which the curriculum describes as source, sink, service and spiritual (Maude, 2014). These range from the practical (such as the provision of food and water) to the emotional (such as inspiring landscapes). To understand the statement students will need considerable knowledge of the physical processes involved in each function, and of the ways people perceive, use and manage the environment. The statement could be complemented with this one.

Environmental sustainability depends on the maintenance or restoration of the environmental functions that sustain human life and wellbeing.

This statement takes the idea of environmental functions and connects it with the concept of sustainability. If students adopt the way of thinking described in the two statements they will have an appreciation of how the environment supports and enhances their lives, the ways they are dependent on it, and the importance of sustaining its functions. This will influence their views on a whole variety of environmental issues. It might even change their behaviour, or make them politically active, which could be very powerful.

The statements described above, derived from the concepts, are examples of different ways of thinking geographically. They are powerful because they can change the way that young people perceive and think about the world and their place in it. However, they are ways of thinking that require a considerable knowledge of geography to be understood well enough to provide a basis for action. They can't be learned as purely abstract ideas devoid of any empirical content. Students will come to recognise them as geographical ways of thinking if they are shown how they underlie the content of the curriculum.

Type 2. Knowledge That Provides Students with Powerful Ways of Analysing, Explaining and Understanding.

Young argues that knowledge is powerful when it enables students to better understand and explain the world. In geography this type of knowledge could be a concept that can be applied to analyse or explain something, or a generalisation.

Analytical Concepts

Some of geography's analytical methods are shared with other subjects, but some are distinctively geographical because they are derived from the major concepts in the curriculum. Four of these are:

- analysing a spatial distribution for ideas on the processes that are influencing the phenomenon mapped (from the concept of space). A map of rainfall in Australia, for example, shows that precipitation declines with increasing distance from the coast and rises with increasing elevation, observations which identify two of the causes of rainfall;
- comparing spatial distributions as a way of exploring possible causal relationships (also from the concept of space);
- comparing places to identify the effects of a specific variable, such as climate or culture (from the concept of place);
- testing relationships by analysing them at different spatial scales (from the concept of scale). This method is important because different explanatory factors can be involved at different scales. For example, climate is the main determinant of the type of vegetation at the global scale but soil and drainage may be the main factors at the local scale.

In their ability to identify and test relationships between phenomena, all these methods should be considered powerful. The first two are well represented in the Australian Curriculum, but not the third. Its significance is explained in this

quotation from an influential review of geography in the United States.

Places are natural laboratories for the study of complex relationships among processes and phenomena. Geography has a long tradition of attempting to understand how different processes and phenomena interact in regions and localities, including an understanding of how these interactions give places their distinctive character (Rediscovering Geography Committee, 1997, p. 30).

In geography teaching, this method could be used to identify the effects of a specific variable, such as climate or culture, by comparing a number of places that are similar in one of these characteristics, but different in others.

The fourth method is used in the Year 10 unit on Geographies of human wellbeing, which involves a study of spatial variations in human wellbeing at global, national and local scales. Students should learn from this that while Australia has a high average level of wellbeing compared with other countries, within the nation there are places with much lower levels of wellbeing, and at the local level there are areas of relative disadvantage within all cities. The explanations of disadvantage are likely to differ between these scales.

Explanatory Concepts

Substantive concepts can also have the power to explain. For example, for students in regional Australia to explain why the settlements in their area vary in their size and growth, or even why they exist at all, they should understand and be able to apply concepts like geographical concentration and centrality. When combined with an understanding of people's changing mobility and consumer preferences, these help to explain why some settlements are declining and some growing, often at the expense of the former, and could be used to predict future trends in settlement sizes. There will, of course, be settlements that don't fit the expected pattern, because of history, location, community or individual entrepreneurialism, or politics, and explaining the anomalies makes for interesting geography.

Another example of a powerful explanatory concept is the water balance, described in this statement and in Figure 1.

The water balance models the determinants of the quantity of water available as soil moisture, surface water or groundwater.

