Teaching Geography

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Geographical Association

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Writing for *Teaching Geography*

Teaching Geography provides a forum for sharing:

- practical strategies for teaching geography
- critical reflection on geography teaching and learning
- curriculum innovation and change in geography.

If you have a teaching strategy, practical idea, resource to share or particular view on educational practice, we would like to hear from you.

Teaching Geography welcomes articles from PGCE students, NQTs and practicing teachers. If you have an idea but have never submitted an article before and would like some advice, please contact Melanie Norman (*m.j.norman@brighton.ac.uk*), the Editor of *Teaching Geography*, who will be happy to discuss it with you.

We welcome the submission of these types of article:

1. **Geographical concepts** articles critically discuss and illustrate approaches to teaching geography or current educational views and how they impact on geography.
2. **The G-Factor** articles (supported by online resources) are based around a practical idea for teaching one or a sequence of lessons.
3. **How to...** articles provide practical advice and strategies for geography departments.
4. **Spotlight** articles provide specialist subject information and propose approaches for teaching these topics.

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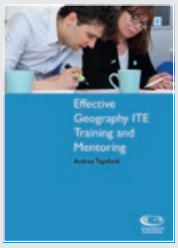

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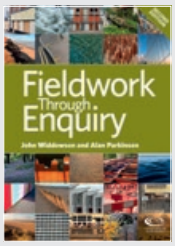

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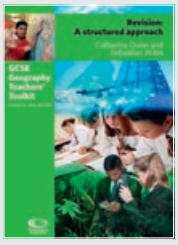

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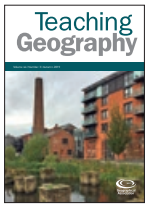

Cover image: Kelham Island, Sheffield. **Source:** Flickr/ Diamond Geezer.

Accompanying online materials

For articles with this symbol, go to **http://www.geography.org.uk/journals** and click on *Teaching Geography*. Select Summer 2019 from the drop down menu and you will find the additional resources for these articles if you scroll to the bottom of the page.

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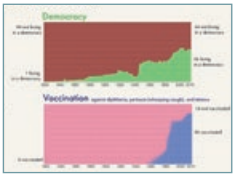

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Geographical Association

The Geographical Association is the leading subject association for all teachers of geography. Our charitable mission is to further geographical knowledge and understanding through education. Our journals, publications, professional events, website and local and online networks support teachers and share their ideas and practice. The GA represents the views of geography teachers and plays a leading role in public debate relating to geography and education.

GA Annual Conference and Exhibition

University of Surrey
Thursday 16 – Saturday 18 April 2020

'Geography *really* matters!'

As a community of geographers we know that geography matters – to us as individuals, to local communities, to national governments setting policies and priorities, to global players responding to international challenges and issues. However, many people don't realise how central geography is to the way we live.

There are so many ways in which geography is fundamental to our lives, from physical landscapes, natural disasters and the characteristics of where we live, to the energy we use, services we enjoy, the travel we undertake and the networks in which we engage. Geography gives young people a voice to speak up about their changing and interconnected world. It engages their curiosity and helps to equip them with the skills to investigate and engage with their local, national and global environments. Geography is a cornerstone in the continuing education of everyone, both young and old, helping to make us more effective local and global citizens.

We need to shout about the value of geography and its role in the development of our young people. It is time to remind pupils and parents, head teachers and school governors, politicians, businesses and media of geography's essential value; to reinforce the power and contribution of geographical knowledge and understanding within ourselves as citizens and within our communities.

Consequently, I am setting our geographical community a challenge: undertake one activity in 2019–20 to show that geography really matters! It might be a letter to an MP or a government minister, a presentation to a school governing body, a group response to a local/national/global issue, a social media blog or vlog extolling the virtues of geography, a school-based activity…

Now is the time to take practical action to tell the world how important geography is and how much it really does matter.

Gill Miller,
GA Senior Vice President 2018–19

Get involved
For more details visit **www.geography.org.uk**

Editorial

Melanie Norman, Editor

The Editor introduces this issue of Teaching Geography.

The new academic year has brought changes for the *Teaching Geography* Editorial Board and I'd like to open by saying farewell and thanks to Dr Rosie Gillman who has made a strong and committed contribution to the work of the Board. Rosie's new job means she won't have time to continue with her peer review work for *Teaching Geography*.

We now welcome Emma Rawlings Smith to our Editorial Board. Emma has just started as Lecturer in Education at the University of Leicester and has recently submitted her doctoral thesis. She has also contributed articles to *Teaching Geography* in the past.

The subject of the striking cover photograph is taken from Christopher Hoare's article, where he proposes Kelham Island in Sheffield as a model case study. Hopefully readers will be able to use and adapt this case study to suit their own needs.

Charles Rawding's 'Raising Issues' article, 'Putting Burgess in the bin', highlights his experience of the shortcomings of the Burgess model, still evident in geography classrooms in spite of being contested for many years. I too have had the misfortune of observing trainee teachers misusing the Burgess model in my various external examiner roles, perpetuating myths and misconceptions regarding urban structure. The most recent incident arose only last year when I observed students being instructed by their teacher to make the whole of London, where one single CBD was identified, 'fit' the Burgess model. If this model of urban structure is still being taught in your department, I urge you to re-think your curriculum content in light of Charles' analysis of Brighton. The cover photograph emphasises the dynamic nature of urban environments reflecting aspects of historic development, while acknowledging change in relation to current social, economic and environmental needs.

Readers expecting a visit from OFSTED during this academic year will find the article by Alan Kinder and Paula Owens to be a clear outline of expectations. The article should help readers to understand the implications of the new framework for their geography curriculum work.

A number of articles reflect the development of critical thinking, a crucial aspect of public examinations as well as preparation for lifelong learning. Gemma Mawdsley describes the GA's 'Critical Thinking for achievement CPD' training, a two-day course for teachers. She provides two case studies which could be adapted by readers to trial with students in class.

Ian Selmes discusses the lack of focus on sustainable development in comparison to previous National Curriculum programmes of study and examination specifications. Ian states, 'For students to be able to properly achieve the professed aims of their geography curriculum … they need a thoughtful understanding of sustainability and a critical approach to studying it'. The article's supporting resources will assist the development of a reflective approach to sustainability.

Hannah Finch Noyes outlines a departmental homework strategy enabling students to develop geographical skills, including creativity and independence of thought, which better prepares them for success in AO3 at A level and beyond. 'Beyond' might well be an undergraduate degree and Kenny Lynch outlines some thoughts regarding note taking during lectures. This piece is not specifically related to geography, so students may find it helpful for many subjects.

Brexit has not been finalised as I write, although the situation may have changed by the time you read this editorial! Jo Usher's scheme of work 'Brexit and Borders' looks at the issue from the perspective of students in Ireland. I found this an inspiring approach and an excellent way for young people to engage with the issue and develop their critical thinking.

Peter Vujakovic celebrates key tools to develop critical thinking – maps and related information graphics – but he warns that their form and function need to be taught and understood because maps can also mislead. For example, the Mercator map projection (1569) overemphasises the dimensions of the northern hemisphere, but the map projection was originally drawn to aid navigation and is still employed today in nautical charts. Our thinking about map projections has moved on in the 450 years since the Mercator map was first published.

David Alcock's article encourages us to recognise the positives of progression. Yes a gamut of issues still need addressing but as David observes, put in a temporal context many things have improved. It is important to let our students know the positives and show that progress is evident in many areas without detracting from the necessity to strive for continued improvement and progression.

Many thanks to everyone who has contributed to the wide range of well-informed content and opinion contained within this issue.

Editor Dr Mel Norman on the South Downs near Beachy Head. **Photo:** Tony Norman.

Charles Rawding

Raising **Issues**

Putting Burgess in the bin

Charles challenges the Burgess model of urban development and proposes instead a process model, giving Brighton as an example.

As a GCSE regional moderator fifteen or so years ago, I had the misfortune to have to look at studies in which students were required to apply the Burgess model (Figure 1) to Dorking in Surrey – and not much has changed since then. In my opinion, the Burgess model (Burgess, 1925) has no place in the geography curriculum and should never have achieved acceptance as a model of urban structure. Ernest Watson Burgess, the urban sociologist who created the model, adapted a model of plant succession favoured by his ecologist friends to an economic context to explain patterns of urban land use in Chicago in the 1920s (Figure 1). Somehow the Burgess model became the most important model in geography in the schools of England, and even though it was based on Chicago in the 1920s and was contested at the time, it was used to explain land use in a range of very different modern English towns and cities (Johnston 1971; Garner 1968). It is still in use today. And it shouldn't be!

The wholesale adoption of the Burgess model has fossilised our understanding of the incredibly dynamic nature of urban landscapes; more seriously, it renders sterile the urban landscapes we introduce to our students. Urban geography should be the most riveting of topics, especially for the 85 % of our students who live in urban areas: it should reflect the excitement, fluidity, inequalities and problems of everyday life in cities. Instead, the Burgess model reduces it to a two-dimensional, circular diagram.

I propose a rather different approach to interpreting urban landscapes, which stresses the dynamic interplay of the range of processes which contributes to our ever-changing cityscape. I hope to be able to demonstrate this interplay through a brief discussion of some of the urban geographies (a deliberate plural) that have created contemporary Brighton.

Process and place

All places are the outcome of a wide range of processes: their importance will have varied over time and their influence will have resulted in a series of consequences for future development (Rawding, 2007). Notions of a palimpsest comparison are useful here – a canvas which has been created layer upon layer, some previous layers having been obliterated and some having survived. However, the crucial element for explanation lies with the processes that produce the landscapes. I've tried to represent this diagrammatically (Figure 2) – all locations start with a physical setting which may or may not have a significant influence on subsequent developments. Clearly, in the case of Brighton, its development cannot be understood without reference to its physical setting. At the same time, the development of its outer council estates and suburbs have limited connections with their own physical site but can only be understood in relation to their physical situation, i.e. their proximity, or lack of it, to the urban core of Brighton, or indeed the London-Brighton main railway line or the A23.

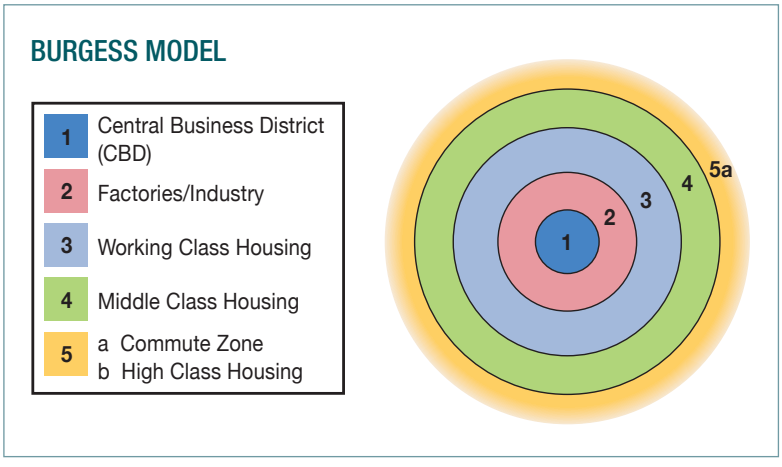

Figure 1: The Burgess model of urban development.

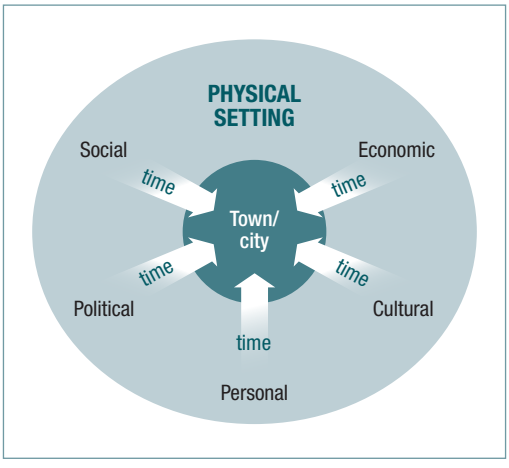

Figure 2: Considering place as a process.

Building onto this physical setting, we then need to incorporate explanations that identify the key economic, social, political, cultural and personal processes that have helped to establish a given urban area. These are not fixed forces – they vary over time. Nor are they simple linear progressions; the reality is much more interesting: complex, often contradictory or conflicting, sometimes consensual, but infinitely more reflective of a society that has seen massive shifts over the last 200 years.

The example of Brighton

Taking as an example the urban geographies of Brighton, it becomes clearer how such a framework might be developed. The original medieval town was eroded by the sea, burnt to the ground by the French, and flattened by storms. However, Brighton's Lanes district is one of very few surviving examples of a Tudor fishing town (Figure 3). Brighton had been a fishing port up until the mid-sixteenth century, but by the mid-eighteenth century only a limited amount of coastal trade remained.

