Teaching Geography

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Focus on knowledge



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Editorial: The knowledge issue

Mary <u>Biddulph,</u> Editor

The 2010 White Paper The Importance of Teaching proposes several significant changes to the English education system, not least of which is the curriculum. The National Curriculum is once again under review and this time with a heavy emphasis on 'core knowledge':

The National Curriculum should set out clearly the core knowledge and understanding that all children should be expected to acquire in the course of their schooling. It must embody their cultural and scientific inheritance, the best that our past and present generations have to pass on to the next. (38)

An important question here is: 'What is core knowledge'?' The White Paper certainly does not say. And why should it? This is surely a question for professionals, not politicians. In the Spring edition of Primary Geography, Fran Martin and Paula Owens (2011) argue that 'information does not equal knowledge in the deeper sense'; for the school curriculum 'knowledge' has to be more than a mere collection of information and facts that is, more than a 'pub quiz' view of knowledge. And so the focus for this edition of Teaching Geography is subject knowledge, and in particular the kind of geographical knowledge that might comprise a new curriculum.

The three focus articles in this edition of *Teaching* Geography continue the knowledge the debate. John Morgan's lead article draws on the work of Michael Young in order to consider knowledge as a complex and contested set of ideas. He outlines the competing demands that have been made of teachers in response to changing social, economic and educational priorities over the past 20 years or so. In the light of these, he raises some significant issues for us to think about, not least the different kinds of knowledge that compete for curriculum dominance. His article provides arguments that may help us see some of the mistakes of the 1991 National Curriculum (see Rawling 2001 for more on this).

David Lambert and Alan Kinder's article 'What is a better school geography?' presents us with some very practical issues for consideration. Their argument is that teachers are (by definition) 'knowledge workers'. The selection of what to teach is, therefore, part of what it means to be a

teacher. Is content a list of facts to be taught or 'conceptual knowledge, including organisational frameworks and models, principles and generalisations'? Is it useful also to distinguish content from context?

In the final article that focuses on knowledge, by John Hopkin explores some of challenges geography teachers face in deciding what to teach. He argues that real place contexts can often become a backdrop to studying problems, and that places become typecast in the geography curriculum because of what they exemplify rather than their ever-changing realities.

Other articles in this edition remind us of the potential of an interesting and challenging geography curriculum that is built by expert teachers who select interesting and appropriate content (or contexts?) for student to learn to think geographically.

This curriculum debate, and specifically a debate about knowledge, is welcomed by the GA, and in response the Association has launched its own consultation; a precursor to the government's official consultation (due in 'early 2012'). The Association wants your views on its proposals for a possible geography curriculum. The aim is to encourage debate within the profession well as clarify the Association's position regarding 'core knowledge'. The consultation process, which comprises the consultation document and a series of related resources, has a simple questionnaire and some open ended questions to gather your response, and will close on Monday 31 October. Please take the time to participate. Your responses will contribute to the GA's participation in ongoing conversations, particularly with national government, about the nature of a future geography curriculum.

You can view and download the consultation document at www.geography.org.uk/getinvolved/ geographycurriculumconsultation

This is my last issue as editor of Teaching Geography. I am delighted the Dr Melanie Norman, at the University of Brighton, will be taking over from here. Mel is well placed to steer the journal through the ongoing discussions about developments in geography education and I wish her every success. | TG

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The focus for this edition of Teaching Geography is subject knowledge, and in particular the kind of geographical knowledge that might comprise a new curriculum as a consequence of the national curriculum review. The focus articles help us understand the challenges of the knowledge debate.

More on the National **Curriculum review**

There is a timeline for the National curriculum review and a summary of the GA's national consultation in the current GA magazine. In the Autumn 2011 issue of Primary Geography Diane Swift explores the our role in interpreting the National Curriculum proposals.



John Morgan

Knowledge and the school geography curriculum: a rough guide for teachers

This article provides a broad discussion of the question of knowledge in school geography. This will help us to better understand the challenges involved in contemporary curriculum debates. Since so much of the focus of Labour education policy over the previous 13 years was on the importance of learning, it is significant that the first White Paper on education produced by the present coalition government should be titled The Importance of Teaching (DfE, 2010). The focus on learning, so popular with Labour education ministers was signalled by the publication of texts such as The Learning Game, authored by New Labour's educational 'guru' Michael Barber, and the creation of numerous education 'strategies' where the emphasis was on generic 'learning', free from any sense of subject or disciplines. In response, a number of commentators such as Robert Whelan (2007), Frank Furedi (2009), Lyn Yates and Michael Young (2010), became concerned that, during the 'long decade' of New Labour government, schools and teachers had become so focused on the 'how' of learning that the question of what was to be learned had been neglected. It is against this backdrop that The Importance of Teaching makes its call for a return to a focus on subject-based teaching and within that a concern with the core knowledge that makes up the subjects. For many geography teachers, this seems to be an alarming prospect, signalling a return to long lists of content to be covered, and threatening the pedagogical developments around enquiry and learning that are increasingly seen as 'best practice'.

In this article, I want to provide a broad discussion of the question of knowledge in school geography, in the belief that this can help us to better understand the challenges involved in contemporary curriculum debates. In many ways the history of modern geography education is underpinned by the growing realisation that geographical knowledge is a social production; Young (2011a) argues that knowledge is a product of, and responsive to, changing social and economic demands so it is developmental in nature and as such open to critique. This factor has important implications for understanding what happens in classrooms.

The idea that there is no single geography, but many 'geographies', is evident in the work of academic geographers and emerged from the 'cultural turn' of the 1990's. Whilst the disconnect between school and research-led geography has been much discussed (Castree *et al.*, 2007) this notion of multiple geographies has in some ways dovetailed with approaches to teaching and learning that focused on values and on understanding the viewpoints of different groups within the environment. At the same time as geography has become geographies, there have been two major shifts in the role that teachers are expected to perform:

• The first is that school geography is increasingly geared to preparing young people for an uncertain economic future, which means



Figure 1: Teaching geography in schools today is a complex mix of curriculum, pedagogical and social purposes. Photo: Barking Abbey.

Figure 2: Teachers make expert selections of knowledge to teach. These students are engaged in field work on the slopes of Blencathra in the Lake District. Photo: Richard Gill.



that they require a series of cognitive and social skills or competences. This in turn means that geography teachers are more likely to focus on generic skills such as thinking skills, functional literacy, and meta-cognition, as well as developing the so-called 'soft skills' of team-work, self-presentation and reflection.

• The second is that schools are also concerned to promote social or community cohesion, emotional well-being and all-round citizenship, which means that geography teachers are more likely to devise learning experiences which encourage certain values such as empathy for others, responsible social and environmental behaviour and participation, and so on. In all of this, we see a complex set of curricular goals.

These two substantive shifts in what geography teachers are expected to do means that teaching geography in schools today is a complex mix of curriculum (content), pedagogical and social purposes. In this mix, it is hardly surprising if there is confusion about the role of geographical knowledge. Crudely stated, geography teachers may experience some confusion as to whether their job is to transmit geographical knowledge, prepare autonomous learners who are able to 'learn how to learn', or promote social cohesion through notions of global citizenship. In practice, teachers combine these aspects, but, overall, the trend has been for school geography to become less concerned with the 'what' of teaching (curriculum) and more focused on the 'how' of learning and the social uses the subject serves. This confusion of purpose has prompted recent moves to clarify and restore knowledge to the curriculum.

Michael Young and the future of knowledge

Michael Young, a sociologist of education, proposes the notion of 'powerful knowledge' as opposed to 'knowledge of the powerful'. In very general terms the latter refers to high-status knowledge associated with the powerful groups in society which sustain inequalities in education and other realms of life, while the former refers to 'knowledge that is reliable, fallible and potentially testable – knowledge that takes anyone beyond their experience' (Young, 2011b) and which all young people can access through what they learn in school. Young raises the question: does geography offer some of the powerful knowledge we want all young people to acquire?

In order to support thinking at a curriculum level, Young has proposed three typologies of future knowledge that currently compete for position in curriculum debates.

- Future 1: subject boundaries are fixed and maintained in an elitist form of knowledge – subject knowledge for the select few, and subject knowledge as a desirable end in itself.
- Future 2: subject boundaries are removed or are at least 'porous' and fluid. There is a focus on generic learning outcomes, such as 'learning to learn' or 'thinking skills'.
- Future 3: Disciplinary boundaries are recognised and maintained but also crossed for the creation and acquisition of new knowledge.

As with all typologies, we need to avoid seeing them as fixed and exclusive, but Young's classification serves as a useful device with which to analyse current curriculum debates in geography. It seems clear that many (most?) geography teachers would reject the Future 1 versions of knowledge as conservative, and that many would argue that Future 2 type knowledge is the most important: even where teachers do not consciously hold this view, in practice they may pursue it in schools through geography lessons that pay close attention to 'learning to learn', assessment for learning and thinking skills. In Future 2, the processes of learning are prioritised over the content of teaching. Future 3-type knowledge is less developed in school geography, though this version is currently promoted in the Geographical Association's manifesto

A Different View (2009) and most strongly through the contributions of David Lambert. It sees geographical knowledge as a social construction, and the job of the geography teacher is to induct students into socially valued knowledge, though it insists that this knowledge is not fixed. Indeed, with the attendant concept of curriculum-making (see Kinder and Lambert's article in this edition), it places a high premium on the skills of geography teachers as making expert selections of knowledge.

An important element of debates about the sociology of school knowledge, despite Young's own revisions of his position, is that knowledge is a social product and as such is grounded in material interests. So far at least, what is missing from these discussions about core knowledge in geography education is an analysis of the material interests and forces that underpin different versions of knowledge. To understand this it is useful to re-visit the discussion on education in Raymond Williams' book The Long Revolution (1961). In this book, Williams argued that the process of industrialisation had led to three revolutions - in the realms of politics, economy and culture – and, according to Williams, it was culture that seemed to lag behind. Williams sought to analyse these changes. In education, the working out of these processes was reflected in three different attitudes to education: the grammar school tradition, the progressive educators and the industrial trainers. The old humanists are perhaps represented by the likes of Michael Gove, who seeks a return to traditional subjects, but it is also found in the work of writers such as Frank Furedi and those associated with the 'think-tank' Civitas who worry about 'the corruption of the curriculum'. In geography this view is represented by Alex Standish, who argues for a return to the politically neutral version of 'scientific'

geography. In many ways this is a backwardslooking agenda, but a question has to be raised about the vested interests that lie behind these arguments (see Morgan, 2011 chapter 1 for an extended discussion). Most geography teachers hold to the Future 2 version of knowledge, and this is reflective of the new common sense that education, primarily, is about preparation for life in the world of work. This idea is hegemonic and encompasses a broad spectrum, from the 'curriculum modernisers' who see the changes in the new economy as ushering new forms of social relations that are positive and liberating, to the more narrow versions of vocationalism promoted by organisations such as Edge (www.edge. co.uk). At present, there is little real support for the Future 3 version of geographical knowledge, and the interests it may serve are ill-defined. The most-developed position is that advanced by David Lambert, who, through his adaptation of the metaphor of the 'Garden of Peace' (see Wadley, 2008), seeks to restore geography classrooms to a place where students have the opportunity to reflect, an up-dated version of liberal humanism to counteract the fast-capitalist educational world we currently inhabit. Whether this is a viable project remains to be seen, and the challenge that Young's work raises is what a geography curriculum that represents 'powerful knowledge' for all students would look like. At any rate, it is encouraging that geography educators are devoting time and energy to this debate. | **TG**

What do you think about Young's classification of knowledge? What do you think a geography curriculum that represents 'powerful knowledge' for students would look like?

Add your comments to the debate about what geography should be taught in schools? at www.geography.org.uk/getinvolved/ geographycurriculumconsultation

Useful websites

Edge is an independent education foundation: www.edge.co.uk. A Different view: www.geography.org.uk/resources/adifferentview

For further reading

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The National Curriculum Review: what geography should we teach?