This concept could be used to teach these elaborations in the Australian geography curriculum Year 7 unit on Water in the world by:

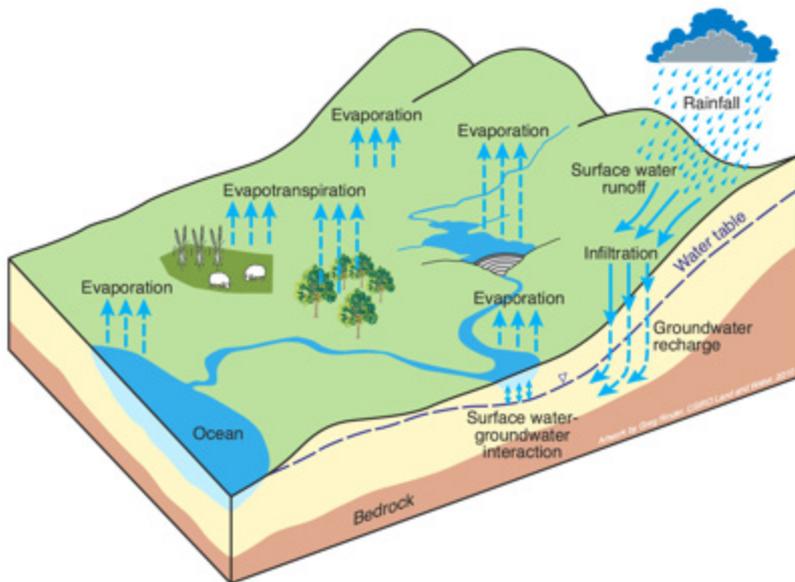


Figure 1: Diagram of the partitioning of the water balance components. Retrieved from [http://www.ewater.com.au/uploads/images/Block%20diagram%202_5_2010\(GR\).jpg](http://www.ewater.com.au/uploads/images/Block%20diagram%202_5_2010(GR).jpg)

- describing how water is an available resource when it is groundwater, soil moisture (green water), and surface water in dams, rivers and lakes (blue water), and a potential resource when it exists as salt water, ice or water vapour;
- comparing the quantity and variability of rainfall, runoff and evaporation in Australia with that in other continents.

If students understand the components of the water balance, and the relationships between them, they will have learned a conceptual framework for integrating several elements in physical geography, including rainfall, evapotranspiration, soil characteristics and land cover. They will also be able to use the concept to analyse and explain the availability of water for plants and people, and the differences between places and whole continents in water resources.

Processes are an important type of explanation in geography and illustrate the explanatory power of the concept of interconnection, because they are sets of cause-and-effect relationships or interconnections. For example, knowledge of the processes of weathering, erosion, transportation and deposition is fundamental to an understanding of landforms and flooding, while knowledge of sediment transport processes is essential in understanding coastal change. The concept of a system – a group of interacting objects, materials or processes that form an integrated whole linked together by processes – also belongs to the meta-concept of interconnection. It can be very helpful in investigating and understanding some of the interconnections within and between places, and

can be applied to both environmental and, with more difficulty, human phenomena.

Generalisations

Some empirical generalisations can be powerful because they help students to make sense of a lot of information. For example, in both the primary and secondary years students will study some natural hazards: their spatial distribution, causes and impacts, and community responses to them. Out of these studies they could develop this generalisation.

Each type of environment has its own natural hazards. The impact of these hazards on people is determined by both human and environmental factors, and can be reduced but not eliminated by prevention, mitigation and preparedness.

This statement synthesises a lot of detailed information about different natural hazards, and tells students several important things. The first is that all environments can have natural hazards, even the inner urban areas of temperate cities that don't experience tropical cyclones, bushfires or drought. The second is that the economic impact of natural hazards is the result of human as well as environmental causes, so when investigating an unfamiliar hazard, students should look beyond the environmental causes of damage. They may discover, for example, that flood damage has been increased by vegetation clearance, the draining of the wetlands that previously absorbed flood waters, the straightening of river channels or settlement on floodplains. The third is that there is a variety of strategies that can be used to reduce the impact of a hazard, so students should look beyond a single answer. These are powerful insights into how communities can understand and respond to a natural hazard.

Generalisations can be especially powerful if they include explanation or can be used to predict. This example is from economic geography.

Because of the advantages of geographical concentration, economic activities tend to cluster in space unless tied to the location of natural resources or dispersed customers.

This statement is based on an elaboration in the Year 8 Australian geography curriculum unit on Changing nations, because it is a way of explaining urbanisation. It is powerful because it synthesises knowledge of the location of primary, secondary, tertiary and quaternary activities into one simple generalisation, and it adds a major explanatory concept, that of geographical concentration. The generalisation can be applied to explain why used car yards or second-hand

clothing shops often locate together, why half the world now lives in urban areas and why decentralisation is so difficult, because all of these involve the advantages of geographical concentration. It can be applied to forecast the effects of anticipated changes in the structure of the economy on the future pattern of economic activity within a nation. It is also a generalisation that students may be able to challenge by finding examples that don't fit, while explaining why they don't fit is again likely to be an educationally and geographically valuable exercise.