By the 1750s, the growing fashion for sea bathing led to the development of resort functions in some coastal towns. In Brighton this was as a direct result of investment by tradesmen from Lewes who spotted a business opportunity following the establishment of a house for the reception of patients in 1751-2 by Richard Russell of Lewes who was using seawater treatment. Libraries, a large inn and assembly rooms, shops, better transport facilities and new housing were all constructed, so that by 1783, when the Prince of Wales made his first visit, Brighton was already Britain's largest seaside resort. The Prince of Wales came because of Brighton's fashionable reputation, he did not create it, but of course his subsequent decision to build the Royal Pavilion (completed by 1806) helped cement Brighton's position at the forefront of seaside resorts (Figure 4).

So far, so historical; however, if we now look at the pattern of the town's growth, it becomes clear that there is a range of factors which come into play. Before about 1780, most of the town's housing and services were located in the Old Town (The Lanes). The rest of Brighton's parish was arranged as five large open fields owned in strips by a multiplicity of landowners. The town's growth from 1780 was determined by the field system surrounding it. Building development converted the unenclosed strips to the north, east and immediate west sides into the modern street pattern. This is a fossilised landscape i.e. urban development has simply overlaid the old field system. Brighton's medieval fields determined the shape of the streets around the edges of the Old Town. When the Old Town expanded, builders bought up the narrow fields (Figure 5).

If we now zoom in on this townscape, it becomes clear that unplanned infill resulted in urban chaos, with bad sanitation and poor health in working class areas (Lowerson, 1983). The fashionable area was along the cliff tops and beside the Steine (the open area north and east of the Pavilion). As early as 1808, the Royal Crescent was built as an isolated, and initially unsuccessful, speculative development. By the 1820s, the town had spread beyond the limits of the unenclosed strips; larger areas of enclosed land offered opportunities for grander squares, crescents and terraces (Figure 6).

The railway from London arrived in 1841 and links to the east and west were in existence by 1847 (Farrant, 1983). The impact of the railway in resort terms was slower than anticipated; however, the construction of the railway gave employment to 3000 people and resulted in the growth of an area of working class housing north of the existing settlement.

Figure 3: The Lanes, Brighton. **Photo:** © Melanie Norman.

Figure 4: The Royal Pavilion, Brighton. **Photo:** © Flickr/ Andrew Writer.

Figure 5: Landscapes determined by the fossilised field systems. **Photo:** © Melanie Norman.

Figure 6: The grander, more spacious, layouts on already enclosed land: Brighton's squares and crescents. **Photo:** © Shutterstock/ Vittorio Caramazza.

During the inter-war period the contrast between the wealth of the Regency terraces and crescents and the solid, secure suburbs with the slums of central Brighton was described by Graham Greene in *Brighton Rock* (1938). He also describes the effects of council slum clearance and rehousing either in new, outlying estates or dwellings built on slum clearance sites. We are beginning to see here layer upon layer of development and redevelopment for a range of economic, social and political reasons. These changes continue, sometimes transposing their original purposes: for instance; the gentrification of Victorian working-class terraces coinciding with the subdivision of Victorian middle-class houses to provide the cheapest housing stock for those on the lowest incomes – often students, in the case of Brighton.

Although much less affected than many British cities by the Second World War there is clear evidence of historical discontinuities in several locations, where modern infilling has replaced bomb-damaged buildings.

The discussion so far has focused largely on patterns of residential properties, but in the case of Brighton there is a significant built environment connected to the growth of the city as a resort and centre for consumption. However, if we attempt to explain patterns of retail, for instance, we first have to define what we mean by retail – chain store Brighton (Western Road and Churchill Square) or tourist Brighton (The Lanes) or interesting and quirky Brighton (The North Laine)?

The second aspect of geographies of consumption in Brighton, of course, relates to the sea front, an extremely dynamic area of recent change. The area has been transformed from a beach-focused, family-orientated space into a playground for the drinking classes. Again, this is a reflection of the changing nature of leisure activities.

Conclusions

Hopefully this brief focus on the urban geographies of Brighton has highlighted how diverse and complex cities are (Figure 7), and shown the total inadequacy of obsolete, simplistic models such as Burgess in understanding the complexity and dynamism of an urban area. | **TG**

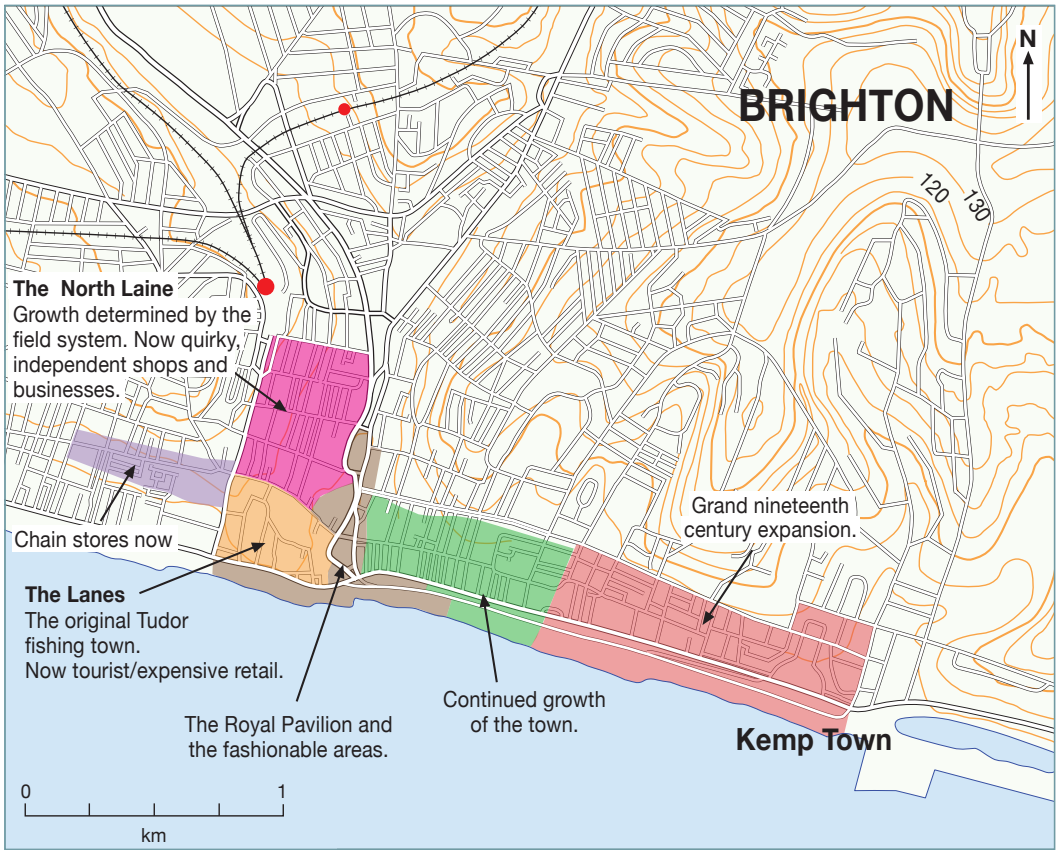

Figure 7: Change and development in Brighton – an attempt to integrate my original proposal into the context of the realities of the city.

Feedback

If you have any comments or views that you would like to share on this article please email Elaine Anderson at the GA (eanderson @geography.org.uk) and we will aim to include a number of them in the next issue of *Teaching Geography*.

Charles Rawding is Geography PGCE Course Tutor at Edgehill University and former Chair of the GA's Teacher Education Special Interest Group. He is a Consultant to the GA.

Email: rawdingc@edgehill.ac.uk

References

Burgess, E.W. (1925) *The City*. Chicago: University of Chicago Press.

Farrant, S. (1983) 'The early growth of the seaside resorts c. 1750–1840', in The Geography Editorial Committee University of Sussex *Environment, Landscape and Society*. Gloucester: Alan Sutton. pp. 208–20.

Garner, B.J. (1968) 'Models of urban geography and settlement location', in Chorley, R.J. and Haggett, P. (ed) *Socio-economic models in geography*. London: Methuen. pp. 303–60.

Greene, G. (1938) *Brighton Rock*. London: Heinemann.

Johnston, R. (1971) *Urban residential patterns*. London: Bell.

Lowerson, J. (1983) 'Resorts, ports and "sleepy hollows": Sussex towns 1840–1940', in The Geography Editorial Committee University of Sussex *Environment, Landscape and Society*. Gloucester: Alan Sutton. pp. 221–34.

Rawding, C. (2007) *Theory into practice: Understanding place as a process*. Sheffield: Geographical Association.

The new Education Inspection Framework – through a geographical lens

Alan Kinder and Paula Owens

Here, Alan and Paula outline Ofsted's new Education Inspection Framework and aim to help teachers and leaders of geography to understand some of its implications for their work.

Accompanying online materials

Background

From September 2019, a new Education Inspection Framework (EIF) is being used by the school inspectorate Ofsted when visiting schools and colleges in England (Ofsted, 2019a). The new framework includes a Quality of Education judgement (Figure 1), with a much sharper focus on the curriculum and the specialist knowledge, understanding and skills required to teach and learn subjects like geography.

The authors were both members of an Ofsted geography reference group that worked throughout the summer term of 2019. The aim of the group was to help devise training guidance for Ofsted inspectors, so that they could become better equipped to apply the new framework to inspect the quality of geography education in schools. It is noteworthy that, out of approximately 2000 ordinary inspectors, fewer than 30 identify as geography specialists (Freeland, 2019).

This article introduces the EIF from the perspective of teachers and leaders of geography, to help readers understand some of its implications for their work. We hope it will help move curriculum thinking in schools forwards – an aspect of education Her Majesty's Chief Inspector, Amanda Spielman, claims has been subject to 'gradual erosion' in recent years (Spielman, 2019).

The quality of geography education

Curriculum intent

The notion of intent is nothing new in geography education. Kinder surveys the roles that educational vision and moral purpose have played over recent decades and concludes that effective teachers 'share in a discourse which covers the "why" as well as the "how" of what they do' (2017). Nevertheless, the introduction to the EIF of the concept of curriculum intent as 'the extent to which the school's curriculum sets out the knowledge and skills that pupils will gain' (Ofsted, 2019a) is likely to prompt reflection among teachers and particularly subject leaders. While many schools already have a vision (or equivalent statement) that sets out the broad aims of geography in their curriculum and draws on sources such as the introductory sections of the geography national curriculum (DfE, 2013), the aims underpinning GCSE and A level geography (DfE, 2014a,b) and/or more aspirational documents (such as the GA's (2009) Manifesto for geography), curriculum intent is not expected to be evidenced through vision statements. Instead, Ofsted inspectors are likely to pursue lines of enquiry that may feel quite challenging, such as:

- why specific themes, topics and content have been included in the geography curriculum and what makes this content the most appropriate and useful
- how the sequencing of this content helps to build students' knowledge, understanding and skills in geography over time
- whether there are clear expectations around what students will know and be able to do with their geographical knowledge and skills at curriculum 'end points' (such as the end of a key stage).

The selection and particularly the sequencing of content in geography are matters on which the national curriculum has less to say than one might expect (Kinder and Owens, 2014; Kinder, 2015). A consideration of the research evidence around sequencing is beyond the scope of this article; suffice to say that teachers will want to consider the way the content they have selected reflects the goals of their curriculum and the way in which it serves their professional ideas around progression in geography. (For a useful summary of progression, see GA, 2014).

Curriculum implementation

By implementation, the EIF means 'the way the intended curriculum is taught and assessed' (Ofsted, 2019a). An important point here is that the EIF does not prescribe a geography curriculum, nor an approach to teaching it. For example, it does not define geography's key concepts. However, the EIF does make clear that key subject concepts and skills should be deepened and embedded over time, and that students should be able to demonstrate their

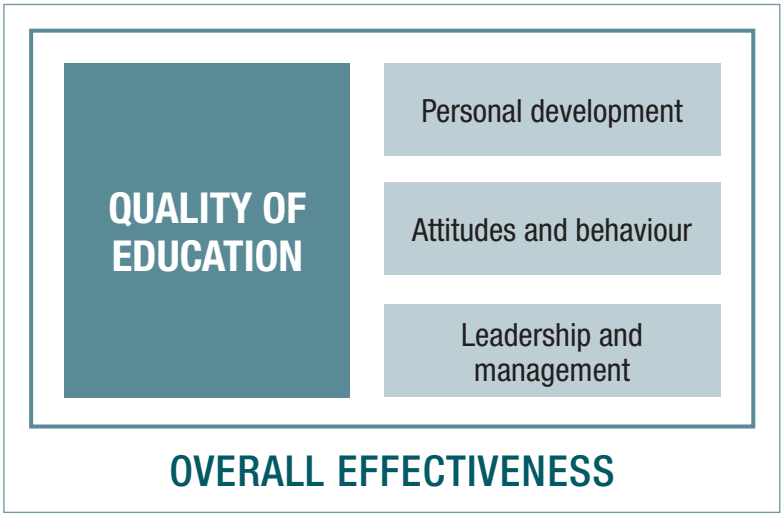

Figure 1: Key judgement areas in the Ofsted Education Inspection Framework, 2019.

growing knowledge of these and proficiency in using them – and that the system of assessment should guide and support students in doing so. A particularly useful source of guidance for teachers seeking to embed geographical conceptual understanding is *Thinking geographically* (GA, 2012), which sets out how big ideas such as place, space and environment can help shape more concrete concepts in school geography. Well-researched support is also available addressing ways in which students acquire new knowledge, connect this to prior learning and build it incrementally into connected knowledge systems or 'schema' (for example, Roberts, 2013).