The 2010 White Paper, *The Importance of Teaching*, (DfE, 2010) offers a root and branch revision of the national curriculum. It promises to raise standards by specifying the 'essential' or 'core' knowledge of school geography and at the same time it will return professional responsibility to teachers to select what to teach (above and beyond the 'essentials'), the intention being that the reforms should give schools greater control over the wider curriculum.

The focus for this article is the 'what' of teaching, namely the geography/ies that we believe students should learn and how we consider this in the context of a changing curriculum. The Geographical Association has launched a nationwide consultation on the question: 'What is a better school geography?' (www.geography.org. uk/getinvolved/geographycurriculumconsultation). The consultation focuses on what we should teach in geography. It is designed to prepare the ground for contributing to the second phase of the National Curriculum Review (NCR) in early 2012. This will focus on the writing of new programmes of study for geography. Because the White Paper refers frequently to 'core' and 'essential' knowledge, as well as encouraging a heightened professionalism whereby teachers will select what and how to teach, it is very important to focus on questions of knowledge.

Geographical knowledge

To open up a debate on knowledge is notoriously risky because for some reason we appear ever so keen, as a profession, to opt for simple dichotomies: knowledge or skills? – knowledge or understanding? – teaching or learning? This is unhelpful because, alongside everything else, we have to accept that, as geography teachers with a subject specialism, we are in the knowledge business!

The real purpose of this article, therefore, is to help us all avoid what one distinguished professor of education calls the seesaw curriculum (Elliott, 2011). He likens curriculum policy making in this country to a form of bipolar disordered thinking: it is either 'subject based' or it is 'learner centred' and we seem to swing from one to the other at regular intervals.

Avoiding folk remedies

We want to encourage scepticism toward the deeply entrenched 'folk pedagogy' which appears alive and well in the White Paper, and that seems to see students as learning only from 'didactic exposure to propositions cast as fact, principles and rules' (Elliott, 2011 p. 27).

But we also encourage a similar wariness about other folk remedies – a 'personal learning and thinking skills (PLTS)' curriculum, for example, that can sometimes appear to presume learning happens entirely through social interaction between peers and that there is nothing to learn that cannot be drawn from personal experience. This undermines the whole idea of education.

Rather, we argue that curriculum making (see Figure 1) is a central concept to teachers' professionalism in that it acknowledges the role of the subject discipline, students' experiences and adventurous pedagogies. It is the concept that underpins the GA's key stage 3 and GCSE Toolkits (Kinder, 2008). We do not argue here that developing personal learning and thinking skills, or acknowledging lived experience, is irrelevant to productive teaching, and neither do we argue that the accumulation and development of factual knowledge is trivial. All are important.

Teachers' subject knowledge

John Dewey, the educator who is most commonly associated with child-centredness, recognised a century ago that teachers who lack depth of understanding in their subject will be impoverished as teachers.

This is because their selection and communication of facts and principles may be partial, faulty or inaccurate. Moreover, the teacher with limited subject knowledge may not know how to respond to questions or difficulties students encounter. In such cases the curriculum experienced by students as a whole may lack passion, direction and/or commitment, and be perceived by students to be not only dreary but also useless.

Also they lack the disciplinary understanding necessary to ensure the appropriate organisation of the subject curriculum around issues, questions and procedures valued by the discipline.

Geographers raise particular questions about the world in particular ways (as do historians, scientists and artists). If school geography is to help students participate in active ways in a 'lifelong conversation about the earth as our home' (Geographical Association, 2009), then it is up to the subject specialist geography teacher to translate disciplinary knowledge and understanding into pedagogical action. As Firth (2011) argues, 'content and pedagogy are already interrelated and creative and effective This article considers what we should be teaching in geography. This is to prepare for contributing to the second phase of the National Curriculum Review in early 2012. It explores the question what is the 'essential' or 'core' knowledge' specified in the 2010 Education White Paper.



Figure 1: Curriculum making. The diagram shows the process by which teachers hold competing priorities in balance. Great teaching is not just about pedagogy and serving student needs. It is also about knowing what to teach.



teaching is an outcome of recognising that interrelationship.'

So, we need to discuss knowledge. We are taking it as read that we do not wish to promote the study of geography as if it were merely about mastering a predetermined 'body of facts'. Facts are not unimportant but they only really become knowledge, at least of any depth and lasting value, when they become connected and part of a system – when we can give them meaning.

What is core knowledge?

Core knowledge can be defined as geographical knowledge in the popular imagination. Often this is confused with low-status 'pub quiz' material – that is, inert and relatively useless information which is often shunned by schoolteachers as unimportant to teach and learn in formal education.

Indeed, if core knowledge is taught badly, as disconnected or fragmented facts, by rote, it probably does remain inert and relatively useless. Core knowledge is the sense we make from the limitless information we can find in atlases and globes. Thus, teaching case studies carefully – putting them in locational context, for example – contributes to student's development of core knowledge.

E. D. Hirsch has argued, over a period of 25 years, that core knowledge is significant in building cultural literacy. It is vital in strengthening and contextualising deeper understanding of issues, processes or case studies.

For geographers, core knowledge can be equated with the spatial setting or context of geographical patterns and distributions, plus a range of geographical phenomena such as climate patterns, major mountains ranges and crustal plates, distributions of population and megacities, natural resources ... and so on.

It comes from careful and well-resourced teaching, not from rote learning!

Teaching and learning core knowledge

There was a time when school geography appeared to consist *only* of core knowledge. This was taught (and memorised) by rote. It almost seemed to worship lists and the accumulation of junk knowledge – junk knowledge because, unless taught really well this information was not really allowed to become useful knowledge. The accumulation of fragmentary facts as an end in itself is like learning a language by simply learning lists of vocabulary: you may know a lot of words but you still cannot speak the language. For that you need grammar.

By the same token, you cannot speak a language by only knowing the grammar! You need some vocabulary. The grammar of geography is in its ideas and concepts. These are vital to geographical understanding: vocabulary and grammar need to work together.

Geographical core knowledge does not get learnt just by chance and young people's acquisition of core knowledge is by no means guaranteed. This is why it needs to be taught in schools. For some young people, school may be the only place where they have the opportunity to make sense of core knowledge, to question its validity and in doing so to be able to move, intellectually at least, 'beyond their local and particular circumstances' (Young, in Firth, 2011, p. 15). Thinking about geographical knowledge is important. It is helpful, for instance, to be able to make distinctions between different forms of knowledge. We know there is more to learning geography than its facts. We need to be able to articulate this not only to ourselves, but also to others such as ministers, parents and, most significantly, students.

Fortunately, the model of the curriculum that appears to be adopted by the government readily embraces a knowledge perspective. A national curriculum should limit itself, Tim Oates (2010) argues to 'a statement of content – a listing of concepts, principles, fundamental operations and key knowledge.' This is very close to matching how others have described subject knowledge in the curriculum, for instance by Anderson and Krathwohl (2001) and recently summarised by Lofthouse (2011). This distinguishes four types of knowledge:

- 1. **factual knowledge**, including terminology (it is this that we equate most easily with core knowledge or vocabulary)
- 2. **conceptual knowledge**, including organisational frameworks and models, principles and generalisations (which in the box we refer to in terms of the subject's grammar)
- 3. **procedural knowledge**, referring how to undertake subject disciplinary investigation and enquiry – and communication, which in geography may emphasise graphicacy
- 4. **meta-cognitive knowledge**, referring to the individual's self-efficacy in the learning, including the application of thinking, analytical or organisational strategies.

An essentials curriculum probably needs to stop short after points 1 and 2 the above list, as 3 and 4 are more pedagogic and definitely under more local control, as is the choice of context (or case studies). All of this is easier said than done. The first national curriculum in 1991 attempted to select the factual and conceptual knowledge (and tried to specify enquiry methods) for each key stage, in sequence. To some extent it even selected the place contexts too. It was overloaded and unworkable and subsequent revisions have relaxed the content prescription. In 2008, the concept-led revision was very thin in content prescription – something that the current root and branch review aims to put right, while hopefully avoiding the mistakes of the past. But how?

Would we be happy to accept a list of essential factual core knowledge (point **1** in the above list), and take the responsibility for the rest ourselves? That might be one option. Alternatively, should the statutory curriculum focus on point **2** and leave most of 1 to teachers – especially the selection and building of locational world knowledge?

Either way, geography teaching professionals have a great opportunity ahead, as curriculum makers, to help shape a better school geography, rigorously based on the development of knowledge and understanding, incorporating a wide range of skills and above all thrilling, interesting, current and useful. | **TG**

Read the more thoroughly considered draft curriculum outline and take the opportunity to contribute to the consultation.

Visit the website and have your say on the feedback page

www.geography.org.uk/getinvolved/ geographycurriculumconsultation/feedback.

Useful websites

E. D. Hirsch's sequence of core knowledge: www.coreknowledge.org A Different view: www.geography.org.uk/resources/adifferentview

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Online resources

A UK core knowledge presentation has been created with the GA's partners ESRI (UK). It is available via the GA website (www. geography.org.uk/ getinvolved/geography curriculumconsultation) and it designed to stimulate some thought about the place of core knowledge in the geography curriculum.



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John Hopkin

Sampling the world

In this article, based on his presidential lecture at the GA conference 2011, John Hopkin considers how teachers select the content of the geography curriculum and the places students learn about in geography lessons. One of the joys of geography is that the world really is our oyster: we could literally teach about the whole of planet earth and its people. Yet to create a manageable geography curriculum, we need to be very selective in what we choose to study. However, the way we sample the world also says something about the way we, as individuals who are geography teachers, perceive it. Moreover, the pace of change in the world requires us to keep our thinking and our subject knowledge up to date, or run the risk of teaching about fairly recent history rather than current reality.

Secondary school geography tends to sample the world using the main principles of physical and human geography to guide the selections of content, with considerably less emphasis on studying places as a whole. One downside to this approach is that places may become largely a backdrop, made up of bite-sized chunks to illustrate the issues and themes, with little opportunity for students to study places in the round.

A second problem is that places tend to become defined by the issue they are used to exemplify, and so can become predictable and typecast. For example, Bangladesh is often used to illustrate the causes and impact of large-scale flooding: to a great extent, Bangladesh has become defined by flooding in school geography and students learn little about other aspects of life there. Bangladesh has become a 'single story' for learners (Biddulph, 2011); there are many other examples in school geography.

Finally, this approach also risks leaving out important places. For example, many students learn relatively little about the USA in school geography despite its global importance. Also, when the selection of places is a secondary consideration, there is less opportunity for students to build up a coherent framework of world knowledge. In the light of all of this, our claims to be the world subject begin to look rather flimsy: Ofsted suggests we need to raise our game:

All but the best students interviewed were spatially naïve. The mental images they held of the world were often confused and they were not able to locate countries, key mountain ranges or other features with any degree of confidence. For example, they understood about development issues in Kenya but had little or no idea of where Kenya was in Africa ... Their study of geography was isolated and not set within a context that they could identify with. (Ofsted, 2011, p. 22)

This is surely a problem of the type of knowledge we help students construct, not only about the way the world works, the processes and patterns, but also where places are and what they are like.

In addition to the 'place problem' we, as geographers, also need to critically consider the models we use to help us understand the world



Figure 1: The Gapminder world chart shows a continuum of development in contrast with the Brandt north–south model. Source: www.gapminder.org.

	HDI	Life expectancy	% employed in agriculture
Country A	0.750	76.7	14.3
Country B	0.767	73.2	30.5
Country C	0.699	72.9	19.3
Country D	0.698	72.0	55.3
Country E	0.623	68.9	43.3

as a complex reality. One of the defining features of human societies is the significant difference in human welfare from one to another. On a alobal scale the dominant model used to explain this in school geography is the MEDC-LEDC paradigm, which has its origins in the Brandt report's north-south model (Brandt, 1980). However, by suggesting there are basically two groups of countries, rather than a continuum of human welfare and development, as the Gapminder website graphically shows, this model has only a tenuous relationship with contemporary reality (see Figure 1). In geography we often need to simplify reality to make it more understandable (Taylor, 2011) but there's a real danger that the model gradually takes on a life of its own, then stays entrenched in our planning, teaching, exam specifications and resources.