Another example of an empirical generalisation is this statement.

Because of the interconnections between the components of the biophysical environment, change in one component may produce change in others. The subsequent changes may be experienced in the same place as the initial change, and/or in different places, or at a different scale.

The first sentence involves the concepts of interconnection and change, but is similar to the way science might define a system. The second sentence, however, makes the whole statement clearly geographical, by adding the concepts of place and scale.

Another example of an explanatory generalisation is:

Where people grow up and live has an influence on their lives through its effects on their health, educational attainment, aspirations and economic opportunities.

This is relevant to the Year 10 unit on Geographies of human wellbeing, and identifies a significant social issue that government policies sometimes try to address. The statement can be illustrated from a recent study of Year 12 subject offerings in Perth schools, disaggregated according to the socioeconomic status of the school population. The study found that while all but one of the 48 schools in the top 40 per cent by socioeconomic status offered advanced maths, chemistry, physics and English literature (the subjects needed for admission to some professional university courses), only three of the 24 schools in the bottom 20 per cent by socioeconomic status offered all these subjects (Perry and Southwell, 2014). The career opportunities of students in the latter group of schools is much more limited than those of students in the former group.

An example of a generalisation that has both explanatory and predictive power is:

Coastal areas are dominated by wave and tidal processes that drive weathering and sediment movement, and stopping natural sediment movements in one location on the coast may cause additional erosion and major coastal problems elsewhere (adapted from Holden, 2011, p. 119).

This statement warns students of the potentially negative effects of structures like marinas, and the importance of locating them in places where sediment movement is minimal. Understanding it would be a fundamental part of a study of coastal management in Year 10.

Generalisations that can be used to predict can also provide a “basis for suggesting realistic alternatives” (Young, 2010), as students may be able to use them to forecast what might happen, and compare this with what they might prefer to happen. They can then think about how their preferred future could be achieved, given their understanding of the processes influencing that future. This may enable them to identify ways of taking actions to improve their own and others' futures. Knowledge that results in actions should qualify as powerful.

The generalisations described are powerful because:

- they synthesise a lot of information, and so help student understanding;
- they are high level generalisations that can be applied to many contexts;
- some have analytical power;
- some have explanatory power; and
- they can be used to predict and therefore to think about futures.

Type 3. Knowledge That Gives Students Some Power Over Their Own Knowledge.

One component of the ability to have some power over your own knowledge is knowing how to acquire knowledge that is new to you. This does not mean the ability to undertake an academic research project to study something that has not been investigated before, but the skills to find information already available, and make sense of it. This enables young people to be independent of the dominant sources of information in our society. In the Australian Curriculum, this knowledge is taught through the Inquiry and Skills Strand, and by the end of Year 10 students should be reasonably competent in finding information.

The other component is knowing how to evaluate claims about knowledge, which gives students the power to be critical of the opinions of the

powerful, and to be independent thinkers. Young writes:

Knowledge in the sense we are using the word in this book allows those with access to it to question it and the authority on which it is based and gain the sense of freedom and excitement that it can offer. (Young, 2014b, p. 20).

To do this students need to know something about the ways knowledge is developed and tested in geography, an aspect of the subject that has been explored by Firth (2011, 2013, 2014). This is about being able to answer the question: *how do you know?*, an underdeveloped area of geographical education. In the Australian curriculum, evaluation and reasoning should be taught through the Inquiry and Skills Strand, but the curriculum overemphasises technical skills like map construction, and underemphasises the more powerful interpretive, analytical, critical thinking and methodological skills that would develop the abilities of students to reason and evaluate. In particular, it neglects the critical thinking skills needed to test statements made by others.

Type 4. Knowledge That Enables Young People to Follow and Participate in Debates on Significant Local, National and Global Issues.

The ability to follow and participate in public debates is essential to full and equal participation in society and its conversations about itself, and without this ability young people lack power. Much of the content of the Australian Geography curriculum gives students this power, because it examines many of these issues. They include water scarcity, the liveability of Australian suburbs and the management of Australian places, natural hazards, urbanisation, food security, sustainability, the management of landscapes, the interrelationships between land cover change and climate change, global inequalities and migration. However, whether students learn enough about the physical and human processes involved to be able to have informed opinions on these complex problems is debatable, given the limited time allocated to geography in schools. In addition, students need Type 3 knowledge if they are to be able to assess conflicting statements about these issues.