The EIF makes clear that discussions with subject leaders, teachers and students, as well as lesson observations and scrutiny of curriculum plans and/or student work, are potential sources of evidence for judging the quality of curriculum implementation. In the authors' view, particular thought needs to be given to:

- how the intent for the subject helps steer the teaching and assessment
- why specific teaching approaches have been selected and how they are appropriate for all students
- how specialist aspects such as the provision of fieldwork across the curriculum help build knowledge and skills
- the subject and specialist pedagogical knowledge of those teaching geography in the school – and what is being done to support them.

A number of other documents released into the public domain by Ofsted help to 'flesh out' how inspections might be experienced by teachers of geography. In May 2019, it published its revised inspection methodology (Ofsted, 2019b) and in June two pilot-phase research exercises detailed findings around book scrutinies (Ofsted, 2019c) and lesson observations (Ofsted, 2019d) – see Figure 2.

Curriculum impact

There are a range of implications for senior leaders and teachers of geography arising from the impact section of the new inspection framework and methodology. One of the driving principles behind the reform of the EIF was the view that the current system had encouraged teaching 'to the test' and an over-reliance on data. Furthermore, in the words of the HMCI, 'when data trumps substance, it is curriculum, teaching and learning that suffer' (Spielman, 2019). The new framework quite rightly continues to place great importance on learning outcomes and assessment and inspectors will continue to make use of national performance information. However, it also makes clear that learning must build towards a goal and that pupils are expected to acquire knowledge and skills progressively. In relation to subject knowledge, the expectation is that pupils should make connections in their learning and use their knowledge with increasing fluency in different and more complex situations. This approach can be applied very readily to a 'horizontal' subject like geography, where we revisit key concepts (such as 'environment' or 'interdependence') periodically in order to broaden and deepen pupils' understanding.

Since inspectors will no longer be making use of internal data to assess the attainment or progress of pupils, there is likely to be greater focus on the first-hand evidence available from the interviews, lesson observations and book scrutinies that are discussed in the implementation section above. This approach may help geography to evidence its positive impact, since nationally-generated data only becomes available in our subject at the end of GCSE. It may help to dismantle unwieldy internal data tracking systems in some schools since, as part of its mission to be a 'force for improvement', inspectors will begin to ask school leaders who require more than three

Figure 2: EIF pilot-phase book scrutiny and lesson observation research indicators. **Sources:** Ofsted, 2019 c, d.

Book scrutiny research indicators	Lesson observation research indicators
Building on previous learning – consistent, coherent and logically sequenced knowledge development • Depth of coverage – suitably broad range of topics within a subject • Depth of coverage – independent thinking, subject-specific concepts and connections to prior knowledge • Pupil progress – acquisition of knowledge and understanding appropriate to starting points • Practice – opportunities to revisit, deepen and solidify subject understanding and to demonstrate this	**Curriculum** • subject expertise and skills to provide learning opportunities • equality of opportunity – lesson as building block to the wider curriculum • strategies to support reading/ vocabulary/numeracy • suitably demanding content • logical sequence • recall and practise previously learned skills and knowledge • assessment of the current skills and knowledge of learners **Teaching** • good communication skills • students build knowledge and make connections • relevant and appropriate resources to clarify meaning • good questioning skills and effective checks for understanding • explicit, detailed and constructive feedback **Behaviour** • supportive classrooms focused on learning • focused classroom through high expectations for students • clear and consistent expectations that are understood and followed • students' behaviour contributes to the focus on learning

data collection points per year in subjects like geography to justify their approach in terms of teacher workload. Curriculum structures will come under scrutiny if students are unable to demonstrate they can recall and make good use of their knowledge. Secondary schools with a two-year Key Stage 3 or primary schools that do not teach geography in every term and year group may need to review the breadth and ambition of their curriculum and its impact on learning over the long term. While the potential advantages of these changes for geography are clear, concerns have also been raised that the new EIF may create unintended consequences – such as senior leaders requiring teachers to focus on recording learning in student workbooks at the expense of other approaches to learning (Enser, 2019).

Geography and Personal Development

Geography makes distinctive and vital contributions to personal development. Through our transactions with places, people and environments, we develop our identity and sense of place in the world. Geography, when taught well, can help us better understand ourselves, our relationships with others and with the world in which we live. Thus, the EIF section on Personal Development (Ofsted, 2019a) provides a wealth of opportunities to demonstrate how the subject can contribute to the wider curriculum.

What is it like to be a student at your school? What kinds of experiences does your school offer? How are these built into the curriculum? A robust geography curriculum will offer varied, planned-for and rich experiences such as fieldwork (perhaps with residential opportunities), environmental engagement and meaningful collaboration with local and global communities (including school links). A geography curriculum that builds on relevant and current context – from debating a planned closure of a local shop to investigating impacts of rapid climate change – will contribute to personal as well as academic development when knowledge, skills and values are integrated.

A high-quality, robust geography curriculum will have planned opportunities to explore identity, cultures and countries sensitively: celebrating difference but also recognising what we have in common; learning and remembering facts but also developing skills of empathy to augment core knowledge. Such geographical experiences deepen students' understanding of concepts such as diversity and interdependence as well as foster critical thinking; enabling students to 'understand, appreciate and respect difference in the world and its people, celebrating the things we share in common' (Ofsted, 2019a).

Geography contributes to spiritual development: whether it is marvelling at the grandeur of the Rocky Mountains or the Taj Mahal or the colours of Earth as seen from space, geography has awe and wonder in abundance. Those 'wow' moments provide deep and lasting impacts on students. Moral and ethical issues are supported by the application of a geographical lens: who gets what, where and when? And who decides? Should we buy local or global? Why do people become refugees? What do we mean by a climate crisis? Geography, therefore, teaches students 'how to discuss and debate issues and ideas in a considered way' (Ofsted, 2019a).

How does geography 'support students to be confident, resilient and independent' (Ofsted, 2019a)? Resilience is generally agreed to be both a trait as well as a dynamic process (Ofsted, 2019e), indicating that it can be affected by learning processes; and there are many opportunities for subject leaders to flag up where this is happening. For example, students become more resilient in dealing with change as their understanding of impacts, causes, adaptation and mitigation of environmental issues grows. Geographical knowledge gives students confidence and empowers debate, and even something as straightforward as involving students in risk assessment before fieldwork teaches them self-reliance and independence.

Geography 'provides students with meaningful opportunities to understand how to be responsible, respectful, active citizens who contribute positively to society' (Ofsted, 2019a). Through their enhanced world knowledge and geographical skills (such as digital mapping), students gain confidence. Widening their vision not just for the present, but also for possible futures (e.g. investigating where in the locality bat boxes might be sited or how the use of floating farms can help farmers in Bangladesh adapt to monsoon flooding) and the idea of what might and could be.

Overall, geography can contribute much to the section on Personal Development, provided there is a carefully thought-through, rigorous curriculum in place whose aims are realised by careful and knowledgeable teaching. A good subject leader will help teachers to develop that rigour, accentuating the geography and making it visible.

Subject leadership – conclusions

Reference has been made throughout this article to the implications of various EIF sections for both teachers and leaders of geography. Subject leaders should note that, overall, the EIF is built around the idea of the connectedness of curriculum, teaching, assessment and standards. In that sense, it echoes the GA's take on curriculum making, which suggests that effective teaching draws on the rich resources offered by the subject discipline, specialist pedagogies and students' own experiences (GA, 2009). Figure 3 illustrates this thinking by showing how curriculum intent, implementation and impact come together around the notion of curriculum making.

Of course, the 'quality of education' judgement is itself a component of the overall effectiveness of a school (Figure 1). Subject leaders may therefore want to reflect on their effectiveness by drawing together the evidence around the school's geography curriculum, the teaching

of, assessment of and standards in the subject alongside student behaviour and subject leadership (see web panel). This is something the GA's Primary and Secondary Geography Quality Marks have been redesigned to assist with (GA, n.d.).

While the new EIF does not mean changing the curriculum overnight, it does imply reflecting on its cohesiveness and effectiveness, being able to articulate why you teach what you do, and understanding the impacts on all students. | **TG**

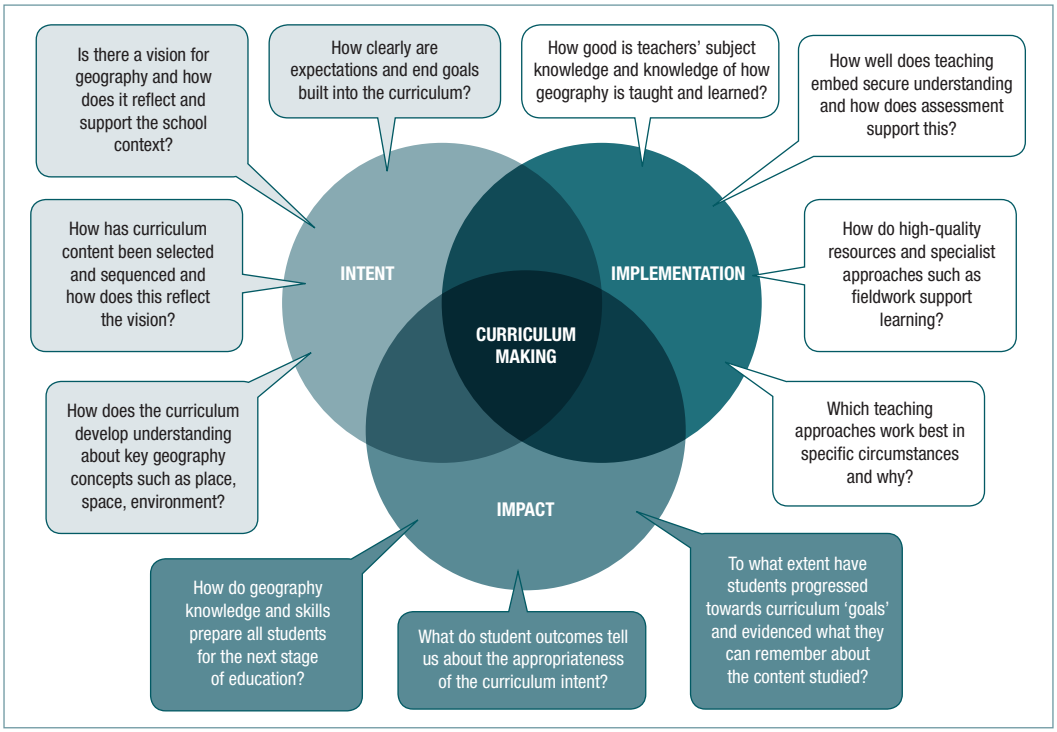

Figure 3: Key questions link intent, implementation and impact around the notion of curriculum making.

Online resources
Download the GA 'Policy Matters' summary of support: www.geography.org.uk

Leading Primary Geography (includes EIF geography framework): https://www.geography.org.uk/Shop/

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References

All websites last accessed 23/7/2019 unless indicated otherwise.

DfE (2013) *Statutory Guidance – National curriculum in England: geography programmes of study*. Available at: https://www.gov.uk/government/publications/national-curriculum-in-england-geography-programmes-of-study

DfE (2014a) *Geography GCSE subject content*. London: DfE.

DfE (2014b) *Geography GCE AS and A Level subject content*. London: DfE.

Enser, M. (2019) *Why Ofsted's focus on exercise books could be harmful*. Available at: https://www.tes.com/news/why-ofsteds-focus-exercise-books-could-be-harmful

Freeland, I. (2019) 'Education Inspection Framework 2019: What does it mean for the teaching of geography?' Lecture to the GA Annual Conference, 10 April.

GA (2009) *A different view: a manifesto from the Geographical Association*. Available at: https://www.geography.org.uk/GA-Manifesto-for-geography

GA (2012) *Thinking geographically*. Available at: https://www.geography.org.uk/write/MediaUploads/Support % 20and % 20guidance/GA_GINCConsultation_ThinkingGeographically_NC_2012.pdf

GA (2014) *An assessment and progression framework for geography*. Available at: https://www.geography.org.uk/download/GA % 20Assessment % 204pp % 20flyer-3.pdf

GA (n.d.) *Geography Quality Marks*. Available at: https://www.geography.org.uk/quality-marks

Kinder, A (2015) 'English lessons: the changing nature of geography curriculum and assessment in England' in *Journal of Research and Didactics in Geography*, 2, 4, pp. 79–84. Available at: http://www.j-reading.org/index.php/geography/article/view/98

Kinder, A. (2017) 'Belonging to a subject community' in Jones, M. (ed) *The Handbook of Secondary Geography*. Sheffield: Geographical Association.