I think we've reached this point with the LEDC– MEDC idea. For example we commonly teach students that in LEDCs most people work in agriculture, people have low life expectancy, poor education etc; and the converse in MEDCs. So to match the model, we select the countries with lowest human development to represent all LEDCs; they become 'an undifferentiated entity' (Roberts, 2009). Or we can even end up ignoring reality to make a country fit the model. For example Mexico is often used as an example of a LEDC – which country is it in Figure 2?

The other problem is that the model becomes locked in time, whereas progress happens in time and space. The past four decades have seen very significant improvements in human welfare and development: since 1970 the world as a whole has averaged a 41 % average increase in HDI, with striking improvements in education and health (United Nations, 2010, p. 28). There are clearly still huge gaps from one end of the spectrum to another, within as well as between countries (e.g. life expectancy in Afghanistan is 45 years, compared with 83 in Japan). The question for school geographers is: do we focus on the gaps (the current model) or on the progress?

So how do we, as geographers and teachers, keep our own subject knowledge sufficiently up to date so that we still teach about the real world? The LEDC-MEDC model not only represents reality poorly, but it makes a real difference to how we perceive places: it is an illusion that must surely affect students' world view. It makes it easy to forget that development is dynamic, that it is about progress, and development and progress happen across the world. But it is also a problem with our dominant paradigm: starting with the issue (contrasts in human welfare), then looking for a model and working outwards, rather than starting with reality and investigating the model to see how useful it is.

Progress in geography requires a more sophisticated view of the world, including sampling the world with more rigour. The White Paper *The Importance of Teaching* (DfE, 2010) provides a significant challenge for the geography community, with its strong focus on knowledge. It may also be an opportunity to rethink and perhaps rehabilitate geographical knowledge (Lambert, 2011), including a fresh look at how we select the geographical knowledge appropriate for students growing up in the 21st century. | **TG** Figure 2: Can you match the country to the data? Which is Brazil, Romania, Mexico, Moldova, Georgia?

Sources: HDI and life expectancy (2010) from http://hdr.undp.org/en/ statistics/ (accessed 9 June 2011); percentage employed in agriculture (2006) from http://data.worldbank.org (accessed 9 June 2011).

Useful website

Gapminder: www.gapminder.org

(accessed 5 April 2011).

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Key to Figure 1 A = Mexico, B = Romania, C = Brazil, D = Georgia, E = Moldova. Dr John Hopkin

was President of the Geographical Association from 2010 to 2011.

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Explaining students' mistakes using concepts from psychology

Psychology, and in particular visual perception, can offer explanations for students' mistakes in geography. The purpose of this article is to illustrate, using examples, some of the ways in which this occurs. Cartographers use concepts drawn from psychology in the production of maps. For example, the colours chosen for layer tints on relief maps are based on a physiological effect known as 'advance and retreat'. The theory suggests that, when visible light passes into the eye, it inversely refracts relative to its wavelength, so that longer wavelengths, i.e. those at the red end of the spectrum, appear closer than shorter wavelengths, i.e. blue. On relief maps, therefore, hues at the red end of the spectrum are often chosen to depict high elevations and blue and green are employed to depict lower ground, creating a sense that the mountains rise up from the plains.

However students make mistakes in interpreting maps. Identification and correction of perceptual errors is important because, once embedded, they are often difficult to erase and frequently lead to other misconceptions.

Locating places

Many students believe that London is at the same latitude as New York. In reality London, at 51° 30' N, is much further north than New York, which is located at 42° 40' N. Tversky (1981) suggests the reason for the error is that Europe is frequently aligned with North America, which encourages the belief that Europe is further south than it really is. Similarly, Africa is often aligned with South America, which encourages students to think that the Equator runs through the Sahara.

Places are also mentally aligned along a north– south axis. For example, Spain is often viewed as due south of Britain, whereas in fact it is slightly positioned to the south-west. Similarly, the island of Sri Lanka is often perceived as being aligned with the southern tip of India whereas it is actually to the east.



Figure 1: Europe is frequently aligned with North America which can lead students to think that Europe is further south than it really is. Photo: Barking Photographic. The vertical and the horizontal occupy a privileged status in perception and language, in that we often compare objects with the horizon, or with upright figures. These orientations are therefore useful in helping us to fix and remember locations. The tendency to align positions in this way is known as an **alignment heuristic** and is one source of error in locating places.

A related idea is the **rotation heuristic**, which is the tendency to mentally rotate a tilted object so that it is more vertical, or horizontal, than it really is. Britain, for example, is often remembered as more upright than it really is, which consequently leads many students to believe that Edinburgh and London are on the same longitude, whereas in reality Edinburgh lies further west than London. Similarly, students often mentally rotate South America and as a result find it difficult to believe that Santiago in Chile is located east of New York (Tversky, 1981).

Distinguishing land from sea

Students often have difficulty distinguishing seas such the Mediterranean from the surrounding land areas. The problem of distinguishing an object or figure, which in this case equates with land, from its background or ground as it is known, i.e. the sea in this example, is one of the fundamental organisational concepts in visual perception. According to Gestalt theory a figure is distinguished from its ground when it is enclosed, or is the smaller of the two areas, or has a vertical or horizontal alignment, or has good continuation. The problem in the case of the Mediterranean, which is almost an enclosed sea, is that it looks like a figure which makes it difficult to distinguish from the surrounding land areas. For a further discussion of the problems of distinguishing sea from land see MacEachen (1995).

Interpreting contours on relief maps

Ideas about figure and ground may also explain why some students have difficulty interpreting contour lines on relief maps (Wiegand and Stiell, 1997). One problem is that contours produce open rather than closed patterns, which makes it difficult for students to distinguish figure from ground. The difficulty this creates was demonstrated in a study by Boardman (1985) in which students, when asked to shade an area on a simple contour map below 91 m, shaded only the area between this and the next contour line, which was 76 m, and ignored the land below this line.

A further reason why students have difficulty interpreting isarithms such as contour lines relates to Gibson's texture gradient theory. The theory suggests that, in visual images, textures which become finer and smoother as they recede into the background create a sense of depth. Lines, for example, which are drawn finer and closer together as they approach the horizon create a sense of perspective. This concept may, however, create a false sense of depth on relief maps which contain closely-spaced contours. It was, for example, one reason offered for the difficulty



Figure 2: Test question: 'In which direction is the river flowing?'

students encountered in interpreting convex and concave slopes in a study by Griffin and Lock (1979).

Rivers flowing south

The belief that rivers, when drawn on paper, flow towards the base of the page is deeply engrained. It is difficult to conceive of water, a liquid, flowing anywhere but downwards, which is why many students have difficulty believing the River Nile flows up the page. Western cultures also read from the top to the bottom of a page, which further reinforces the concept of downward motion. The belief that rivers flow downwards, together with the convention that most maps place north at the top of the page, frequently leads to mistakes in map interpretation. For example, despite the presence of contours, the author has observed that many students, when asked in a test to identify the direction of river flow in Figure 2, will suggest south-east, rather than north-west.

Colour on maps

Colour symbolisation and emotional responses to colour have been major areas of research in psychology. Red is associated with heat, dryness and danger; blue is linked to cold and wet conditions; and green to lushness and fertility (Patton and Crawford, 1978). Blue, unsurprisingly therefore, is the colour conventionally chosen to depict rivers and water bodies, but such a strong association can sometimes lead to misconceptions. Some students, for example, literally believe that rivers are blue (Dove et al., 2000). Another problem is that motorways, which are also coloured blue on 1:50,000 Ordnance Survey maps, are often mistaken for rivers, but the reverse is rarely the case.

The choice of colours selected for the layer tinting on relief maps, as mentioned at the beginning of the article, can also be a source of misinterpretation (Patton and Crawford, 1978). The colour green, for example, which is used to show low elevations, is often misinterpreted



Figure 3: Motorways can be mistaken for rivers on 1:50,000 Ordnance Survey maps. Photo: Shaun Flannery.

as lush grassland, while light brown or yellow is believed to represent sparse vegetation and aridity rather than low relief (Wiegand, 2006).

Estimating distances

When asked whether Newcastle-upon-Tyne or Brussels is closer to London, many students would probably incorrectly suggest 'Newcastle'. The explanation for the error again links to Gestalt theory, which suggests that two points located within one figure, in this case Britain, are more likely to be perceived as closer together than two points in separate figures, i.e. Britain and Belgium.

Matlin (2002) suggests that estimating the distance between two points is influenced by three factors, namely the number of intervening cities, semantic categories, and whether the points are landmarks or non-landmarks. Where there are no intervening cities between two

points, the distance is perceived as shorter than it would be if, for example, there were four intervening cities. It is for this reason, similarly, that people tend to overestimate distances in urban areas such as London, where there lots of landmarks along the route. Two locations which are semantically close – for example, two churches - are also often perceived as closer together than, for example, a church and a swimming pool. Travelling to an important, large or distinctive landmark from a smaller, less significant non-landmark also appears to be shorter than the converse. For example, travelling to London from a rural village in Oxfordshire may well appear to be shorter in terms of distance than journeying in the opposite direction.

Conclusion

This article has illustrated how findings from cognitive psychology can offer explanations for students' mistakes in geography. Psychology is a popular subject and students are likely to take an interest in the reasons for their mistakes. Moreover, raising their awareness of the connections between visual perception and geography may encourage students to identify further links between the two areas.

There is considerable scope for further research into how theories of visual perception relate to geography. For example, are river meanders perceived as more symmetrical, and roads straighter, than they really are? How do main roads and rivers distort estimations of the distances between places located on either side of these barriers? Are road junctions perceived as intersecting more at right angles they do in reality? On a 1:25000 map, are red symbols some of the first to be noticed by students? Are the blue tourist symbols – for example for nature reserves - always associated with water features? Answers to such questions may help to arrest perceptual errors which, left unchecked, could persist into adulthood. | TG

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Wiegand, P. and Stiell, B. (1997) 'Children's Relief Maps of Model Landscape', *British Educational Research Journal*, 23, 2, pp. 179–92.

Gestalt theory: a psychological approach that identifies a number of laws of organisation underpinned by the idea that

Alignment heuristic: a series of figures which are remembered as being more aligned than they really are.

Rotation heuristic: a tilted figure which is perceived as more vertical or horizontal that it really is.

Wiegand, P. (2006) Learning and Teaching with Maps. London: Routledge.

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Cities of the future: a cross-curricular project

This cross-curricular project was launched in an assembly that began to consider the importance of cities. It started out by looking at how cities are important in everyday life, introducing the idea that, even if we live in the countryside many decisions that affect our lives are made in cities. Cities are often hubs of global decision-making. Building on from this, we considered the fact that more people live in cites than in rural areas, and that rapid urbanisation is still continuing on a global scale. We concluded with some identification of city problems.

In geography lessons

In subsequent geography lessons students began learning about the growth of cities, the reasons for the growth of cities and the problems caused by urban growth. Finally, the concept of sustainability was introduced as a potential solution to some city problems. Students not only learned about environmental sustainability, but considered the concept more holistically, including economic sustainability and how to make cities inclusive places.

Finally students were put into groups to design their realistic cities of the future – not sci-fi cities of the distant future but cities of the near future. Students had to prepare a 'concept model' of their city. The cities had to be not only environmentally sustainable but also sustainable in terms of economics and governance. This task was to lead into 'Cities Day', a day off timetable where students were to showcase their ideas and their understanding.