Type 5. Knowledge of the World.

If powerful knowledge is knowledge that takes students beyond the limits of their own experience, then the geography that teaches students about places that are beyond their experience must be regarded as powerful. This

is knowledge about the world's diversity of environments, peoples, cultures and economies, which may stimulate children's curiosity, wonder and awe. It is also knowledge of their links with other places and the interconnectedness of the world, which may develop an understanding of and empathy with peoples in other places. It is more general knowledge than that in Type 4, because it is not tied to a current event or issue. However, in Australia geographers have tended to resist the inclusion in the curriculum of anything that looks like regional geography, and as a result the teaching of world knowledge in the Australian curriculum is patchy. In the primary years there is a progressive study of the continents, working from Australia and its neighbouring countries to South America and Africa in Year 4, North America and Europe in Year 5 and the countries of the Asia region in Year 6. This study, however, is uneven, with content descriptions which have a different focus in each year. In the secondary years there are country case studies of themes in each unit that will enable students to learn more about particular regions or countries of the world. Case studies can lead to stereotyping, with Indonesia, for example, taught only as an example of urbanisation or deforestation, and India taught only as an example of population growth or poverty. This places considerable responsibility on teachers to ensure that students gain a balanced knowledge of the countries they study.

How Might A Unit in the Australian Curriculum Be Organised to Emphasise Powerful Knowledge?

I will use the Year 8 unit on Changing nations to suggest a way of structuring units to give them conceptual coherence, and provide students with practice in using the different types of powerful knowledge. The structure can be developed in logical steps, rather like an argument.

1. Some of the clues to the conceptual structure of the unit are in the year level description. The beginning of the description tells us that the unit is about the changing human geography of countries, and that it uses shifts in population distribution as the measure of change. So the way of thinking underlying the whole of the unit is spatial, because this is a very geographical way of investigating change. This illustrates powerful knowledge of the first type.
2. The description also says that population distribution is chosen as the measure of change because it is a sensitive indicator of economic and social change. This is using population distribution analytically, an example of powerful knowledge of the second type. The two most significant changes in

the spatial distribution of population within nations are urbanisation in developing countries and regional shifts in developed countries. Both are mainly produced by migration, both internal and international, because differences in rates of natural increase within nations are relatively small in comparison with the effects of migration. So to explain shifts in population distribution we examine the main forms of migration.

3. The two case studies suggested of internal migration are rural-urban migration in Indonesia and China. Indonesia is suggested because it is an excellent example of urbanisation, and provides one of the few opportunities in the curriculum to study Australia's important and complex neighbour. In these case studies, there is the opportunity to examine the causes of urbanisation, and to discuss an example of Type 2 powerful knowledge discussed earlier:

Because of the advantages of geographical concentration, economic activities tend to cluster in space unless tied to the location of natural resources or dispersed customers.

In an urbanising economy a growing proportion of jobs are in economic activities that are not tied to the location of natural resources, such as manufacturing or trade, and these tend to cluster in towns and cities.

Students should understand that urbanisation is both a response to and a cause of profound changes in the economy and society of a nation. They should also understand that many of these changes are positive, such as higher educational levels, increased incomes, a growing market for rural produce, a possible reduction in urban poverty, cultural mixing and cultural change, and the growth of an urban middle class. It is also possible that urbanisation can reduce the use of fossil fuels (through the provision of efficient public

transport) and reduce water consumption (through higher density housing). I mention this because too often the emphasis is on the negative effects of urbanisation, such as squatter settlements.

If both Indonesia and China are studied it could be worthwhile making a brief comparison of the urbanisation experience of the two. This comparison will illustrate the statement discussed earlier in this article, about a similar process producing different outcomes in different places, using countries as places. China, for example, is much more industrialised than Indonesia, has much more government control over population movement, and these factors produce differences in the urbanisation process and its outcomes. Place matters!