Kinder, A. and Owens, P. (2014) 'Preparing for curriculum 2014', *Primary Geography*, 83, pp. 28–9.

Ofsted (2019a) *The education inspection framework*. Available at: https://www.gov.uk/government/publications/education-inspection-framework

Ofsted (2019b) Inspecting the curriculum: revising inspection methodology to support the education inspection framework. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/814685/Inspecting_the_curriculum.pdf

Ofsted (2019c) *Workbook scrutiny*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/811807/Inspecting_education_quality_workbook_scrutiny_report.pdf

Ofsted (2019d) *How valid and reliable is the use of lesson observation in supporting judgements on the quality of education?* Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/811808/Inspecting_education_quality_Lesson_observation_report.pdf

Ofsted (2019e) *Education inspection framework: overview of research*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794355/Research_for_EIF_framework_100419.pdf

Roberts, M. (2013) *Geography Through Enquiry*. Sheffield: Geographical Association.

Spielman, A. (2019) *Amanda Spielman launches EIF consultation proposals*. Available at: https://www.gov.uk/government/speeches/amanda-spielman-launches-eif-consultation-proposals

World maps in a time of crisis

Peter Vujakovic

Peter provides an overview of the relative merits and problems of different map projections.

In the year in which Greta Thunberg, the Swedish teenage 'climate change' activist, galvanised public opinion during her visit to the UK, the Extinction Rebellion movement brought parts of London to a standstill, and in which evidence of plastic waste was found at the bottom of the Mariana Trench, it is important to reflect on the global issues – economic and geopolitical, as well as environmental – that face us today, and how we address these as teachers of geography. One way we can do this is by providing our students with clear information that allows them to think critically and make informed choices. A key tool at our disposal must be maps and related information graphics.

Maps provide an immediate and effective visual stimulus to thinking and debate, but their form and function need to be taught and understood, because maps can also mislead, and very often do, as examples from educational publications to the news media show. E. Lynn Usery, Director of the US Geological Survey Centre of Excellence for Geospatial Information Science, has warned:

> *It has never been more important in the history of cartography … that people understand how maps work. With increasing globalisation, for example, world maps provide a key format for the transmission of information, but are often poorly used.* (Usery, 2018, p. 202)

A range of projections

Politicians and social commentators speak glibly of the 'existential crises' facing the world, often in very general and disquieting terms. Maps can help our students to make sense of these issues, but only if the maps we expose them to are effective. Sadly, many creators of world maps still employ incorrect or poorly chosen projections, often combined with unwarranted connotations due to the choice of colour (e.g. red implying 'danger') or melodramatic graphics. Projections are the systematic transformation of the globe to a flat surface, but no single map projection can be effective in all circumstances. All include some form of distortion, whether of area, distance, or the shape of continents. We must alert our students to the biases, deliberate or not, that poor choice of projection can convey – we need to teach them to understand *how maps work*. The point of this article is not, however, to provide practical advice on teaching projections (see below for some suggestions), but to encourage critical thinking concerning the maps we expose students to, or ask them to use in their own work. Incidentally, it is now a decade and a half since my plea for *diversity* in the use of world maps in education was published in *Teaching Geography* (Vujakovic, 2004), a plea which remains current. One of the enduring myths of cartography is that a certain type of world map can provide a 'one size fits all' answer for general educational purposes.

Some people have advocated what are known as 'compromise projections', involving the 'least bad' distortion of all key attributes (area, shape, scale). A classic example is the widely adopted Robinson projection, originally called the 'orthophanic' (right-appearing) projection, designed by Arthur H. Robinson in the 1960s (Snyder, 1993). The other popular option has been the use of one or other equal-area projection; these produce world maps that show continents and countries in their correct area relative to one another (while accepting other distortions, especially shape). Equal-area is a property of maps referred to as 'equivalence'. These projections are often contrasted with the classic Mercator world projection, which exaggerates area in the high latitudes, such that Greenland appears larger than the whole of South America, while actually being some eight times smaller. It is due to this exaggeration that the use of Mercator has been condemned as 'imperialist'; for example, it over-emphasises northern Europe compared to Africa and southern Asia. However, as Snyder (1993) reminded us, 'Mercator's chief purpose in developing the [1569] projection was navigational' (p. 45). Its use has significantly declined as a world base map for educational use, although it still appears in other contexts.

The idea that a single 'correct' map exists is a legacy of the so-called 'Peters Phenomenon'. The German historian Arno Peters introduced his equal-area projection and map to the world in the late 1960s, and by the 1980s the map appeared in the influential North-South ('Brandt') report on world development (Brandt, 1980). It was subsequently adopted widely by development educationalists and NGOs, as well as UNESCO. His map *does* show the continents and countries in their true area, but is not the first to do that, nor the best in terms of preservation of shape. Many in the cartographic community slated Peters, and claimed his projection was simply a reintroduction of that published in 1885 by the Rev. James Gall (hence the use of the title 'Gall-Peters' among cartographers). The backlash was as much a reaction to Peters, who as a non-professional 'outsider' had managed to influence map users where the cartographic community had failed make any real impact. Sadly, the cartographer's job was not helped by poor use of map projections in a wide range of popular and academic publications (Vujakovic, 2002).

Equal area projections

The Mercator projection was Arno Peters' *bête noire*. It was the projection placed alongside the Peters in a range of publications which sought to address bias in mapping. In the mid-1980s, against the grain, when many UK development education organisations and charities were adopting the Peters projection, I convinced the World Development Movement (WDM; a UK national NGO lobbying on development issues)

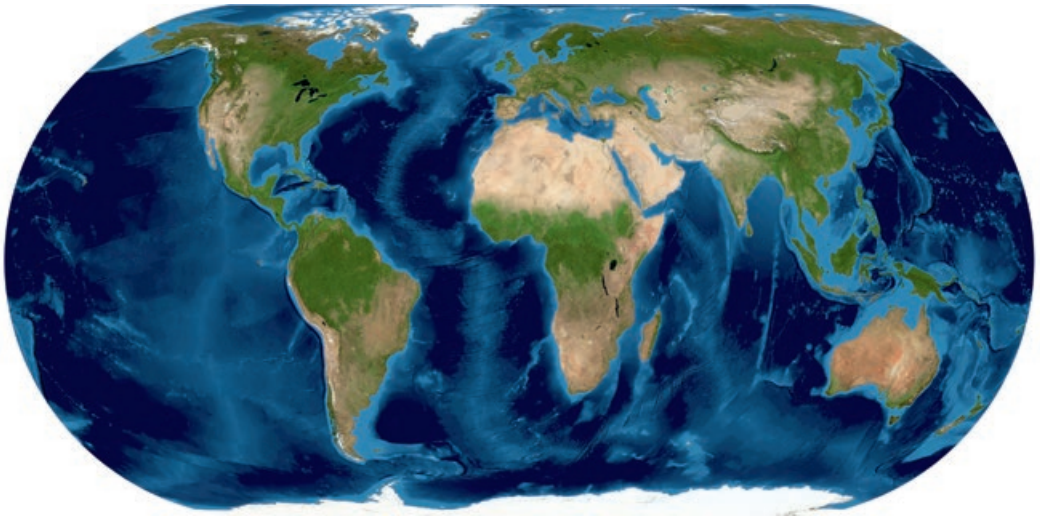

Figure 1: Complete Earth view from space. High resolution world map illustration in Eckert IV projection. Data source NASA. **Photo:** © Shutterstock/ Volodymyr Nikulishyn.

to adopt Eckert IV (another equal-area projection – Figure 1) as the base for most of their thematic maps. WDM received some angry responses to this, as other organisations thought that if we were not using Peters, we must be using Mercator. The serious lack of basic cartographic understanding was obvious. It exposed the fact that individuals and organisations, while understanding that *maps matter*, did not understand the options available to them, but tended to accept the 'politically correct' map based on who shouted the loudest.

Creating and popularising an equal-area projection to compete with Peters appears to have become a cartographic 'holy grail'. The US company ODT Maps, which has done much to publicise and market the Peters map, produced a similar map, their Hobo Dyer Projection (2002), which they claimed removed some of the exaggeration (elongation of Africa, for example) inherent in Peters, but produced compression at the poles. The map achieved a high profile, being adopted by, for example, US President Jimmy Carter, and was used at his Nobel Peace Prize ceremony in 2002. More recently, a team of cartographers, Bojan Šavrič, Tom Patterson and Bernhard Jenny (2018), has launched a new equal-area projection, 'Equal Earth':

> *The Equal Earth map projection is a new equal-area pseudocylindrical projection for world maps. It is inspired by the widely used Robinson projection, but unlike the Robinson projection, retains the relative size of areas … Continental outlines are shown in a visually pleasing and balanced way.* (p. 454)

In visual terms, however, Equal Earth varies little from other projections, especially Eckert IV. In the end, the choice of an equal-area projection is largely a matter of taste and message (see for example, the Atlantis projection (Vujakovic, 2004), a novel equal-area projection that focuses on the Atlantic Ocean and shows Antarctica in roughly the correct shape). Equal-area maps are clearly the sensible default, as they *generally* do no harm to most data sets, and ensure that environmental issues which are area-dependent, such as forest loss, land degradation or desertification, are displayed effectively. Whether they are 'fairer' to the peoples of the world is more open to debate; I have discussed this in some detail in *Teaching Geography* (Vujakovic, 2004). That article was itself a response to David Wright's (2003) 'Questioning world maps' in which he argued for the use of equal-area maps *as the norm in teaching*, and in which I argue for using cartograms and 'polyhedral maps' as stimulating alternatives. If fairness to the world's people is a basis for choice of world map, then a population cartogram (map or diagram?) would be a good alternative, with other thematic data superimposed as appropriate. Many readers will be familiar with the Worldmapper project and its range of interesting cartograms; these provide an excellent resource to stimulate debate in class – for example, their maps of carbon dioxide emissions shows China as a major global contributor, but begs the question 'Whose pollution is this?'; is it in fact western consumers exporting their dirty industries?

Avoiding pitfalls

In what is left of this article I enumerate some pitfalls that students should be aware of. The first is the issue of centring and orientation. This is more insidious than the simple choice of projection. Despite the efforts of educationalists and others, most world maps that students in the UK are exposed to are 'Eurocentric', i.e. orientated with north to the top and Europe placed centrally. Even Stuart McArthur's well-known 'Universal Corrective Map of the World' (launched on Australia Day in 1979), which placed Australia at top centre, has scarcely dented the Eurocentric bias. This bias should be a cause for concern as it certainly does create an unwarranted sense of superiority. It also means that when a Pacific-centred map might be more practical use, it is often not used. It is interesting to note that neither Arno Peters nor Worldmapper seek to challenge the dominant orientation or centring of world maps. Additionally the Worldmapper base map (un-named), described as 'equirectangular', clearly exaggerates the size of Greenland compared to south America and is not an equal-area map. When I interviewed Peters in the 1980s, he felt that a change in orientation, on top of his already unfamiliar map, would be too much of a challenge for map readers. One of the failings of so many 'experts' is the lack of trust in students or the wider public to be able to cope with change.

Another key issue that is often misunderstood is scale related to distances, and the fact that this is not constant across the whole map, but only for certain aspects. For example, the linear scale of a Mercator map increases with latitude and is only constant along a line of latitude; this is the reason it distorts (enlarges) the size of continents further from the equator. Beyond 70° north or south the Mercator projection is practically useless, because the linear scale becomes infinitely large as the poles are reached, making it impossible to produce a Mercator map of the whole world! Where scale becomes critical, however, is for specific issues such as mapping the geopolitical threat posed by intercontinental missiles. The UK news media, for instance, has tended to adopt standard rectangular world map projections for most purposes, including displaying missile ranges (Figure 2). On such maps it appears that the most direct missile route from, say, North Korea to the US mainland would track the line of latitude 40°N, while in fact the direct route would follow a Great Circle across the Aleutian Basin (between 50° and 60°N). These missile ranges can only be genuinely shown as concentric circles if based on an equidistant (polar style) projection centred on the launch site (Figure 3). The use of a standard equal-area map would be just as useless to show missile ranges as concentric circles (Vujakovic, 2018).