Cities Day

The main aim of this day was to produce an exhibition of students' 'cities of the future'. For the first two hours of the day, students finished designing the models of their cities, which were then exhibited in the school's main hall. This exhibition comprised 70 different and exciting models of sustainable and inclusive cities (see Figure 1). At the time, students also looked at video clips of real examples of sustainable communities. In the afternoon a carousel of activities was organised, with every student spending time evaluating the cities on display in the hall created by their peers. Every student also attended two other workshops run by different subject teachers. There was a session taught in religious studies looking at why Mecca is viewed as such an important place; a science lesson looking at how lichens in urban environments can be used as a measure of air quality, our Chinese language assistant taught a session looking at the difference between his city Nanjing, and London.

History sessions explored the historical importance of Rome, and in geography we learned about at the growth of Dubai.

The workshops gave students different experiences and perspectives enabling them to appreciate that cities are not homogeneous places. Instead, they are defined by a myriad of factors such as social and cultural shifts, historical processes and even scientific developments. At the end of the day prizes were awarded for the cities that demonstrated imagination and an understanding of key ideas such as sustainability and inclusion.

Follow up

In the geography lesson following the 'Cities Day', students were asked to evaluate and reflect on their experience. They explained why they designed the city they designed. They also reflected on how they could improve their city based on ideas from the other cities they had seen in the exhibition. This gave an opportunity to assess individual students' understanding and contribution to a group project. Students tended to annotate pictures of their 3D city, giving reasons for the choices they made.

Reflection

This activity involved 210 students being off of timetable for a whole day. As is always the case with such an event, this project succeeded, mainly thanks to the support across the school. In addition, the day was genuinely inexpensive to run, with the only cost being less than £50 for some materials.

The original idea for this project came from a workshop at the Tide Annual Conference in June 2008. | **TG**



Figure 1: City of the future produced by students on the year 8 cities day. Photo: Graeme Eyre

Graeme Eyre

For the last three years the Anglo European School, has run a crosscurricular project with year 8 students looking at global cities. This was led by the geography department but brought in a variety of different subject areas. This article describes the project and reflects on the outcomes.

Accompanying online materials

Online resources

Go to *www.geography. org.uk/tg* and click 'Autumn 2011' to find Graeme's resources for the cities day.

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Sophie King

This article outlines a short scheme of work taught to year 9 students about New York City and its status as a global city. Outlined here is a rationale for teaching students about New York as well as a discussion about the processes and resources used.



Accompanying online materials

Figure 1: What do year 9s think of when they imagine New York? Photo: Anna Totterdell

New York City: teaching a global city

Take a seat. Now close your eyes. Clear your mind, and imagine that you have just won tickets for the holiday of a lifetime. The destination? ... New York City.

I smile as I look around the classroom and see 25 silent year 9 students lost in a dream world of yellow taxis, shopping bags, Broadway shows, basketball games, skyscrapers and a 100 other iconic images of New York City. But New York City is a dream destination for more than just my year 9 class: visited by 44 million tourists a year, and home to over 8 million people, this is a city with some serious global appeal.

What is a global city?

Sassen (1991) cites New York as a prime example of a global city. She identifies a range of indicators that determine a city's global status, including cultural diversity, conglomeration of power and finance and iconic cultural nature. This scheme of work sought to explore and evaluate the extent to which New York fulfils these criteria whilst also considering the changes the city put into place in order to facilitate its global growth. To this end our key enquiry questions were are follows:

- 1. To what extent can New York be considered a 'global city'?
- 2. How did New York become a global city?

Why teach about New York?

My passion for New York came, not from films and famous American TV series, nor from my experiences as a tourist, but from my experiences as an undergraduate geographer given the opportunity to visit the city and explore it through a geographical lens. This lens enabled me to appreciate New York in very different ways and caused me to question representations of the city in popular culture. I was fascinated to learn of New York's former dark and disturbing reputation – an image that seemed entirely alien



to someone who had grown up with a perception of New York as a city of wealth and power. Yet, standing looking over the site of ground zero, I realised for the first time the fragile nature of our global economic hubs. As I looked across a site that once represented the power and wealth of capitalist America, all I saw was rubble and memories of lost loved ones. New York became in my eyes a city of contrasts, with large areas of nature fighting against an ever-expanding skyline, areas of great wealth bordering those of social deprivation, and a diversity of ethnicities the like of which I had never experienced on such a scale before.

As a beginning teacher, I also wanted to teach something that I really wanted to teach – something I had learnt from my degree, rather than something dictated by a specification or prescribed in someone else's scheme of work. However, my commitment was more than just personal interest: I truly believe that New York is a fantastic city to study, and that studying it can make a valuable contribution to students' understanding of globalisation.

So why is it so important for my students, living 3,000 miles away, to study global cities such as New York? As my year 9's daydreams proved, New York is a global city that many *think* they know, and which some students may even have had the good fortune to have experienced firsthand. Yet how frequently do we ask them to look beyond the stereotypical tourist attractions and see the alternative perspectives of this apparently familiar place. My aim in designing this scheme of work was to draw on Sassen's (1991) criteria in order to challenge students to explore how New York has been largely altered into a global city through human actions. Mass migration, the deliberate rebranding campaign in the 1970's, and the devastating effects of the 9/11 terror attacks on the twin towers in the heart of the financial district, were core components of the unit of study. Students were encouraged to explore the broader geographical concepts from Sassen through a range of teaching and learning strategies

Teaching and learning strategies

Students were introduced to the concept of place rebranding – a popular feature of many A level specifications – in order to identify how New York has altered its one-time image of high-crime rates, drugs racketeering and extreme poverty and degradation to become a global icon. To do this students were shown a series of video clips from a useful programme entitled 'Nightmare in the city that never sleeps' and were asked to identify problems the city faced and possible



reasons for these problems. Students were then introduced to the concept of rebranding through a demonstration of popular products that have been rebranded such as Opal fruit sweets. A cloze activity then ensured students had a background knowledge of the how New York utilised the rebranding concept to become the first ever example of place marketing. Having understood how New York was successfully rebranded, students were then challenged to apply a globally recognised concept to their local area, a north Nottinghamshire ex-mining community. Students found this activity really enjoyable and they took on the challenge of re-presenting their place with energy, enthusiasm and some interesting geographical perspectives. Students used ICT, images and music to create a rebranding scheme for their local area, including a logo, slogan and jingle before their peers evaluated how successful they felt these campaigns would be.

Migration is a common concept in most key stage 3 schemes of work and GCSE exam specifications. Through this scheme of work students were taught how the causes of migration alter over time. Using a mystery students were asked to identify push and pull factors for Irish migrants coming to New York during the Irish potato famine. This activity was designed to provide the stimulus for a further discussion on how New York is a city with a diverse ethnic makeup which is often visually very apparent within particular spatial areas of New York such as China Town and Little Italy. Mapping the city helped students to appreciate the very distinctive ethnic characteristics of each area.

One of the most appealing characteristics of studying geography is the subject's ability to improve one's geographical imaginations through the use of images. When examining the alterations in the use of the former site of the twin towers, I asked students to consider how the site might be viewed through different geographical lenses by a range of stakeholders, including business tycoons, developers and relatives of those who died there. I also saw this as an opportunity to improve students' visual literacy by examining and annotating a range of photos of the twin towers site to compare how the function of a site can be altered by human activity.

Throughout this scheme of work students constantly built on their prior knowledge as they examined the multi- faceted nature of New York as a global city, before demonstrating their understanding of new geographical concepts such as rebranding through creative, practical examples. The level of challenge increased throughout the scheme to reflect students increasing cognitive development provided through a variety of activities as related to the revised version of Bloom's taxonomy (Bloom and Krathwold, 1965) shown in Figure 2.

I believe that students engaged so readily with this scheme of work as they were able to identify the relevance to their own lives. Many students were able to recognise iconic New York locations from poplar media sources and were able to cite copied examples of the now world famous 'I ♥ NY' rebranding campaign. New York no longer felt 3000 miles away, one of the world's leading global cities suddenly became a great deal more local.

Globalisation is a key concept in geography and we are constantly reminded in the press and elsewhere that we live in a global era. Whilst New York is a fascinating example we have to be careful not to reinforce students 'touristic' perceptions of the place. Understanding the global nature of the city enabled students to appreciate New York as a more fallible and ever-changing place. | **TG**

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Figure 2: Bloom's taxonomy (revised), based on an APA adaption of Anderson and

Krathwold (2001).

Source: www.apa.org

Figure 3: The 'I♥ NY' rebranding campaign began in 1977 and was designed by Graphic designer Milton Glaesar to sell New York as a tourist destination. Following the September 11 terrorist attacks he produced a modified version reading 'I Love NY More Than Ever'. Photo: Ruth Totterdell

Online resources

Go to www.geography. org.uk/tg and click 'Autumn 2011' to find Sophie's lesson plans and resources for this unit of work.

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Chris Pearson

This article describes a lesson with year 8 students on the theme of weathering. Students are introduced to an aspect of physical geography early in the academic year and then maintain an ongoing conversation about this throughout the year. An important feature of this work is its connection with the outdoor classroom.

Figure 1: An interesting volcanic rock formed from solidified bubbling lava. Photo: Chris Pearson.

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Pet rock: bringing geology into the classroom

The teaching process

After teaching students about the four types of weathering – chemical, freeze thaw, onion skin and biological – through many images and some careful explanation from myself, I ask students to close their books as I have a special 'pet', which as a treat I have brought in to meet them.

A sense of suspense and intrigue is thus created! I then produce from the store cupboard a cardboard box which I gingerly bring to the desk (acting as though it is very sensitive), and I ask for quiet so we don't scare my pet.

Inside the box is my pet: a rock! it is helpful to select a fairly interesting-looking rock such as one with lots of holes in, e.g. volcanic rock, or one with seams/layers. Rock from the local area that students can see in their own environment is a different angle to take. Ultimately the rock needs to capture students' interest.

I continue by asking students what pets they have at home; this builds a connection and encourages students to speak with confidence about something they know well. I tell them that my pet is different from the usual kind of pet.

I then tell them that as geographers we use skills to find things out, and we consider what investigative skills we have. Students are then asked how they might find out what is in the box without looking inside What clues do we have? I encourage them to consider size of box (could it be something large but curled up?), and also to use their senses, listening for sound and sniffing for any smells. To maintain some suspense we sit



in silence as we all listen for any noise clues from the box – of course there is no noise – but it is interesting how someone always imagines they have heard something rustling or making a noise! Next, we all take in a big sniff at the same time for any smells! Again someone always imagines they can smell something horrible – I tend to play along, saying they could possibly be right.

I try to build students' sense of expectation and then a volunteer is asked for to come and lift out the pet – a sea of hands normally shoots up. However, I walk around, eliminating anyone who has dirty hands or any cuts as I don't want my pet being made dirty; students frantically try and clean grubby hands! I then select one lucky volunteer to come and gently put his/her hand into the box without looking and lift out my pet; the rock is underneath lots of crunched-up newspaper bedding.

Just before this happens we discuss what the pet might be from the clues we have. We know it is unusual – snakes, spiders, scorpions, lizards are normally mentioned – what will it feel like – slimy, spiky, slippery, hairy? Often the volunteer bottles out at this point, which is good as it prolongs the need to know, but there is always at least one student (as always!) who will take the chance and put their hand in the box, no matter what, and feel around for the mystery pet.

By now the tension is often unbearable for the students – a need to know has been created! Finally student puts a hand in the box, feels around and pulls out ... a rock! Stunned disbelief all around is normal. I then explain that we are going to adopt this pet as our class pet, and that we are going to make it live outside all winter and then find out how it has survived over the next six months. We then have to decide on a name. I get students into groups to think of a name for our pet rock (they love this) as I walk around, letting them stroke, pat and talk to our pet rock.

We write suggested names on board (the dafter the better as it sticks in their minds more and creates a sense of ownership). The class vote for the most popular name as we also consider the nature of democracy and decision-making in our classroom. Everyone has one vote and we have to agree with the majority.