4. The next case study is of Australia. Australia is no longer urbanising, and cities like Sydney, Melbourne and Adelaide are actually losing more people than they are gaining from internal migration within the country. Consequently, this part of the unit starts with internal migration, which is complex and reveals much about current economic and social change within the nation. The case study of Australia also includes international migration, which is unimportant in Indonesia and China, and because this is mainly to the major cities it counters the net loss of the population from some cities through internal migration, and so reinforces urban concentration. Where migrants settle in the cities is a spatial question, but the concentration of some groups in specific areas is also a current social and political issue. Space matters!
5. The next step uses the comparison of Australia and the United States to examine whether urbanisation produces the same spatial distribution of population in countries where the process is finished. This is again about similar process producing different

Table 1: Comparison of urbanisation and urban concentration in Australia, the USA and Canada, 2014

Measure	Australia	USA	Canada
Percentage of total population in urban areas	89	81	82
Percentage of total population in urban agglomerations of more than 1 million	59	45	45

Source: World Bank Data Bank (<http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>; <http://data.worldbank.org/indicator/EN.URB.MCTY.TL.ZS/countries>)

outcomes in different places, using countries as places.

Two simple measures, readily obtained from the web, can be used to identify differences between countries in urban concentration and urban settlement patterns, as shown in Table 1. Canada is included to demonstrate that the USA is not an exception.

What the first measure shows is that Australia is more urbanised than both the United States and Canada, and this high level of urbanisation has been a feature of Australia for well over a century. The second measure shows that Australia also has a much higher level of urban concentration, with 59 per cent of the population living in cities with populations of more than 1 million. In Australia, there are just five of these cities. Suggestions on how to explain the difference between Australia and the United States are in this elaboration in the curriculum:

- researching the causes of urban concentration in Australia and the United States of America, for example, the history of European settlement, migration, the export orientation of the economy, the centralisation of state governments, environmental constraints and the shape of transportation networks.

The point here is that, although both Australia and the United States are highly urbanised countries, there are sufficient historical, environmental, economic, social and political differences between them to produce significantly different forms of urbanisation. For example, students could be asked to speculate on what the urban pattern of Australia might have been if there had been the same number of states along the east coast as in the United States.

6. The final step is about the last of the content descriptions in the curriculum, on the management and planning of Australia's urban future. This provides the opportunity to examine the consequences of the spatial distribution of the population, and particularly of the high level of urban concentration. As these are a matters of regular public debate students will gain experience of the fourth type of powerful knowledge. Note that in keeping with the spatial theme in this unit, one of the elaborations to this content description is:

- examining how Canberra can be used as an example of urban decentralisation.

Many teachers see Canberra only as an example of a planned city, but it is also by far the largest

city created by government policies outside the state capitals, and has an increasingly diversified economy no longer totally dependent on government employment. Consequently, if students raise the question of whether the growth of the major cities could be restrained by diverting population to smaller cities, Canberra provides an example of what is needed to achieve this.

The approach to the unit on Changing nations suggested here provides opportunities for students to:

- illustrate the application of ways of thinking associated with the concepts of space and place (type 1 powerful knowledge);
- use generalisations to explain (type 2 powerful knowledge);
- use concepts analytically (type 2 powerful knowledge);
- engage in debate on a national issue (type 4 powerful knowledge); and
- learn more about Indonesia, China, Australia and the USA (type 5 powerful knowledge).

Conclusion

This paper set out to identify geographical knowledge that could be described as powerful, using Michael Young's explanations of the concept. The five types of knowledge identified teach students ways of thinking, explaining, finding out and evaluating that are intellectually powerful, give them the capacity to participate in public debates, and take them well beyond their own experience. They could also help students to find deeper meaning in the factual content of the curriculum, and to see geography as a structured, coherent and ordered discipline. Furthermore, this knowledge may influence their ideas, values and actions, which would make it particularly powerful. All of the five types can be taught using content in the Australian Curriculum. But what could the subject gain from the concept of powerful knowledge? First, by focusing on ways of thinking, generalising, analysing and explaining, powerful knowledge could help to raise the intellectual challenge of geography in schools. Second, powerful knowledge could provide a way of identifying what we would like students to take away from their study of geography at school, and finding ways to ensure that they do. Third, powerful knowledge provides a way of explaining geography to non-geographers, by describing its ways of thinking, understanding and explaining, and demonstrating that these ways are educationally valuable. It also provides a further justification for geography's historic role of teaching about the world. All could be powerful for the position of geography in schools.

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Endnotes

- 1 This paper is based on my Keynote Address to the Conference of the Australian Geography Teachers' Association, Rotorua, 15 January 2015, with some amendments.
- 2 Hutchinson (2012) has a typically rich discussion of the many aspects of the concept of place.