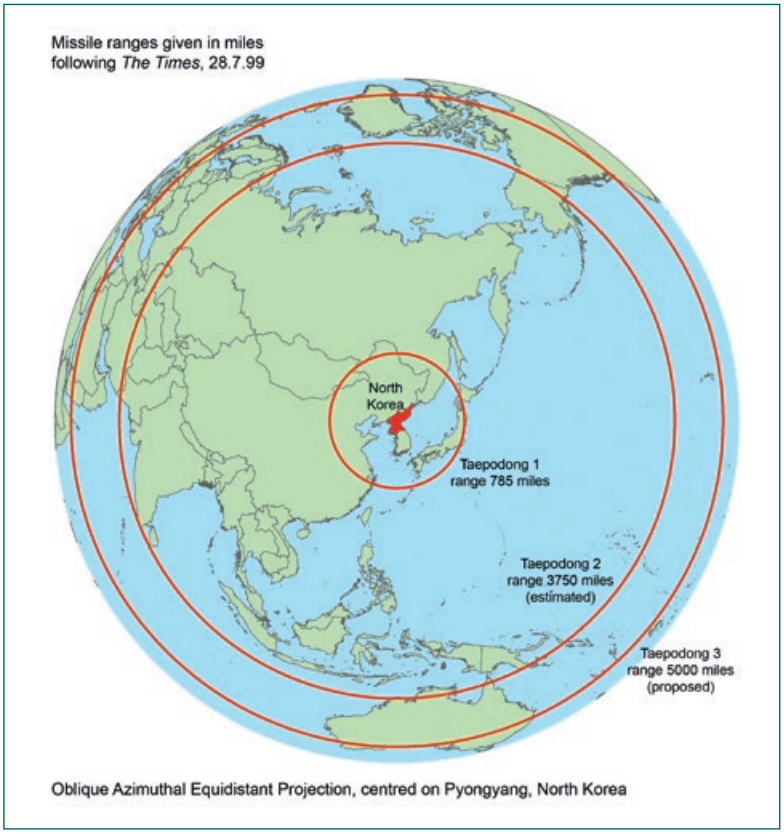

Figure 3: Map of missile ranges shown correctly as circles on an equidistant projection.

Further reading and resources

While I have made the point that this article is not designed to provide practical advice regarding map projections in learning and teaching, there are a number of resources that will be beneficial to those seeking materials to help develop their classroom activities or to explore world map projections in more detail. The most obvious class resource is the latest edition of Woods *et al.* (2019). While designed primarily for a US audience, their book is a clearly written introduction to mapping, with a strong focus on world maps. It provides a range of ideas that will help teachers engage students with maps and issues such as centrism and orientation, as well as exploring diversity in map projection as a positive issue rather than a source of confusion. The following quote sums up their approach to education:

> *What we have begun here is a process of 'unpacking' or 'decoding' maps. Such a process requires us to equip ourselves with analytical tools – tools that will help us see through maps to discern their motivating agendas. Without such tools we simply accept what maps tell us. Learning to ask the right questions can help to liberate our thinking. It can free us from bondage to other peoples' agendas. Why should we passively allow our minds to be taken over by someone else's image of the world?* (p. 36)

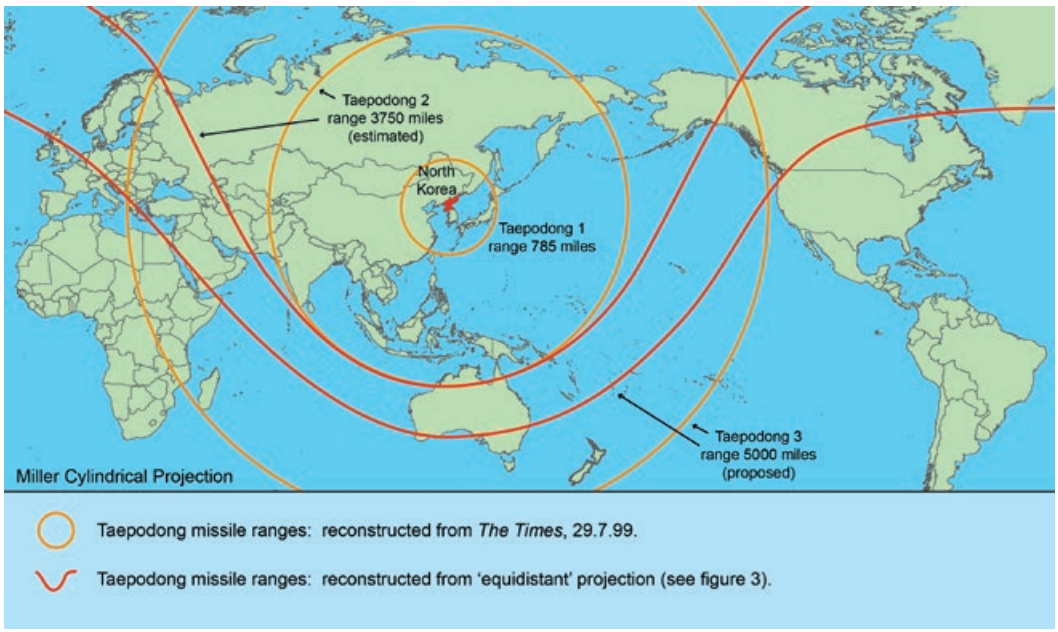

Figure 2: Map of missile ranges on rectangular world map, showing original 'circles' and corrected for true distance.

Another current resource is Oxfam's 'Mapping Our World' (designed for 8–14 year-olds), an entertaining and interactive update of their 1993 hard copy resource pack aimed at UK schools.

Other sources, for those who wish to explore world mapping in more detail, include John. P. Snyder's (1993) classic (and evocatively named) *Flattening the Earth: Two Thousand Years of Map Projections*, which provides a comprehensive overview of world mapping. Snyder has been my 'go to' text for two decades of studying maps in the news media. A recent important resource is Usery (2018); although as one of the editors of that text, I have to acknowledge that the exemplars were almost entirely Eurocentric. Another resource which provides useful information on appropriate choice of projection is ESRI's 'Projection toolset' website; as they point out:

> *… anyone who uses maps as analytic tools should know which projections distort which properties and to what extent. Briefly, conformal maps preserve shape; equal area, or equivalent, maps retain all areas at the same scale; equidistant maps maintain certain distances; and azimuthal, or true direction, maps express certain accurate directions.*

The site provides detailed information on a wide range of world map types, but once again, the graphic examples are almost entirely Eurocentric.

An interesting site that teachers might consider using as a learning aid is the set of maps illustrating each of the UN's seventeen Sustainable Development Goals (SDGs) produced by the International Cartographic Association (ICA). The project mapped each of the goals from the perspective of a specific ICA Commission to provide an overview of the strengths of cartography, including diversity of mapping options and of multiple map perspectives. It offers free downloadable posters for classroom use; for instance, maps for SDG 8 (Good Jobs and Economic Growth) usefully challenge the way colour can be used to create certain connotations. Others are less successful, but offer opportunities for critical engagement, for example the map for SDG 9 (Industry, Innovation and Infrastructure) which uses a so-called '3D extrusion' technique that, on a non-equal-area map, creates a visually confused product. Sadly, there is little consistency in the use of projection for their world maps: many, despite being appropriate, are certainly not equal-area. For example, two map projections are used to display terrestrial ecoregions (SDG 15); the first, the Mercator, is quickly dismissed as too distorting of area. Then the Winkel Triple is suggested as a substitute, based on the claim that it 'is very well suited for mapping the entire world', and despite still exaggerating the area of higher latitudes. One example (SDG 12) even uses what appears to be a Van der Grinten projection or similar, which massively exaggerates the higher latitudes, and in one version manages to drop New Zealand, a significant cartographic blunder! The only world maps in the collection to use a non-Eurocentric format are those focused on the oceans (SDGs 14 and 15). Why not at least one 'turnabout' map in a series focusing on global development issues?

It is difficult to do more than scratch the surface in such as short article. A key word search of the web will provide numerous other sites detailing the significant characteristics of specific projections. The key issue is to always ensure the chosen projection does the correct job of work! | **TG**

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References

All websites last accessed 03/07/2019.

Brandt, W. (Chair) (1980) *North-South: A Programme for Survival* Report from the Independent Commission on the International Development Issues

Šavrič, B., Patterson, T. and Jenny, B. (2019) 'The Equal Earth map projection', *International Journal of Geographical Information Science*, 33, 3.

Snyder, J.P. (1993) *Flattening the Earth*. Chicago: Chicago University Press.

Usery, E.L. (2018) 'Understanding map projections' in Kent, A. and Vujakovic, P. (eds) *The Routledge Handbook of Mapping and Cartography*. London: Routledge.

Vujakovic, P. (2002) 'What ever happened to the 'New Cartography'?', *Journal of Geography in Higher Education*, 26, 3, pp. 369–80.

Vujakovic, P. (2004) 'World maps: a plea for diversity', *Teaching Geography*, 29, 2, pp. 77–9.

Vujakovic, P. (2018) 'Cartography and the news', in Kent, A. and Vujakovic, P. (eds) *The Routledge Handbook of Mapping and Cartography*. London: Routledge. pp. 462–74.

Woods, D., Kaiser, W.L. and Abramms, B. (2019) *Seeing through Maps: Many ways to see the World* (3rd Edition). Amherst, MA: ODT Inc.

Wright, D. (2003) 'Questioning world maps', *Teaching Geography*, 28, 4, pp. 174–6.

Websites

ArcMap Projections toolkit (ESRI) – http://desktop.arcgis.com/en/arcmap/10.3/tools/coverage-toolbox/an-overview-of-the-projections-toolset.htm

Mapping Our World (Oxfam) – www.oxfamblogs.org/education/mapping_our_world/mapping_our_world/l/home/index.htm

Maps and Sustainable Development Goals, International Cartographic Association (ICA) – https://icaci.org/maps-and-sustainable-development-goals

Reddit 'Maps without NZ', created by people concerned about New Zealand being left-off maps – www.reddit.com/r/MapsWithoutNZ

Worldmapper – https://worldmapper.org

Making homework count

Hannah Finch Noyes

Hannah describes how her department developed a series of homework projects for year 7 and 8 geography students which emphasise the development of the skills required for GCSE.

Accompanying online materials

When I joined my current department in 2015, homeworks for year 7 and 8 consisted of 20-minute tasks which were given a grade and short comment. The school studies GCSE over three years and although the homework tasks varied from week to week, they didn't build students' learning to the level required for them to begin studying GCSE content in year 9.

After a few years of trialling different options, we have now developed a series of homework projects across key stage 3 which have a particular focus on developing students' geographical skill sets, focusing on those areas that will be necessary for success at GCSE. We have found that when making the transition to GCSE, students find AO3, 'Apply knowledge and understanding to interpret, analyse and evaluate geographical information and issues and to make judgements' (Ofqual, 2015), the most challenging assessment objective. Students always find it hard to reach a definitive judgement in the longer questions at GCSE. Consequently, almost all the homework tasks we have designed incorporate an element of evaluation so that students become familiar with how to make appropriate geographical judgements.

We also wanted to allow students the time to develop their homework tasks into an extended piece of writing or presentation work. As a result of student feedback, all homework projects are divided into weekly tasks over the course of four to five weeks. Figure 1 outlines the variety of homework tasks completed over the two years.

The summary table (Figure 1) demonstrates how key skills are incorporated into the homework tasks to build student confidence in analysing sources. For example, many projects ask students to locate their study area using annotated maps, or to include labelled photographs. The nature of the project titles prevents students from simply copying and pasting vast amounts of information from the internet.

The analysis and creativity demonstrated in students' conclusions are key to informing the overall grade they receive. Indeed, the quality of the evaluation evident in students' work is something that we hope will provide a good foundation as they begin GCSE topics. Allowing students a whole week at home to write their conclusion familiarises students with the evaluation process and emphasises its importance. Figures 2 and 3 overleaf show some sample conclusions which demonstrate how students have become more confident in drawing upon research to justify their ideas.

	Year 7	Year 8
Autumn term 1	**What is the geography of your favourite place?** An A3 poster with pictures annotated to show different aspects of geography. Students conclude by evaluating which is the most important aspect of their place and why.	**Cool climates** An A3 poster of a climate of their choice to show physical conditions, location and human adaptations. Their conclusion discusses the extent to which their climate is easier or more difficult to adapt to than the UK's climate.
Autumn term 2	**Imaginary island** Students design their own OS map, building on their map skills unit.	**Is globalisation a force for good?** An A4 information page enumerating the advantages and disadvantages of globalisation. Students evaluate the pros and cons and decide whether globalisation is or isn't a force for good.
Spring term 1	**Why was Japan's 2011 tsunami so deadly?** A newspaper report including labelled photos and maps enabling students to reach a judgement about the main reason why the tsunami was so deadly.	**Is the geography of Russia a benefit or a curse?** An A3 article for National Geographic magazine outlining benefits and problems of Russia's geography. Students conclude by deciding whether the benefits outweigh the costs.
Spring term 2	**Opportunities and challenges in Africa** An A4 fact file giving the location of an African country of their choice, and outlining the opportunities and challenges it faces. They must decide if the opportunities outweigh the challenges.	**Getting to know Lulworth** A map skills assessment using OS maps and aerial photography to introduce Lulworth Cove prior to fieldwork.
Summer term 1	**Representing places** Students choose 2–3 sources (e.g. poetry, graffiti art) to represent a place of their choice and annotate them. Students conclude by suggesting which source is most useful and why.	**Is the management of tourism effective at Lulworth Cove and Durdle Door?** Students write an answer to this question using fieldwork data they collected during their trip. This links to the AQA GCSE paper 3 pre-release decision making exercise.
Summer term 2	**Young Geographer of the Year competition** All students in years 7 and 8 produce an entry for the RGS (with IBG) Young Geographer of the Year competition. The projects throughout the year prepare them well for this. Projects are judged internally and the best are submitted to the national competition.	