Pet rock as a geological artefact

I tend to react offended and hurt (I appreciate that this will not suit every teacher) that students are being so rude; my special pet is 50 million years old and nobody else in the world owns one like it. I then tell then something about the rock – where it is from, where else in the world this type of rock is found, how it was made, how old it is and its physical qualities. We look at images of features created by the rock type and have a conversation about the significance of our pet rock to human activity. It is important to put the pet rock into some form of geological/ geographical context if the purpose of having the pet in the first place is not to be lost. I find that by this stage students are genuinely curious and have lots of questions of their own to ask.

Writing task: our pet rock

In a writing task students explain how we have acquired our pet rock, what it is called and a little bit about the history of the rock. They then complete the table in Figure 3.

I tell students that we will be hiding the rock outside so no one can find it and that we will be using map skills (directions, distances) to track it down in six months' time. Student mobile phones (with cameras) can be used to take a photo of our pet, so we can compare the difference in six months and we can see how it has survived. We will take its photograph again and see who is the closest in their predictions from table above.

And finally ...

I hide the rock. I normally half-bury it somewhere where it will not be found and also somewhere to make it look grubby when it is unearthed. Whilst we know nothing will probably happen to it in six months, this is valuable as students can begin to consider why this is so and start to get to grips with the significance of time in relation to rock degradation.



To maintain the sense of drama I tend to tell students not to lie awake at night worrying about our pet having to live outside in the cold, as this is what rocks like to do! In the following weeks I find many students stop me around school asking how our pet is getting on, which suggests that students are talking/thinking about their geography lesson outside the classroom.

This activity could be developed and students could be asked to acquire their own 'pet'. They could research their pet's geology and also see how it has fared after six months. Different rocks could be compared in all sorts of ways: formation, location and use. | **TG**

My reason

Figure 2: What is the story of pet rock? Photo: Shaun Flannery.

Figure 3: How weathering is likely to affect our pet rock

Type of weathering Is this type of weathering likely to happen to our pet rock while living outside our school?

Freeze thaw

Biological

Chemical

Onion skin

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Simon Renshaw

Following on from the article 'Creative thinking and geographical investigation' in the last edition of Teaching Geography (Summer 2011). this article considers how peer assessment and technology can enable students to begin to judge the creative angles that they bring to their work.



Accompanying online materials

Figure 1: Creatively showing the albedo effect. Photo: Simon Renshaw.

Creative thinking: assessing students' learning

Every child is an artist. The problem is how to remain an artist once he grows up. (Picasso)

Creative thinking is certainly not an innate gift but rather a skill that we can all learn, practice and use. However there is some evidence to suggest that in many schools the high-stakes examinations culture, where getting the 'right answer' seems to be of paramount importance, there is a real danger of systematically teaching students out of their creative capacities (Land and Jarman, 1993). This should be of concern to all educators, as it stands in direct contradiction to much of the recent literature which places the cognitive capacity to create at the very top of the revised version of Bloom's taxonomy (Anderson and Krathwohl, 2001).

The previous article (Renshaw, 2011) outlined four approaches that students can use to encourage more creative ways of working:

- re-expression: a technique that encourages the exploration of existing ideas expressed in alternative forms
- the creative revolution: a technique which allows the space to explore new ideas and generate alternatives
- related worlds: a simple technique that allows existing successful ideas and approaches to become incorporated into your own problemsolving
- random links: a technique that allows you to obtain inspiration for problem solving from a completely random and often unusual place.

My year 9 students drew on these approaches to create presentations that evidenced their learning following a series of lessons on glaciation. Working in groups of four, I asked the students to present their ideas to another year 9 class. To give this process a structure I asked students to frame their presentations around three key evaluation questions:

- 1. What method of presentation did you use and why did you use it?
- 2. What aspect of the work we covered did you think was most important about ice and why?
- 3. If you were to complete this task again, what changes would you want to make to your work to improve it?

After all the students had presented their work to their peers, I asked them to come to the front of the class, where I took a digital image of their work. While I took the photographs, I asked the other members of the groups to assess the quality of the responses given to the key questions using assessment criteria.

Once all the students had presented their own work, I explained the use of Voicethread (*http:// voicethread.com*) for one final homework task. Voicethread is a spectacularly useful website that allows you to upload pictures, documents and videos which can then be directly annotated with comments. In this case I uploaded the image of each student's work and asked them to add either a text, an audio or a video comment to their work which answered the three key evaluation questions. Following the lesson, this gave the











students the opportunity to act on any feedback they received from their peers. Once the student comments had been added, I was then free to add my own formative comments on the work the students had completed. The Voicethread was then stored online and could form part of each student's assessment portfolio for key stage 3.

Students produced posters, powerpoints, games, models and in one case even a cake (Figure 1). Providing students with the freedom of presentation method coupled with an opportunity to explain the thought processes behind their decision-making and its relationship their own current levels of geographical understanding, not only provided an increasingly personalised approach to assessment, but was an exceptionally powerful diagnostic tool which teachers could use to gain an insight into the students' learning. In order to encourage greater creative capacity in our students it is necessary for teachers to bring their own creative minds to the curriculum.

This process of designing and developing a curriculum is demanding. It is a creative process and relies on inspiration as well as good subject and pedagogical knowledge. (Kinder, 2008)

The key stage 3 geography curriculum has given geography departments far greater space and flexibility to select appropriate content for their programmes of study. Both the content and the processes of learning are in the hands of geography teachers, and by engaging in the creative process of curriculum making will go some way to foster the right conditions and incentives for learners to express creatively what they know, understand and feel about their world. | **TG** Figure 2: Examples of student work demonstrate the range of presentation methods that students selected after completing the creative thinking tasks. Photos: Simon Renshaw.

Online resources

More ideas for creative geography were shared at the Secondary Phase Committee Workshop (22) at the GA's 2011 Annual conference. To download ideas, go to www.geography. org.uk/download/GA_ Conf11Kitchen.doc

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Acknowledgements

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Cheryl Hatt

By looking at the Holocaust from a geographical perspective at university, Cheryl Hatt could more easily comprehend the complexities and diversity of people's experiences, and was able to place Auschwitz within a clearer context as a major, but not the only component of the Nazi Holocaust machine. This article describes some practical teaching ideas for using a geographical approach while teaching the Holocaust.



Teaching the Holocaust through geography

The motivation behind this study

The Holocaust is a statutory focus in the key stage 3 National Curriculum and it is often revisited at GCSE and A level. My own experience of Holocaust education at school was confined to several lessons in year 9, which, I feel, left me with a very simplistic and linear view of the Holocaust as an unpleasant but inevitable journey from Nazi-occupied Europe to the gas chambers of Auschwitz.

As a sixth former participating in the Holocaust Educational Trust's visit to Auschwitz, I was still left with a stereotypical view of the Holocaust. However, this changed significantly when I studied a module at university entitled 'Holocaust Landscapes'; here I revisited the Holocaust through a geographical lens. By looking at the Holocaust from a different perspective I could more easily comprehend the complexities and diversity of people's experiences, and was able to place Auschwitz within a clearer context as a major, but not the only component of the Nazi Holocaust machine. It was whilst on a PGCE visit to the Imperial War Museum's Holocaust exhibition that the value of this approach struck me again, and I began to think how such a focus could be adapted to work not just with history undergraduates, but with key stage 3 students too. My own personal experience of learning about the Holocaust has heavily influenced my attitude towards teaching it, so I decided to use a geographical approach as a focus with my year 9 students.





Figure 1: Holocaust journeys.

The Holocaust in schools today

There have been a variety of different approaches to the teaching of the Holocaust and these have extended to a number of departments beyond history, including English, RE and citizenship. The focus has been on a range of topics such as the history of anti-Semitism, the rise of the Nazi party and the development of Nazi persecution. Furthermore, there appears to be a common focus upon ghettos, 'The Final Solution' and the reactions towards the Holocaust on the part of local citizens and the Allied forces. There has also been a trend towards balancing the 'big picture' with the micro-histories of specific communities and individual testimony. This balance has presented the Holocaust to students in human terms and has involved them in complex and thought-provoking issues (Kitson, 2001). Many schemes have tended to be chronological in their approach and lend weight to Lambert's claim that thus far the Holocaust has been located in time but not necessarily in space (Lambert, 2004). Arguably a more definite focus on the latter could lead to a deeper understanding of this definitive event.

Spaces and places in Holocaust education

I firmly believe that there is great value in shifting the focus of lessons on the Holocaust around spaces and places. That is not to water down the history which is so fundamental to the teaching of the Holocaust, nor is it to depart entirely from a chronological focus; it is rather to advocate the idea of using spaces such as 'attics' and 'cattle cars' as windows into a broader interpretation of the Holocaust.

There are several valid reasons for adopting a geographical approach. The first reflects a current shift in thinking in history, where the academic literature is beginning to take account of the geography of the holocaust (Beorn *et al*, 2009). Secondly, there is much to suggest that the discipline of geography has more to offer our understanding of the Holocaust (Lambert, 2004), and more specific to the field of education is that a study of landscape, location and environment can serve to challenge the simplified and clichéd view of the Holocaust as 'Auschwitz'.

Furthermore, a geographical perspective can show that the Holocaust did not equate to an inevitable and unavoidable outcome of death at Auschwitz for all Nazi victims. This is not to distinguish the event from Nazi aims and policy, but to emphasise that location mattered in the context of Nazi-occupied Europe, and one's survival often depended on spatial criteria (Beorn, 2009). This has been clearly documented in the Imperial War Museum's 'Country by Country' feature of their Holocaust exhibition, which shows the varying experiences of Nazi victims as exemplified by dramatically different fatal statistics (Paulsson, 2009). By framing lessons around location, landscape, and the physical and climatic environment within the Holocaust, we can show our students why Anne Frank was forced into an attic, why the Bielski brothers were able to offer active resistance and why 99 per cent of the Danish Jewish population survived the war, in addition to unpicking how Bergen-Belsen differed from Auschwitz, and how Warsaw's ghetto was unique rather than typical. The Holocaust occupied a physical space that our students can see today, most pertinently through the media of photography and satellite imagery. By studying these landscapes and how the Nazis, Jewish and other people utilised their environment, we can reveal a more complex and nuanced picture which places an extraordinary event in an ordinary, tangible and physical world.

A geographical approach in practice:

There are numerous ways in which key geographical concepts and processes can complement the teaching of the Holocaust in history lessons.

Using maps to investigate topography, landscape and environment

One landscape which I decided to focus on with my year 9 class was the forest. I wanted to examine how the forests of Europe were utilised by both the Nazi and Jewish people. Through this study I would be encouraging my students to think about the development of Nazi policies towards the Jews, the nature of resistance and the diversity of Jewish experiences across Europe.

I decided to begin this topic with a brief discussion of students' ideas of the forest, their personal experiences of it and the associations it held for them through the mediums of books and films. I then challenged them to think how it might have been used or experienced during the Holocaust, steering their discussion towards both Nazi and Jewish experiences, in order to measure their prior knowledge and their initial expectations.

It was here that I decided to focus initially on the Nazis' use of the forest and the Einsatzgruppen massacres in Eastern Europe. I provided students with two maps: the first a topographical map of Europe, and the second the direction of the four Nazi killing squads and some statistical information on the number of people killed. Students were asked in pairs to draw on the routes of the Einsatzgruppen onto their topographical maps and discuss with their partner what they could observe from the map. Supplementary photographs and satellite imagery of the extensive forests around Latvia, Lithuania and Belarus were then made available to the class. Questions were framed firstly about the direction of these troops, secondly about the geographical landscape, thirdly about the number of casualties, and finally about why similar killing squads were not in operation in Berlin, Amsterdam or the West

generally. A class discussion then ensued as to why the Nazis chose to carry out these massacres in the forests of Eastern Europe.

The subject could be developed further by getting students to use topographical maps of Europe to investigate extraordinary examples of Jewish resistance, to demonstrate how some Jewish people were able to utilise their environment to survive and compromise Nazi policy.