Figure 1: Homework tasks in year 7 and 8. The 'geography of Russia' homework task is available as a download.

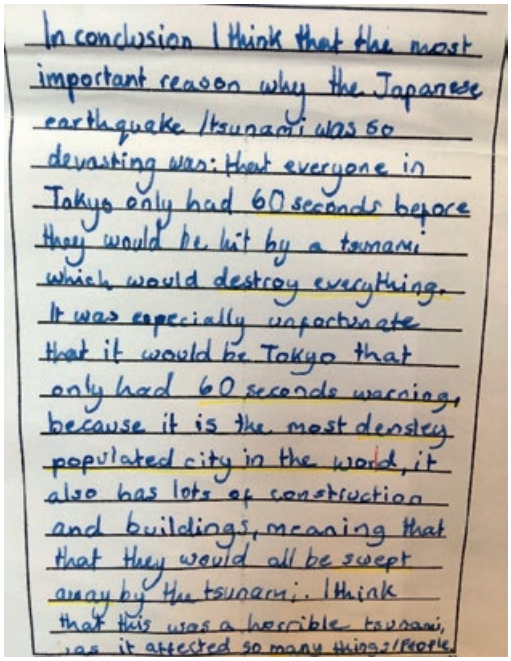
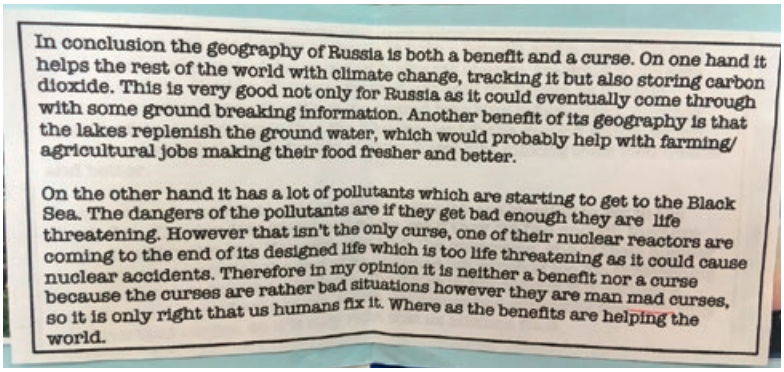

In conclusion I think that the most important reason why the Japanese earthquake/tsunami was so devasting was: that everyone in Tokyo only had 60 seconds before they would be hit by a tsunami which would destroy everything. It was especially unfortunate that it would be Tokyo that only had 60 seconds warning, because it is the most densley populated city in the world, it also has lots of construction and buildings, meaning that that they would all be swept away by the tsunami. I think that this was a horrible tsunami, as it affected so many things/people.

Figure 2: An extract from a year 7 student's conclusion to 'Why was Japan's 2011 tsunami so devastating?'

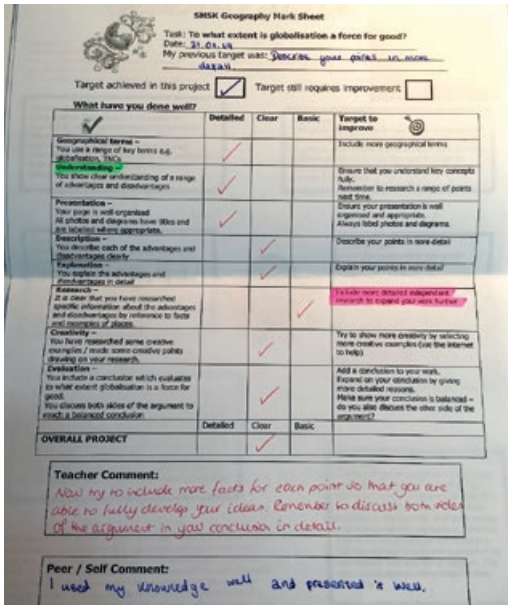

In conclusion the geography of Russia is both a benefit and a curse. On one hand it helps the rest of the world with climate change, tracking it but also storing carbon dioxide. This is very good not only for Russia as it could eventually come through with some ground breaking information. Another benefit of its geography is that the lakes replenish the ground water, which would probably help with farming/ agricultural jobs making their food fresher and better.

On the other hand it has a lot of pollutants which are starting to get to the Black Sea. The dangers of the pollutants are if they get bad enough they are life threatening. However that isn't the only curse, one of their nuclear reactors are coming to the end of its designed life which is too life threatening as it could cause nuclear accidents. Therefore in my opinion it is neither a benefit nor a curse because the curses are rather bad situations however they are man mad curses, so it is only right that us humans fix it. Where as the benefits are helping the world.

Figure 3: A year 8 student's conclusion to 'Is the geography of Russia a benefit or a curse?'

Marking

Each homework task has a mark sheet (Figure 4) which is used to assess eight different skills we would expect students to develop in preparation for study at GCSE. These are marked using 'detailed', 'clear' and 'basic' as grades. As students moved from one topic to another, it was important that we focused on the skill set students were developing rather than just the knowledge they acquired, since the topics covered are very varied in the first two years.


SMSK Geography Mark Sheet

Task: To what extent is globalisation a force for good?

Date: 31.01.19

My previous target was: Improve your grades in more detail

Target achieved in this project ☑ Target still requires improvement ☐

What have you done well?

	Detailed	Clear	Basic	Target to improve
Geographical terms – You use a range of key terms e.g. globalisation, TNCs	✓			Include more geographical terms
Understanding – You show clear understanding of a range of advantages and disadvantages	✓			Ensure that you understand key concepts fully. Remember to research a range of points each time.
Presentation – Your page is well organised. All photos and diagrams have titles and are labelled where appropriate.	✓			Ensure your presentation is well organised and appropriate. Always label photos and diagrams.
Description – You describe each of the advantages and disadvantages clearly		✓		Describe your points in more detail
Explanation – You explain the advantages and disadvantages in detail		✓		Explain your points in more detail
Research – It is clear that you have researched specific information about the advantages and disadvantages by reference to facts and examples of places			✓	Include more detailed independent research to expand your work further
Creativity – You have researched some creative examples / made some creative points drawing on your research.		✓		Try to show more creativity by selecting more creative examples (use the internet to help)
Evaluation – You include a conclusion which evaluates to what extent globalisation is a force for good. You discuss both sides of the argument to reach a balanced conclusion.		✓		Add a conclusion to your work. Expand on your conclusion by giving more detailed reasons. Make sure your conclusion is balanced – do you also discuss the other side of the argument?
	Detailed	Clear	Basic	
OVERALL PROJECT		✓		

Teacher Comment:
Now try to include more facts for each point so that you are able to fully develop your ideas. Remember to discuss both sides of the argument in your conclusion in detail.

Peer / Self Comment:
I used my knowledge well and presented it well.

Figure 4: A year 8 student's mark sheet feedback.

For example, students may struggle with the first topic of year 8 (weather and climate), but then find the second topic (globalisation) much more accessible.

The mark sheet also allows students to record their previous target and for a judgement to be made as to whether this has been achieved or not. Space at the bottom of the page allows for teacher and student feedback. Students are always praised for one area and given one area for improvement. These areas are recorded in teacher mark books so that progression can be clearly monitored and easily reported to parents at parents evening.

The results of a student survey from two classes found that students were very aware of how to improve upon their work. When asked 'Do you feel you have improved upon the quality of your work in homework tasks this year?', 85% said 'yes'. Comments from students who said 'yes' included:

- 'I used the previous targets you gave me and put them into my next project'.
- 'I think I have because the homework builds on what we have done in class and I have time to reflect over the class work at home.'
- 'I have learned how to write in a more geographical way. I know more geographical terms and as we have targets for each time, I can improve on the things I most need to improve on.'

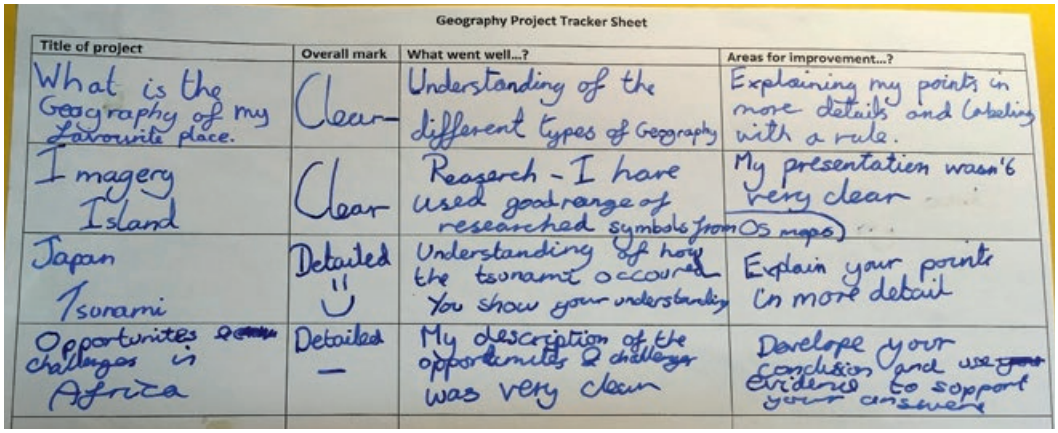
Students record their progress in tracking sheets in the front of their book. These give students a useful summary of their targets, and provide parents, other members of staff and school inspectors with a clear indication of student progress throughout the year (Figure 5).

Many of the students who responded 'no' to the survey said that this was either due to a lack of time to complete tasks how they would like or because their grade had stayed the same so they did not think they had improved. As a result, we are going to expand our marking categories as follows:

Detailed		
Detail +	Detailed	Detailed –
Clear		
Clear +	Clear	Clear –
Basic		
Basic +	Basic	Basic –

This will stop students feeling frustrated with consistently achieving the same 'level', even though they have actually improved upon their previous project. It will also allow us to better track student progression, particularly within the 'clear' category as we have found that this covers a wide range of students' work.

When students were asked 'Do you understand how to respond to feedback you are given about your homework from your teacher?', it was encouraging that 100% said 'yes' – they always or mostly knew what to do. In order to improve further, we plan to ensure there are more opportunities earlier in the



Geography Project Tracker Sheet

Title of project	Overall mark	What went well...?	Areas for improvement...?
What is the Geography of my favourite place.	Clear	Understanding of the different types of Geography	Explaining my points in more details and labeling with a rule.
Imagery Island	Clear	Reasearch - I have used good range of researched symbols from OS maps	My presentation wasn't very clear
Japan Tsunami	Detailed :)	Understanding of how the tsunami occoured You show your understanding	Explain your points in more detail
Opportunities & challages in Africa	Detailed -	My description of the opportunities & challenges was very clear	Develope your conclusion and use evidence to support your answers

Figure 5: An example of a year 7 tracking sheet.

term for students to receive and act upon feedback before their work is submitted as the final version. In addition, we would like students to spend time improving their work once final feedback has been given. The time teachers and peers spend writing comments should not be wasted, so we need to give students time in lessons to allow them to make amendments to their projects.

Creativity and independence

Many of the homework tasks allow students the opportunity to be creative, encouraging independence of thought. This can range from choosing a country in Africa to research, to the different types of benefits and problems they might include in relation to globalisation. Results from the questionnaire showed that students were very positive about being able to choose their own projects to research:

- 'I liked opportunities and challenges in Africa the most because it was very interesting to research about the situation your chosen country is in.'
- 'I enjoyed being able to choose one of my favourite places that I know and love.'
- 'I loved having the free rein to research and to choose which piece of information we got to focus on and then building it into the newspaper aspect of things'.
- 'I enjoyed researching a place that I didn't know that much about. I also enjoyed looking for benefits and curses in a seemingly big and empty space.'

When students are asked to complete a four-week research project, it is vital that they feel engaged with the subject content. The free choice element of projects has also been a helpful skill for students to develop prior to their last project of the year, producing an entry to the Royal Geographical Society (with IBG) Young Geographer of the Year competition. The question asked in the competition could seem overwhelming to a year 7 who has never been given a choice of research topics before, but in previous years our students have been successful in the competition due to the range of creative, independent ideas they have submitted.

Student feedback from the questionnaire demonstrated that students wanted more free choice over the way that they presented their projects. For example:

- 'We could choose how we present our projects more.'
- 'I would make them more creative and have homeworks where we have to make models.'
- 'I might make it more of a story board homework because they are good to visualize geographical processes'.