An excellent comparison would be to analyse maps of rural Belorussia and urban Amsterdam, and the corresponding experiences of the Bielski brothers and the Frank family during the Holocaust. Maps of differing scales, showing their position in Europe, their geographical surroundings, the proximity of civilisation and even the make-up of their respective dwellings, could all be used to encourage students to consider the advantages and limitations one's physical environment could have on the chances and nature of resistance.

Tourism and the Holocaust

Another geographical concept that can be utilised in the teaching of the Holocaust is tourism. A growing trade has developed in tours and visits to sights of atrocity and suffering, and Nazi concentration and extermination camps feature very much at the centre of this. Dark tourism has sparked controversy and debate which remains extremely current, and it is possible to educate and engage our students in these debates about the appropriateness of visiting these places.

After studying the location and nature of several concentration and extermination camps, I asked my year 9 students whether Auschwitz should feature in Poland (Lonely Planet Country Guide) (Parkinson et al. 2005) as one of the 'top ten' attractions. The enquiry first involved reading the current description of the site in the Lonely Planet guide, followed by an analysis of several contrasting sources encompassing a range of views. This took the form of snippets from articles, charity adverts, an online forum, as well as controversial images and quotations from influential individuals; these can be downloaded from the TG pages of the GA website. My most basic objective was for students to be able to summarise two contrasting views and to be able to show evidence for both. There was, however, ample scope for the more-able to engage with and challenge the views they were presented with and to formulate an independent argument. After sharing their views in the form of a lively and valuable class discussion, we plotted these on a scale at the front. I then offered students a choice of activity: they could write to the management team at Auschwitz informing them of their views about the site being open to the public; they could write to the Lonely Planet publishers and comment on their feature; or they could re-write the feature themselves in a way that they felt was more appropriate.

The students were very energetically engaged in this task as they felt their opinions were valued and important. The 'Lonely Planet' was a feature that a large majority of students were familiar with, and the fact that one student's parents Figure 2: Auschwitz features in the *Poland (Lonely Planet Country Guide)* as one of the 'top ten' attractions. Photos: Lucy Oxley.



had visited Auschwitz only the summer before effectively demonstrated to the group that the issue was relevant even today.

Retracing the footsteps of the Holocaust

Having spent a number of lessons with my year 9 students examining various aspects of the Holocaust, I decided to bring together their knowledge and understanding into a 'big picture' focus. I devoted three lessons to the research and presentation of an individual's experience of the Holocaust. Although the individuals in question were carefully selected, the nature and form of the students' presentations was left up to them.

The students researched individuals of a similar age to themselves, with the importance of geography coming through a focus on location and the physical experience.

The specific objectives were made clear to the class from the outset: they were to research the journey of their individual so as to present their findings to the class in the final lesson. Within these presentations I asked students the following:

- Firstly, they needed to show the physical journey of their individual. An atlas, a blank map of Europe on a sheet of acetate and some OHP pens were given to each group to aid them in this task. The ultimate purpose of this was to place all six journeys on top of one another, thus illustrating the length, breadth and at times overlapping nature of these people's journeys (see online resources).
- Secondly, I wanted the groups to be able to offer the class additional information about their individual's journey – to put flesh on the physical journey and shed further light



on particular aspects of the Holocaust. An example was shown to the class using Kitty Hart-Moxon's testimony, explaining what the 'Kanada' block at Auschwitz was, and both the relief and the distress inmates felt whilst working there.

 Finally, I asked students if they could draw links with any of the topics, themes or issues of the Holocaust that we had previously discussed. I offered 'resistance' as an example because I thought it would be interesting to hear their views on whether or not they believed their individual to have resisted the Nazis in some way, and if so what methods were used. This then prompted a wholeclass discussion about the nature, value and limitations of these examples of resistance, which afforded individuals the opportunity to form opinions, challenge the views of others and reach substantiated judgements.

Conclusion:

This task, as an end to the module, served not only to locate the Holocaust in space and show the importance of geography and landscapes in the Holocaust, but attempted to offer a 'big picture'. It provided the chance to measure students' understanding of various topics and themes covered previously, and to develop them further by adding the flesh of real people and their experiences of the Holocaust. It allowed students to demonstrate empathy by giving them individuals of their own age whom they could hopefully relate to on some level. Most importantly, for me, it deconstructed the view for them of the Holocaust as a singularly unanimous journey to the gas chambers of Europe. | **TG**

Online resources

Go to *www.geography. org.uk/tg* and click 'Autumn 2011'.

 Contrasting sources encompassing a range of views for dark tourism debate
 Holocaust journeys



Cheryl Hatt wrote this article whilst doing a PGCE at Bristol University. She is currently working as a history teacher at Cleeve School in Cheltenham.

Email: cheryl.l.hatt@ gmail.com I would like to thank Dr Tim Cole at the University of Bristol, as it was really his undergraduate unit on Holocaust Landscapes which inspired the whole concept.

Useful webpages

Acknowledgements

Kitty Hart-Moxon's story can be found online at the Holocaust Memorial Day Trust, Untold Stories website www.hmd.org.uk (accessed July 2011)

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A different view of 'A Different View'

Whilst this edition of *Teaching Geography* has as its focus the knowledge debate, particularly in relation to possible changes to the school curriculum, this article draws attention to different perspectives or 'views' of geography and begins to raise some questions about how we see the subject. Undergraduates at the University of Sheffield were invited to apply for a GA internship for summer 2010 by writing a short essay entitled 'A different view'. Below are summaries of these essays. The purpose of publishing these summaries, plus the full texts on the journal section of the GA's website, is to provide geography teachers with:

- a possible means by which to consider and reconsider their own view of geography
- the opportunity to share with A level students, in particular those considering studying geography at undergraduate level, multiple perspectives on geography as a consequence of both university study and broader life experiences
- the possibility of drawing on these particular views to encourage and support school students in exploring their own views of what constitutes geography as a discipline, as well as the experiences that shape these views.

1: A different view – the lives of others, by Emma Browning

I once lived in London. It broadened my mind and scope for opportunities in life. However gradually the work-hard–play-hard lifestyle became less than satisfactory. I turned away from urban living and joined an expedition to a Kenyan island, the experiences of which would shape and re-shape my world view forever and inspire me to pursue a geography degree at university.

The residents of my temporary home in Mkwiro Village, taught me more than I could ever teach them. Conversations with local residents revealed that certain fundamentals of life are consistent, even across continents and cultures; family responsibilities, issues and worries over children, friendships, and aspirations for a better life, were just as much part of daily life in Mkwiro as they are in the UK. I naively thought that this expedition would enable me to teach the residents something useful and inspiring. The reality, however, was the reverse.

The cultural and environmental experiences I encountered evoked in me a thirst for knowledge of the world around us, and I craved the ability to intelligently question our place within it. I sacrificed the security of my job to pursue a geographical career. I have found that my geography degree comprises a diverse range of module choices that have allowed me to create a unique degree that suits my interests. In addition I have acquired a diverse range of skills and a breadth of knowledge which renders me and other geography graduates highly employable.

2: Geography and young people: be inspired! by Clare Marshall

Participating in the Geographical Association's Young Peoples' Geographies project, (www. youngpeoplesgeographies.co.uk) and my experiences thereafter helped me to develop ways of thinking about the world around me and so inspired my geographical journey. I realised that I had a personal geography – my own social and spatial identity – which in turn shapes how I interpret aspects of life. The project gave me the opportunity to shape my own school geography curriculum through the discussions with teachers about what and how topics were taught. This enabled my peers and me to own our geography and make it relevant to us. We (the A level students) organised fieldwork in a part of our local area that until then had only been informed by local mythology and poor media representation. This project expanded my boundaries and I became enthused by my local area and the people around me.

Incorporating my ideas into the curriculum and making this aspect of school significant to me greatly benefited my education, moving conversations in school beyond just grade attainment. The process of engaging in conversations about my geographies and school geography gave me a voice and set in train thought processes which I use today in my degree. The experience opened my eyes and enabled me to understand what an exciting discipline geography is. Discuss, converse, communicate and engage with your world. You might be surprised what you find.



Kim Brereton, Emma Browning, Jeremy Ely, Natasha Jarvis, Emma Knight and Clare Marshall

Undergraduates at the University of Sheffield were invited to apply for a GA internship for summer 2010 by writing a short essay entitled 'A different view'. This article includes some extracts from the essays which take different perspectives of geography.

Accompanying online materials

Figure 1: University of Sheffield Geography Department. Photo: Ruth Totterdell. Figure 2: The blue marble: Geography is still the discipline of exploration and discovery. **Photo:** NASA



3: Why exploration hasn't died in geography, by Jeremy Ely

In a world that seems to be getting increasingly smaller, it is easy to believe that exploration of our planet is no longer significant. If we confine Columbus and Marco Polo to the history books, does this really mean that there is no longer any space for geographical exploration?

I believe that mapping the world is simply the first stage of global exploration. Exploration has become available, through the internet and satellites, to everyone, and key modern explorers are geographers. Using satellites to look upon the earth allows geographers to examine even the most remote areas of the earth from the comfort of their own space. Satellite technology has even moved far enough to allow geographers to explore in three dimensions. This new form of exploration allows geographers not only to investigate where things are, but also to gather a clear picture of how the world works. A larger spatial pattern of processes and phenomena can now be considered in geographical investigation thanks to this new form of exploration.

The use of satellites to study the world is one aspect of university geography that I find most engaging, and one that I believe can ensure that geography maintains its role as a discipline of exploration and discovery.

4: Thinking geographically: skateboarding and fashion, by Natasha Jarvis

Geography opens our eyes to the world around us. In the rush of modern life, a subject like geography forces us to stop and consider other peoples' circumstances as well as the global situation. In 2010, 9 million tons of toxic chemicals were released into the atmosphere and 10 million hectares of forest were destroyed, and compounding these global issues is the constant net increase in the global population (Worldometers, 2009). The discipline of Geography can be seen as a defiant force, essential in opening up debate and questioning contemporary events and decisions. It allows us to explore issues and behaviours, and to consider the simple/complex question 'why?'

Geography also helps us see the different ways in which space is humanised and given meaning, and how spaces affect and are affected by human activity. This can be seen perfectly in relation to an element of youth culture – skateboardina. Skateboarders exemplify how space in the city is not just a place for working and shopping but also a place to be expressive. It could even be argued that skateboarding can be seen as a rebellion against the very fundamental nature of society and capitalism itself (Borden, 2001). Skateboarding questions the customary use of space and place; as handrails, steps and benches all become the sites of social demonstration. Geographical analysis of this behaviour shows the effect of politics and societal conventions on everyday life and how any spaces within the city are able to be used as sites of rebellion (Borden, 2001).



Figure 3: In 2010, 10 million hectares of forest were destroyed I experience geography as a vital, vibrant subject that links both the arts and sciences, and I see it as a discipline that, in enabling us think geographically helps us to better understand the issues of today's modern society whilst also considering the likely impact of current trends on the human and physical environment of the future.

5: Geography and the real world: a once-in-a-lifetime fieldwork experience, by Kim Brereton

My year teaching in Ghana was, to me at least, a powerful geographical experience in that it reminded me on a daily basis of the interconnections between my everyday geographical life and broader geographical connections. When living there I was reminded, in very stark terms, of my own cultural incompetence as I was forced to reconsider some of the conceptions and misconceptions I had acquired about development when at school - silly things like visiting a waterfall during in Ghana's dry season when, of course, there was no waterfall. More significantly, the limited and somewhat haphazard availability and reliability of communication technology meant that, for me personally, keeping in touch was inconvenienced at times, but for a country trying to establish itself in a global market place which relies on such communication, the regular collapse without warning of the national internet and telephone system has significant consequences both nationally and globally.

The Ghanaian school students with whom I worked found my world map lesson fascinating but largely irrelevant: it did not match either their conceptualisation or experiences of the world. However, drawing on their walk to school and building on their experience of local places did begin to open up conversations about maps as representations of places, experiences and connections.