There is always a balance to be struck between giving students the opportunity to be creative and ensuring that the teacher provides clear guidance and assessment criteria that allow all students the chance to succeed. The role of the teacher is still vital in the process of developing independent thinking and ways of working, and our aim is to build opportunities now so that our students are well prepared to succeed at GCSE and beyond. The non-examined assessment at A level will act as the 'ultimate' independent project and our students are well prepared to succeed in it. We will continue to develop and assess the projects students complete for homework and look for new opportunities to promote creativity, particularly at GCSE.

Conclusion

It has taken us four years to reach our current provision and we are still making adjustments year on year. Student feedback is vital in this, as well as allowing time for a thorough student book review. Investing time in the work students complete at home certainly pays dividends in the classroom, both now and in later years. I would encourage all geography departments to review their homework policy at the end of every year and consider what skills and knowledge students are gaining from homework tasks. | **TG**

Online resources
The sample instruction sheet can be found on the GA website. Go to www.geography.org.uk/Journals/Teaching Geography and select Autumn 2019.

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References
Ofqual (2015) 'GCSE subject level guidance for geography – March 2015'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/410514/gcse-subject-level-guidance-for-geography.pdf (last accessed 07/07/19).

Ian Selmes

Whatever happened to sustainable development?

Ian discusses definitions of sustainability and its visibility (or otherwise) in the current geography curriculum.

Accompanying online materials

In this part of the twenty-first century the three key themes of geography are said to be sustainability, globalisation and equality, informed by the environmental parameters of biodiversity, climate and morphology (Dorling and Lee, 2016, p. 4). So where is sustainability in the secondary school geography curriculum, and how might we help our students to understand this concept and apply it thoughtfully to the world around them?

Sustainability in the curriculum

The world's climate is changing at an unprecedented rate, and this is attributable in large part to human actions (IPCC, 2019). The RSPB suggests that the UK has lost significantly more biodiversity than the global average (RSPB, 2016). And we are becoming rapidly more aware of the consequences of living in the Anthropocene (Lewis and Maslin, 2018). Surely, you would think, sustainability would have a prominent place in the geography curriculum?

Yet in today's statutory geography curriculum there is surprisingly little direct reference to sustainability (Figure 1).

The rare appearances of sustainability in the current curriculum are in stark contrast to the previous versions of the National Curriculum and GCSE and A level geography specifications. The key stage 3 Programme of Study (QCA, 2007) stated 'Geography inspires pupils to become global citizens by exploring their own place in the world, their values and their responsibilities to other people, to the environment and to the sustainability of the planet' (QCA, 2007, p. 101). Environmental interaction and sustainable development was identified as one of seven key concepts, with content including '… making links between people and their environments to help understand interdependence, sustainable development and future implications' (QCA, 2007, p. 106).

Figure 1: Sustainability in the current geography curriculum.

Key Stage 3	GCSE	AS/A level
Aims To '… understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time' (DfE, 2013).	**Aims** To offer '… the opportunity for students to understand more about the world, the challenges it faces and their place within it' and to enable '… young people to be globally and environmentally informed and thoughtful, enquiring citizens' (DfE, 2014a, p. 3).	**Aims** To enable '… students to be inspired by their geographical understanding, to engage critically with real world issues and places' and '… to grow as independent thinkers and as informed and engaged citizens' (DfE, 2014b, p. 3).
Specific reference to 'sustainability' None.	**Specific reference to 'sustainability'** People and Environment: '… sustainable use and management' of two selected global ecosystems and of either food, energy or water resources. (*ibid*., p. 7).	**Specific reference to 'sustainability'** Included in the concepts relevant to the core and non-core content.
Sustainability implied Physical geography, relating to climate from the Ice Age to the present. Human geography, relating to economic activity, and the use of natural resources. Understand how human and physical processes interact to influence and change landscapes, environments and the climate; and how human activity relies on effective functioning of natural systems.	**Sustainability implied** Natural weather hazards, climate change including human activity, urbanisation including contemporary challenges, and global economic development.	**Sustainability implied** Water and carbon cycles and their key role in supporting life on Earth and carbon sequestration in oceans; global governance, including through the United Nations, to regulate the consequences of globalisation on people, places and environments; and the nature of economic, political, social and environmental interdependence.
Attainment targets Not included for the 2014 National Curriculum.	**In assessment objectives** AO2 requires students to '… demonstrate geographical understanding of concepts and how they are used in relation to places, environments and processes, and the inter-relationships between places, environments and processes'. AO3 requires students to '… apply knowledge and understanding to interpret, analyse and evaluate geographical information and issues and to make judgements' (Ofqual, 2014).	**In assessment objectives** AO1 is directly relevant to studies of sustainability, requiring students to '… demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales' (Ofqual, 2015).

The aims of previous GCSEs included to '… develop students' responsibilities as global citizens and recognise how they can contribute to a future that is sustainable and inclusive' (Ofqual, 2012, p. 3), while subject content specifically referred to 'current issues of local, national and global importance, including climate change and sustainable development' (Ofqual, 2012, p. 4). The previous AS and A level subject aims also included the development of students '… as global citizens who recognise the challenges of sustainability and the implications for their own and others' lives' (Ofqual, 2011, p. 3) and the subject content specified that students should '… develop a knowledge and understanding of the key concepts of place, space, diversity, interdependence, people-environment interaction, the processes associated with these, and change over time' (Ofqual, 2011, p. 4). Teachers might wonder why sustainability is hidden away in the current geography curriculum?

What is 'sustainability'?

Open almost any school geography textbook and you would find the same definition: 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED, 1987, p. 43). This enduring definition derives from the United Nations' 1983 World Commission on Environment and Development and its famous Brundtland Report (WCED, 1987). However, most school textbooks ignore the subsequent metamorphosis of the term, and the continuum of thought that has emerged regarding the vigour of sustainability efforts by governments, businesses, public and voluntary sector organisations as well as individuals. Students need this information to be able to understand the concept of sustainability and to be able to thoughtfully evaluate their own responses to the problem.

Underpinning the Brundtland definition were two key concepts: the 'needs' of the world's poor and the limitations of the environment's capacity to meet present and future needs. Impetus in the UN led to the 1992 Rio Earth Summit, and amongst its outcomes was the Agenda 21 agreement: an action plan for sustainable development (UNCED, 1992). Agenda 21's objectives included bringing together environmental, social and economic concerns and it encouraged the participation of all citizens – from national governments to local communities – in implementing sustainable development.

180 nations committed to Agenda 21, but their interpretations of sustainable development vary.

There have been debates over the degree to which natural capital is substitutable and whether sustained economic growth is the best way to meet human needs. What has emerged is a spectrum of sustainability (Figure 2).

Spectrum of sustainability		
Weak	**Moderate**	**Strong**
• Total capital needs to be sustained. • Allows substitution between types of capital. • Cost-benefit analysis might be used to measure this strategy and environment management agencies are advocated. This view is said to be seen in government and business policies in many countries (Beder, 2011, p. 140).	Seeks to both expand stocks of resources and better balance resources and demands (Williams and Millington, 2004, p. 100).	• Rejects the concept that natural capital is substitutable. • Believes there is uncertainty about how natural capital operates within ecological systems so it should be protected. Supports direct regulation (Pearce, 1993).

Figure 2: A spectrum of sustainability (after Dobson, 1996).

Probably the most deeply embedded idea in contemporary political thinking is that the key to meeting human needs is economic growth. The assumption is that economic growth 'trickles down', so benefitting both rich and poor, and that growth does not necessarily degrade the natural resources on which economies and the poor rely (Fitzroy and Smith, 2004). However, economic analysis of wealth formation and distribution shows growing inequalities: 'trickle up' has accelerated in recent years and the world's richest hold an increasing share of all wealth (Dorling and Lee, 2016, p. 65). The top 1 % of earners in the UK now account for 12.2 % of income before tax, up from around 10 % in 1970s (Smith, 2019).

Snedden *et al.* (2006) list the most common objectives for sustainable development:

1. To conserve, protect and enhance Earth's natural capital and ecosystems for current and future generations
2. The integration of economic, social and environmental issues in decision making
3. A participatory approach to decision making and policy implementation, involving national governments, other organisations (including local government) and local communities
4. To ensure the basic needs of people and their well-being are met in the short and long term
5. To reduce inequalities in living standards, both within and between societies.

Some terms from the sustainability discourse

Total capital for future generations is the sum of:

- **human capital** (skills, knowledge, technology, culture)
- **human-made capital** (buildings, machinery)
- **natural capital** (environmental features, e.g. water, air, soil, rocks, plants, etc).

Substitution between different types of capital means that any depletion of finite reserves is accompanied by investment in substitute resources (Pearce, 1993).

Greenwashing is misleading the public regarding the environmental credentials of a product, service or action (Terrachoice, 2009). See download for a description of the 'seven sins of greenwashing'.

Engaging with sustainability

The Brundtland definition of sustainability might be nuanced in the classroom by recognising that the concept has moved on since 1980. Students could use the five common objectives listed above, expressed in appropriate terms, to critically evaluate policies and actions. For older or faster learning students, you could add the UN's Agenda 21 action plan to the Brundtland definition, investigating the types of capital, and 'trickle down' and 'trickle up'.

To kick start this more reflective approach to sustainability five sets of information about the Cairngorms area of Scotland for student discussion and decision making are provided (Figures 1–5 in the accompanying download). Teachers will be able to source relevant materials from their own area.

Student tasks might include some or all of the following:

1. Read and discuss the information and decide whether specific policies and actions meet each of the five common objectives and so are sustainable.
2. If sustainable, decide where on a spectrum of sustainability they sit: are they weak or strong?
3. If not sustainable, decide how the policy or actions might be made more sustainable.
4. Do you need any other information to make a decision?
5. Consider how governments, organisations and you personally could act more sustainably in future.
6. Share your small group findings in a verbal plenary report.

Some sustainability 'thinking notes' to help make decisions about the five sets of information are summarised in Figure 6 in the download. These are not intended to be definitive but could help focus thinking on sustainable development. No single policy or action is likely to fully meet all five sustainability objectives.

Conclusions

For students to be able to properly achieve the professed aims of their geography curriculum and the related GCSE and AS/A level assessment objectives, they need a thoughtful understanding of sustainability and a critical approach to studying it. The simplistic approach of current textbooks does not facilitate this. This article aims to give teachers a better understanding of sustainability, the means (via the references) of finding out more, and an approach to studying which will engage students and help them become informed and critical citizens. Investigating sustainable development in this way can help geography teachers make a difference to their students' lives. | **TG**

Online resources
The five resources on sustainability, and sustainability thinking notes, can be found on the GA website. Go to www.geography.org.uk/Journals/Teaching-Geography and select Autumn 2019.

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References

All websites last accessed 07/07/2019.

Beder, S. (2011) 'Environmental economics and ecological economics: the contribution of interdisciplinarity to understanding influences and effectiveness', *Environmental Conservation*, 38, 2, pp. 140–150.
DfE (2013) 'Geography programmes of study: key stage 3', London: Department for Education. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239087/SECONDARY_national_curriculum_-_Geography.pdf
DfE (2014a) *Geography: GCSE subject content*. London: Department for Education.
DfE (2014b) *Geography: GCE AS and A level subject content*. London: Department for Education.
Dobson, A. (1996) 'Environmental sustainability: an analysis and a typology', *Environmental Politics*, 5, 3, pp. 401–28.
Dorling, D. and Lee, C. (2016) *Geography: Ideas in Profile*. London: Profile Books.
Fitzroy, F. and Smith, I. (2004) 'Welfare, growth and environment: a sceptical view of *The Skeptical Environmentalist* by B. Lomborg', *Scottish Journal of Political Economy*, 52, 5, pp. 707–17.
IPCC (2019) *The intergovernmental Panel on Climate Change reports*. New York: United Nations. Available at: www.ipcc.ch
Lewis, S. and Maslin, M. (2018) *The human planet – how we created the Anthropocene*. London: Penguin Random House.
Ofqual (2011) *GCE AS and A level subject criteria for Geography*. Coventry: Office for Qualifications and Examinations Regulation.
Ofqual (2012) *GCSE subject criteria for Geography*. Coventry: Office for Qualifications and Examinations Regulation.
Ofqual (2014) *GCSE assessment objectives: modern foreign languages, ancient languages, geography and history*. Available at: www.gov.uk/government/publications/assessment-objectives-geography-history-ancient-languages-mfl/gcse-assessment-objectives-modern-foreign-languages-ancient-languages-geography-and-history#geography-assessment-objectives
Ofqual (2015) *GCE subject level conditions and requirements for Geography*. Coventry: Office for Qualifications and Examinations Regulation.
Pearce, D. (1993) *BluePrint3: Measuring Sustainable Development*. London: Earthscan.
QCA (2007) *Geography Programme of study for key stage 3*. London: Qualifications and Curriculum Authority.
RSPB (2016) *State of Nature 2016*. Available at: www.rspb.org.uk/our-work/conservation/projects/state-of-nature-reporting
Smith, D. (2019) 'The sound of pips gently squeaking will get louder under Labour', *The Times*, London, 10 April, p. 41.
Snedden, C., Howarth, R.E. and Norgaard, R.B. (2006) 'Sustainable development in a post-Brundtland world', *Ecological Economics*, 51, 2, pp. 253–63.
Terrachoice (2009) *The seven sins of greenwashing*. Available at: http://sinsofgreenwashing.com/indexd49f.pdf
WCED (1987) *Our common future*. Oxford: OUP.
Williams, C. and Millington, A. (2004) 'The diverse and contested meanings of sustainable development', *The Geographical Journal*, 170, 2, pp. 99–104.