Whilst my year could be judged as exotic and temporary, the experience served to remind me of the geographical influences that continually shape our everyday lives. I now draw on these experiences to help me make sense of the challenging concepts and theories I encounter through my university study.

6: The seven wonders of the geographical world, by Emma Knight

The world as a whole can only be fully understood with a geographical perspective as this enables us to understand the interaction of both physical and human processes and how these affect each other.

Note

Emma Browning won the essay competition and took part in a four-week internship at the GA's headquarters in Sheffield in June 2010.

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Borden. I. (2001) *Skateboarding, Space and the City: Architecture and the Body*. Oxford: Berg. Worldometers (2009) Available at *www.worldometers.info/* (accessed July 2011).



This holistic understanding can be expressed as the 'seven wonders of the world':

- 1. The hydrosphere covers 71 % of the earth while circulating heat and nutrients around the oceans.
- 2. The atmosphere controls weather patterns and plays a large role in the greenhouse effect.
- 3. The millions of species on earth, including ourselves, live in the biosphere, where the tropical rainforests remove large quantities of CO_2 from the atmosphere but are under threat from deforestation.
- 4. Arid environments are remote areas with few inhabitants or vegetation, but dust storms in the Sahara carry nutrients to fertilize the Amazon rainforest.
- 5. The cryosphere, or the polar regions, are under increasing threat from climate change, even now many of the world's glaciers are in retreat, be it from natural cycles or human induced climate change.
- 6. Natural phenomena such as earthquakes and volcanoes drastically alter landscapes and have huge economic costs.
- 7. Continental drift over millions of years has resulted in the continents we have today.

However, it is important to understand that none of these wonders act independently: they all interact and influence each other. Discovering the processes and links between these wonders is only one task set for geographically thinking minds. Seeing the world on a global scale and thinking critically allows us to face the challenges of the changing world in which we all live.

There is geography to every part of life – every page of a newspaper, every fashion followed, every tree that grows, every meal that is consumed, and every government decision made. What will inspire you, to have a different view? | TG Figure 4: Shanghai: seeing the world on a global scale and thinking critically allows us to face the challenges of the changing world in which we all live. **Photo:** Tim Peel.

Online resources

Go to *www.geography. org.uk/tg* and click on 'Autumn 2011' to read the full texts of these essays.

All six students graduated in summer 2011.

Kim Brereton has started a Primary PGCE at Leicester and Leicestershire SCITT.

Emma Browning is working as an Environmental Advisor for Balfour Beatty Utility Solutions.

Jeremy Ely is starting a PhD at the University of Sheffield.

Natasha Jarvis is doing work experience for an independent documentary director.

Clare Marshall has started a PGCE at Sheffield University.

Chantal Dunand Clarke and Heather Swales

How to create a successful school link

In this article Heather Swales and Chantal Dunand Clarke, described how they have developed a link between two very contrasting Lancashire schools: Bowland High School in Clitheroe and, 13 miles away, Pleckgate School in Blackburn. In 2008 we attended a three-day residential summer school at Homerton College, Cambridge, run by the Princes Teaching Institute (PTI). The summer school featured lectures from leading academics which challenged delegates with the latest thinking and research in geography. The purpose was that teachers re-engage with academic geography as a means of developing academic rigour within their schools. In seminars with other delegates, we discussed ways in which we could take the ideas and experiences we had encountered back to our schools.

To become members of the PTI Schools' on return to school, we completed an internal audit of our current subject provision programme, and set three subject-specific targets to improve the provision for geography within our schools. A year later, we attended a follow-up meeting at Kensington Palace with the PTI subject advisors to review our individual audits and set specific targets for developments in school. One target was to link our two schools in a variety of ways in order to broaden our students' perspectives. This is the focus of this article.

Initial planning

The first stage of our planning was a teacher visit to get to know the schools and discuss the opportunities for a joint school field trip. Bowland is a small rural school situated in an area of outstanding natural beauty and so contrasts with Pleckgate High School's urban setting in Blackburn. The differences that exist between the schools include not just the site of the two schools but the intake, culture and religious

beliefs held by the students. It was felt that these differences should be celebrated and that a joint field trip could offer students the opportunity to work together in a variety of settings. Pleckgate students would have the opportunity to explore and experience the countryside and all that it has to offer young geographers, and Bowland students would have the opportunity to understand and appreciate social and cultural differences through working alongside students from a diverse school community. Pleckgate School is twice the size of Bowland High School so there would be challenges with group numbers and rooming if we tried to include whole year groups. It was decided that the first visit, to be hosted at Bowland High School, would involve relatively small numbers. The visit would allow students to work with geographers of a similar age and ability, and it was decided to invite the gifted and talented students from both schools to take part in the first visit.

Visit 1

On 15 June 2010, Bowland High School hosted the first of the schools' linked events. Sixty students met and worked together in mixed school groups to explore the surrounding countryside. They were given a copy of the local Ordnance Survey map with a pre-planned route highlighted and were challenged to navigate their way from the school to a local trig point and back again. In addition, students also had a series of team-building challenges to complete whilst en route. Both sets of students were encouraged to apply skills learnt in the classroom to a real environment and were able to discuss the



Figure 1: View of the Ribble Valley from Bowland High School. Photo: Chantal Dunand Clarke.





contrasts between their two places. On this first field day, Bowland students were able to mix with students from a different ethnic background and begin to break down the barriers that ignorance can form. The students really enjoyed the day and, most importantly, made new friends.

Visit 2

On 10 December 2010, 120 students from Bowland High School travelled to Pleckgate High School to work with 30 year 9 students. Working in mixed teams again students were challenged to identify the differences between Bowland and the area of Blackburn where the Pleckgate students live. We also used the opportunity to raise awareness of interfaith friendships with activities from the SolidariTea charity, a branch of the Tony Blair Faith Foundation (www.solidaritea. org). In addition, the Bowland students visited the Tauheedal Mosque for a short tour, and also the cathedral, where Mrs Anwar drew parallels for the students between Christianity and Islam. Combining the study of geography with other subjects such as RE meant that students had the opportunity to consider the relationship between place and cultural identity and the significance of location for different faith communities. Both groups of year 9 students enjoyed the opportunity to work with students from another school. Their natural curiosity meant that they

had many questions to ask each other, ranging from the everyday to more significant questions of lifestyle and belief.

Reflecting on the outcome

Ideally the days would involve larger numbers of students in order for such an exchange to have a more wide reaching impact on the two schools; both teachers are confident that this will be something that will grow and develop over time as links between the two schools become more firmly established. Currently the planning of future visits is concentrating on finding a suitable venue in order to be able to accommodate whole year groups from both schools. The value to the students and to the profile of geography within both schools has been boosted following each trip.

Advice

Any school that feels that they are not offering their students a fully rounded view of the country in which we live should not hesitate to find a contrasting school and set up some links. The collaboration between two geography departments has proved to be professionally rewarding for the teachers concerned and has provided the students in both schools with a richer and more informed view of their shared society and environment. | **TG**

The **Princes Teaching Institute** (PTI) is an independent educational charity created by the Prince of Wales. It allows teachers to rediscover their love of their subject through various activities. The next summer school is in November 2011. For more information go to *www.princes-ti.org.uk*.

Pleckgate School has 1,194 on its roll of whom 84% are students drawn from minority ethnic groups (38% Indian Heritage, 40% Pakistani) and a wide range from socio-economic backgrounds. For 68% of students English is an additional language. The school is on the edge of the rural urban fringe in Blackburn, near to the ring road and motorway. The school was awarded the Secondary Geography Quality Mark in 2009. For more information go to *www.pleckgatewebsite.co.uk*.

Bowland High School is now an Academy with 550 students on the roll across the age range 11–16, almost all are of White British heritage. The school is located in the Trough of Bowland – an area of outstanding natural beauty. For more information go to *www.bowlandhigh.lancs.sch.uk*.

Figure 2: Students from Pleckgate High School and Bowland High School meet up. Photos: Chantal Dunand Clarke

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Suzanne Baldwin

In this occasional series, a geography teacher near Christchurch, writes about the city where she lives and the impact of recent earthquakes.



has changed significantly since being struck by a major earthquake in September 2010. The city is home for a population of 348,435 (2006 Census, Statistics New Zealand). It is

New Zealand

Christchurch is my place: it is the city where I grew

up and where I now live and work. Christchurch

located on the east coast of the South Island of New Zealand within the Canterbury region. The site of the city is predominantly plains. Christchurch has a number of rivers which run through it, and is bordered by the coastline to the east and the Port Hills to the south. Some of the city is built on alluvial gravels deposited as a result of the rapid erosion of the Southern Alps to the west of the city. Land close to the coast is marshy with a high water table.

My Place: Christchurch,

Christchurch was planned by the original migrants who came to New Zealand from Britain in the early 1800s. As a result, many of the older buildings have a very English style. Christchurch has always taken pride in the amount of green space in the city and is commonly known as the 'Garden City'. The modern city has a number of functions, including education and commerce, and it is also a tourist destination.

New Zealand is on the boundary between the Australian and Pacific tectonic plates and experiences frequent seismic activity. There are generally more than 15,000 earthquakes each year in New Zealand. While Christchurch is no stranger to significant earthquakes, being located only about 130 kilometres east of the Alpine Fault, there have been few in the region over the last century.

At 4.35 am on Saturday morning 4 September 2010, we were jolted awake by an earthquake measuring magnitude 7.1. This signalled the start of a sequence of earthquake aftershocks, the most damaging being the quake measuring 6.3 that occurred at 12.53 pm on Tuesday 22 February 2011. The aftershocks have numbered nearly 7,000 to date.

The impacts of these earthquakes have been considerable for the people of Canterbury. Everyone who has experienced them has been affected in some way, and our concept of the place we live in has changed. We were thankful there were no deaths directly attributable to the September earthquake; however, on 22 February we were not so lucky. A combination of earthquake location (close to the city centre) and time of day meant that many lives were lost.

Our knowledge, understanding and experiences of previous earthquakes meant that there were building codes in place to ensure that buildings were designed to withstand the predicted effect of a quake. The effects across the city were not uniform; the central city, which had the biggest concentration of pre-1930s unreinforced brick buildings, suffered the greatest damage. Initially residents throughout the city were without power and water, and the east of the city was hardest

Figure 1: Fitzgerald Avenue on the edge of Christchurch city centre. Photo: Suzanne Baldwin.





hit, with liquefaction, building and infrastructure damage. Education has been severely disrupted: most schools were closed for at least a week after the 4 September earthquake and up to a month after the 22 February earthquake. Some were so badly damaged that they have not reopened to date.

In the medium term, the ongoing feeling of the earth shaking is unnerving for most. Some residents are still using chemical toilets because there is limited water or sewerage supply to their homes. The city centre is closed and this is likely to continue for the coming months. However, the community has pulled together and supported those who have suffered the most. The majority of people are able to claim for damage to their homes and possessions through their insurance companies or the Earthquake Commission (set up by the government in 1945 to cover situations such as this).

In the long term we look to the future of our city with optimism. The vast majority of the community are committed to continuing to live and work here. We have an opportunity to develop a city which encompasses economic, environmental, cultural and social sustainability. The planning should be future-focussed so we will be able to cope with issues that may arise.

Christchurch has suffered emotionally, economically and physically as a result of the earthquakes but the community spirit which has increased as a result of these earthquakes has led to a passion to rebuild our city in a way which will embody the Canterbury spirit – the spirit of our place. | **TG**



Figure 3: Merivale shops in the inner suburbs of Christchurch. Photo: Suzanne Baldwin.

Online resources

In response to the New Zealand earthquakes, Suzanne Baldwin and Roger Baldwin (retired social sciences adviser, University of Canterbury) have prepared a teaching and learning resource kit for schools. This is available on the GA website www.geography.org.uk/ resources/earthquakes/

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the Head of Faculty for Social Sciences at Mount Hutt College, Methven, Canterbury, where she teaches geography in a classroom with a magnificent view of the Southern Alps. Suzanne is the current chairperson of the New Zealand Board of Geography Teachers. She has taught geography at a number of schools in New Zealand and also in the UK. She currently lives in Christchurch and has no plans to move away.

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John Huckle

Bringing sustainability into sharper focus

'Desirable but not sufficient' sums up John Huckle's response to the Spring 2011 issue of Teaching Geography. He argues that the articles contributing to the focus of sustainability were not sharp enough since contributors largely neglected issues of class, power and ideology, and the need to address radical social alternatives.

Introducing the spring 2011 issue of Teaching Geography (vol 36, issue 1) with its focus on sustainability, the editor reminds readers of extreme weather events in 2010 which provided stark reminders of the power of nature; identifies the relationships between nature, society and geographical education as the theme of the issue; and introduces articles, that in her view, promote 'teaching for understanding' over 'predetermined ethics'. She claims that these articles 'explore the complex ideas and arguments that permeate the often taken for granted and sometimes oversimplistic notions grounded in sustainability and nature' (Biddulph, 2011, p. 5).

The purpose of this article is to argue that the editor's claim is not entirely valid and that if school geography is to truly 'promote pupils' engagement with current arguments (social, scientific, economic), tensions and actions associated with living sustainable lives', it should be more realistic about the big questions that education for sustainable development (ESD) raises, and the range of ideas that students should consider in exploring possible answers. Such big questions are not purely or uniquely geographical – as Rachel Lofthouse's (2011) article in the same issue can be seen to suggest since they draw on a wide range of knowledge from the biophysical and social sciences, the arts and the humanities. I will make my argument by considering four such questions as they relate to the three principal articles in the spring issue (those by Roger Firth, David Hicks and Alun Morgan).

What is sustainability?

Key to answering this question is encouraging students to see the world not in terms of phenomena or objects but in terms of relationships. It is relationships between things, or the way in which they are structured, that give them powers to sustain processes in the biophysical and social worlds that cause events which we may or may not experience. Climate change is the product of structures and processes in the atmosphere interacting with those in global society. Technological measures may mitigate temperature rise, but tackling climate change requires fundamental change to the power relations that shape dominant forms of development and underdevelopment around the world.

It is such thinking that leads Michael Bonnett (the philosopher whose ideas are explored in Firth's article) to suggest that education should foster sustainability as a frame of mind rather than as an aspect of policy (Bonnett, 2004). While governments and international agencies issue policies that encourage schools to promote sustainable development (for example, the UN Decade of ESD or the Labour Government's framework for sustainable schools), such policies view nature and schooling instrumentally and generally restrict agendas to forms of ecological modernisation, or the greening of capitalism. They promote sustainability largely as rhetoric – a compromise between economic growth, environmental protection and social justice that the rich and powerful find expedient, feasible and possible.

Sustainability as a frame of mind is alive to relationships within and between biophysical and social systems that allow their mutual development to take place in sustainable ways. ESD therefore requires teachers and learners to be open and engaged with the complexity and meaning of things in the manner of great art or literature; attuned to harmony and discord in the world via a heightened sense of attachment; and capable of viewing nature in ways that are essentially poetic and non-manipulative. As Firth (2011) suggests, geography teachers should ask searching questions about nature: how can it be known, how is it being socially constructed, and how can it be constructed more sustainably? Challenging nature/society dualism is central to such teaching as is encouraging students to recognise the aesthetic, existential and spiritual values of nature alongside its ecological, scientific and economic values. Humanistic and cultural geographies have key contributions to offer such teaching as it develops students who recognise the virtue of sufficiency over excess and of sustaining things, not in order to have something in hand for the future, but in order to let things be true to themselves, able to determine their own nature and development.

Why are societies around the world not developing in sustainable ways?

It is significant that the editorial in the spring 2011 issue mentions extreme weather events but not the extreme economic events surrounding the most severe crisis of capitalism since the 1930s. Like many school geography lessons, the whole issue is somewhat blind to neo-liberal global capitalism and its role in precipitating the linked crises of economy and ecology. Harvey (2010) and George (2010) explain that neo-liberalism is essentially a project designed to restore class power by promoting financial innovation and the profitable absorption of surplus capital, no matter where it may lead. Based on privatisation, deregulation, globalisation, speculation, free trade and a supposedly self-regulating free market, it produced property and credit bubbles that

eventually burst around 2007/8. Governments came to the rescue of banks, heralding a new age of austerity for ordinary citizens, many of whom accept the myth that there is no alternative (Huckle, 2010).

In his article, Hicks (2011) seeks to restore the dissenting tradition in school geography by urging readers to address the four challenges of human well-being, climate change, peak oil, and the transition to more sustainable forms of development. He does mention the dominant litany of economic growth and the serious economic recession (p. 9), but in my view his treatment of the challenges does not give sufficient attention to the power relations that precipitate these linked challenges and prevent real progress towards realising human happiness and well-being, tackling climate change, promoting renewable energy, or spreading transition initiatives. David Harvey (2010), the foremost dissenting geographer, has taught us that political economy is the key to how space, place and nature are constantly made and re-made together with such challenges and possible solutions. Acknowledging this requires a conceptual revolution in the school subject, as outlined by John Morgan (2011).

What has to happen to set societies on a more sustainable path?

Dissenting geographers suggest that realising sustainability requires radical forms of democracy and citizenship that give people power over how non-human and human nature are developed. As Susan George (2010) suggests, we are currently prisoners of a global system that puts the interest of finance and the economy (the rich and powerful) above the interests of society and the planet. New forms of environmental, ecological and global democracy/citizenship would invert this system, putting the interests of people and the planet before finance and the economy, allowing people to step off the treadmill of production and consumption, and creating the conditions in which sustainability as a frame of mind could take root and become the new common sense.

Such thinking suggests that ESD in schools should be closely linked to the development of citizenship and political literacy. Students should consider the politics of sustainability – ideas and proposed policies from across the political spectrum – from the neo-liberal right through the social democratic centre to the green, socialist and anarchist left. They should come to their own tentative decisions on where they stand on this spectrum and on issues such as the sale of state forests, the 'kettling' of school students protesting against the loss of maintenance grants, or China's purchase of African land and resources. The curriculum project I developed for WWF in the late 1980s was based on such ideas and issues (Huckle, 1988).

Should lessons on sustainability foster commitment to a pre-determined ethic?

The theory and practice of political education and political literacy has well-developed ways of dealing with the social/ideological controversy and indoctrination that Alun Morgan (2011) outlines. Employing this theory and practice can ensure that geography teachers are engaging in education rather than advocacy, but as Morgan reminds us, many will think it desirable to promote sustainability as a frame of mind underpinned by the kind of 'pre-determined ethic' or universal moral principles set out in the Earth Charter (2011). This continues to prompt significant ESD initiatives around the world that combine ESD1 and ESD2 (see Morgan, 2011), and thus avoid ESD as simply policy or advocacy. Sustainability literacy requires the development of both moral autonomy and political literacy, and dissenting geography teachers should consult the literature on ecopedagogy (Kahn, 2011). | TG

Online resources

Go to www.geography. org.uk/tg and click on 'Spring 2011' to read the articles referred to in this article.



John Huckle is a visiting fellow in the Department of Educational Studies, University of York. Articles extending the argument he makes here can be found at http://john. huckle.org.uk.

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Useful websites

Green Theory and Praxis: online journal http://greentheoryandpraxis.org/journal/index.php/journal

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Geography resource reviews

Reviews of new geography resources.





BOOKS

What You Need To Know Now: The World in Stats, Facts and Graphics London: Dorling Kindersley, 2010 256pp, 22×27.5cm Pb: £16.99. ISBN 978-1-40535-371-7

This book is extremely entertaining, up to date as well as being very informative. The illustrations and diagrams are brilliant and fun; they make difficult concepts come to life and are truly engaging. Each topic covered is presented clearly over a double page spread, with bright and engaging graphics. Each page develops with an ever-increasing layer of more sophisticated facts and information to challenge even the most able of students. The book has an interactive quality, which clearly goes beyond presenting statistics, facts and graphics. Once students start reading this book it is difficult to get them to stop. There is a sense of awe and wonder in this book which has encouraged our students to continue to research a topic and tell their friends! I was particularly impressed by the highly relevant topics covered for today's world, such as water and energy security - a great support in the geography classroom!

Andrew McFadden, Alsager High School

TEACHING PACKS

Stupid or not: Education for a smarter planet ActionAid

Chard: ActionAid, 2009 Pack containing: Activity Booklet, 32pp, 21×29.7 cm 14 A4 Story cards and DVD £25.00. ISBN 978-1-905694-08-2

The Age Of Stupid is a film documentary directed by Franny Armstrong. It stars Pete Postlethwaite as a man living alone in the devastated world of 2055, looking at old footage from 2005 and asking: 'Why didn't we stop climate change when we had the chance?' and implies that we were stupid not to have done this. An interesting idea which would appeal to students, I am sure.

This potentially very useful subject for geography teaching is presented in a pack from ActionAid, which, though it does not have a copy of the film itself, has a number of relevant clips from it, coupled with teaching materials. It is aimed at students aged 12+.

Essentially, the pack explores the complexities of climate change – from the science, to the possible impacts and solutions – through real human stories. The activities are structured around a key question. One example is 'Al and happiness', which focuses on happiness not necessarily being found in the latest gadget. There are six film clips about AI (a real person) to watch and two story cards looking at how climate change is affecting people, enabling learners to develop analytical skills and creative thinking about geographical issues.

There are 14 different stories and 10 different lessons are set out in detail with all resources provided.

I feel that the pack provides a most stimulating way to approach this topic, including activities which learners will enjoy, and which will help to differentiate the geographical approach to climate change from those of other subjects.

Mike Jones, Alleyn's School, Dulwich

DVDS

PACE (Pan African Conservation Education) Virtual Explorer for Geography KS3– 4

Siren Conservation Education and Tusk Trust, 2010 DVD and CD, minimum donation of £5 ISBN 978-0-9555682-1-3

This DVD does what it says on the tin! The series of ten short videos give a very positive insight into the people of different parts of Africa confronting issues and coming up with a sustainable solutions.

I was very impressed with the format of each case study used. The videos are well made; they are short in length and contain text and a variety of people describing the issue and the solution.

To back up the video case studies, there are clear, relevant and teacher-friendly teachers notes. There are also PowerPoints that set the scene about the wider context of the issue. The activities are varied with card sorts, role plays and ICT. There are linked websites about the issue as well some background context about the country. There are also links to the key stage 3 geography curriculum and to GCSE specifications. I would have no problem at all in using it with A level geography or AS world development.

The case studies cover cleaner toilets, urban greening, plastic bags, elephants, making money from trees, good woods, harvesting the rain, cleaner cooking and ecotourism. The cases studies are from South Africa, Kenya, Tanzania and Zambia.

I would recommend this DVD to any geography teacher as it creates a very positive outlook that combines many aspects of development such as population and resources, urban issues, sustainability and local action.

Garry Atterton, Castle School, Thornbury, South Gloucestershire





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London Tuesday 6 March 2012 Sheffield Wednesday 7 March 2012

Target audience

Secondary geography teachers involved in the delivery of controlled assessment

Overview

This course will discuss the relevance and application of new technologies, including accessible GIS, to support and enhance the delivery of controlled assessment for all GCSE specifications. There will be a focus on strategies for developing visualisation and free web-based technologies to display field data and research findings. There will also be a discussion on the role and relevance of some new alternative and mobile technologies to complement controlled assessment.

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"As a whole the course challenged my thoughts in geography education and my classroom practice. It has left me with many ideas and questions that I want to explore, which can be difficult but is an exciting part of learning."

"From start to finish it was very interesting and was clearly designed to encourage us to question our preconceptions of geography and how it is represented in education."