Brexit and borders: topical geography

Joe Usher

Joe presents an account of a project on Brexit and the Irish Border, taught to three classes in Dublin schools. The students were aged 10–12 (4th, 5th and 6th classes in the senior end of the primary school system in the Republic of Ireland).

Geography's relevance and importance

In January 2008 Sarah Cassidy wrote an article in *The Independent* newspaper entitled 'Geography classes ignore key issues'. The focus of her article was the drop off and disengagement of 11–14 year olds; she argued that they were being let down by boring geography lessons which failed to teach them about vital global issues such as climate change. She concluded that more needs to be done to make the subject more relevant and engaging (Cassidy, 2008).

In many respects little has changed over the past decade. Neither the public nor policymakers seem to recognise the relevance and importance of geography. If geography is to find equity and recognition alongside other subjects, it needs to be seen as relevant by teachers, principals and policymakers (Martin, 2015; Catling, 2007). One of the main purposes of education is to equip children with the skills they need to engage as active citizens in the 'real world' (Syed, 2013). Standish (2013) defines the main aim of geography as to engage students in a conversation about complex global and local issues, rather than the delivery of subject content.

Students' lives are geographical (Pike, 2016; Martin, 2008). Students are interested in issues in their locality and the wider world; they listen to adults talk, see the news, etc. and have a range of questions to ask (Pike, 2016). The saturation coverage of Brexit in the media, and our everyday discussions about it, provide the perfect opportunity to help students make sense of the world through relevant, engaging geography education. It affords us as geography advocates the chance to highlight the sheer power and importance of our subject.

Project overview

This article describes a unit of work that exploited the learning potential of Brexit. The learning outcomes for the project were to enable the students to:

- understand the significance of the EU and what Brexit means
- develop empathy by exploring people's various perspectives and reasons why the result of the UK's 2016 referendum was to leave the EU
- become aware of the communities and localities along the Irish border and the interdependence between Northern Ireland and the Republic of Ireland
- understand the importance of the 'backstop' and examine the potential impacts of a hard border on communities in Ireland
- suggest possible solutions to the border issue.

At the beginning of the unit groups of students were given a 'starting out' sheet to generate ideas and create enquiry questions in relation to Brexit. The main questions were:

- What is the EU?
- How and why did the EU start in the first place?
- Who is in it?
- Can anyone join?
- Why does the UK want to leave?
- What does this mean for Northern Ireland?
- How will Brexit have an effect on Ireland?
- What is the difference between a hard and soft border?

What the lessons covered

Lesson 1 focused on the European Union: what it is, why it was originally established, what countries are in it, etc. Here the students learned about key terms such as 'the single market', currencies, physical infrastructure, democracy, and the 2016 UK referendum. They also learned about key reasons for the creation of the EU: peace, free trade, freedom of movement, sharing and managing of resources, growth and challenges (i.e. Brexit).

Lesson 2 covered the 2016 referendum itself, examining which parts of the UK voted leave/remain. Here the students observed maps of the referendum result. They categorised push and pull factors into reasons to leave/remain and discussed the advantages and disadvantages of each (Figure 1). They noted that Northern Ireland and Scotland had voted to remain and yet are now being 'forced' to leave the EU, which led to intense interest in the notion of democracy and fairness.

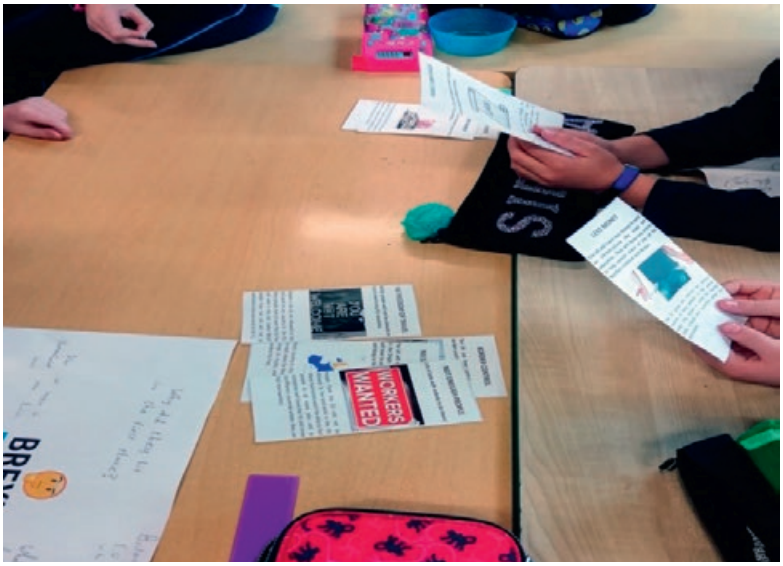

Figure 1: Categorising the 'push' and 'pull' factors of Brexit.

In **Lesson 3** 'hard' and 'soft' borders were discussed. The students related their own experiences of borders, such as 'soft' county borders in Ireland (e.g. mapping the journey from Dublin to Galway City and exploring the many 'soft' county borders crossed along the way). The students categorised and mapped images of 'hard' and 'soft' international borders to their atlases and discussed why certain borders were 'hard' and others not (EU membership being a factor) (Figure 2).

They also explored the complexity of international borders. Students were tasked with creating an international border for an imaginary country, taking into account religious beliefs, languages and physical features as they decided where the border should divide the country (Figure 3). The idea behind this activity was to demonstrate the complexity of borders and how there is no easy answer to these questions. This inspired deep discussion and thought. One group remarked:

> *'It's actually really hard to make the border! Like there's people in Ireland even in our class who have different religions and some of us speak different languages at home so it would be hard to make a border here in Dublin!'*

Another group insisted on creating a 'soft' border:

> *'We are making a soft border because … well … we really don't want to make any border but you are making us do it – so we have a soft border along this big river here and that way people can cross the bridges and sell stuff and work both sides and everything.'*

Lesson 4 examined communities and life along the Irish border. Here the students used Google Maps, satellite imagery and the Streetview function to explore specific areas along the Irish border such as Belcoo, Clones and Crossmaglen (Figure 4). They watched an *Irish Times* video interview of schoolgirls aged 12 living in Crossmaglen and their fears of a 'hard' border (*Irish Times*, 2018). The complexity of the border area was highlighted by examples such as where the border divides one of the girls' houses: she sleeps in Northern Ireland but eats her breakfast in the Republic! The students also explored what the hard border was like during the 'Troubles', during which over 3500 people were killed, before the Good Friday Agreement of 1998.

Figure 2: Mapping images of 'hard' and 'soft' borders to atlases.

Figure 3: Creating international borders based on religious beliefs, languages and physical features.

Figure 4: Using Google Maps Streetview to explore border areas today.

Lesson 5 involved mapping all potential border checkpoints in a specific area, around the N54/A3 road (Figure 5). The role of the so-called 'Border Busters' during the 'Troubles' was also explored. The students revisited the Brexit referendum result and were given an opportunity to express their views and concerns as well as their suggested solutions via a 'tweet' (Figure 6).

The classes held deep discussions and heated debates, both on potential solutions to the border issue and on the fact that Northern Ireland and Scotland are leaving the EU despite the majority of people living there voting to remain:

Student A: 'Of course it's not fair – they voted to stay!'

Student B: 'But hang on, they are in the UK and that means they have to go with the majority of the UK!'

Student A: 'But that's not fair – that's not democracy!'

Student C: 'Eh, it actually is …'

Student A: 'Well I think Scotland and Northern Ireland should join together and form their own country and stay in the EU and say good luck to England and Wales. Northern Ireland is too small to survive on its own and look after itself but it and Scotland could be one country together.'

Student B: 'No that's not right either! Then you're just moving the problem to Scotland and England and I'm sure there are boys and girls like those [referring to video] that live on both sides or sleep on one side of the border in England and Scotland – it wouldn't be fair on them.'

Student A: 'But that's their problem! They voted that way! Why should we have to suffer because of their vote?!?! They asked for this! Anyway NI could join with us!'

Figure 5: Mapping potential border checkpoints on crossing points along a case study area of the Irish border.

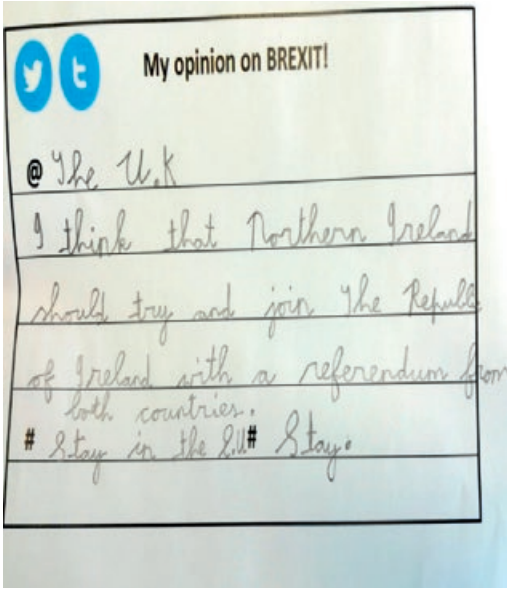

Figure 6: The students 'tweeted' their opinions on solutions and suggestions for the Brexit border problem.

Conclusion

The students' personal geographies and prior knowledge was drawn upon wherever possible throughout the unit. In relation to their experiences of borders, some students had experience of travelling to Northern Ireland while others had experiences of hard borders elsewhere:

Student A: 'Mr Usher, I travelled between that Moldova-Romania border … My family are from Moldova …' (followed by gasps of intrigue from the class).

Student B: 'What was it like? Did they have guns and all?'

Student A: 'Yes, we had to get out of the car and show ID. They asked my mam if we had any weapons or drugs or anything and they looked in the boot of the car! It was scary enough … it took ages to queue in the traffic too.'

Throughout the unit there were ample opportunities for subject integration. Topics such as the Plantation of Ulster (1609–1690), the Irish War of Independence (1919–1921), the Anglo-Irish Treaty (1921), Partition and subsequent Civil War (1922) are all elements of the Irish primary history curriculum for this age group. The students in one class produced their own drama based on Brexit and performed it for school assembly. Different groups acted out scenarios ranging from post-Brexit conversations between Theresa May and Donald Tusk, to David Cameron discussing his regrets.

Well-taught geography is characterised by these factors:

- It is stimulating and enjoyable
- it uses a variety of teaching approaches
- it uses topical issues to engage and challenge students
- it introduces them to new themes and ideas
- it has high expectations of them (Catling and Willy, 2018).

Overall, the students were engaged throughout this unit of work. They appreciated the opportunity to learn about a topic they had heard about in the news and on the radio in the car, etc. Weiss (2017) and Degirmenci and Ilter (2017) put forward the notion of 'authentic learning experiences' whereby real-world examples, issues and content form the foundation for effective geography teaching and learning. Students are more motivated to engage in a problem or issue that affects them, their area, or people and places familiar to them (Weiss, 2017). Exploring real-world, everyday issues, events and problems is more exciting, engaging and memorable for students than if learning is confined to abstract issues in the classroom (Roth, 2014). Here, students can see the relevance and significance of geography to their lives and the wider world. As one 11-year-old boy remarked: 'I think it's fascinating when you type 'B' into the search bar on Google and Brexit comes up as the top suggestion … everyone in the world is Googling it because it's so important and we are lucky to be learning about it'.

Note

The lesson plans and resources for this unit of work can be made available to anyone who wishes to use them by contacting the author. | **TG**

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References

All websites last accessed 07/07/19.

Cassidy, S. (2008) 'Geography classes "ignore key issues"', *The Independent*, 17 January. Available at: www.independent.co.uk/news/education/education-news/geography-classes-ignore-key-issues-770642.html

Catling, S. and Willy, T. (2018) *Understanding and Teaching Primary Geography* (2nd edn) London: Sage.

Degirmenci, Y. and Ilter, I. (2017) 'An Investigation into Geography Teachers' Use of Current Events in Geography Classes', *Universal Journal of Educational Research*, 5, 10, pp. 1806–17.

Irish Times (2018) 'I sleep in Northern Ireland but my living room is in the Republic': Schoolchildren from Crossmaglen talk to Simon Carswell from the Irish Times about living on the border, Brexit and the Troubles. Video: Enda O'Dowd. Available at: www.irishtimes.com/news/ireland/irish-news/i-sleep-in-northern-ireland-but-my-living-room-is-in-the-republic-1.3677234?mode=amp

Martin, F. (2008) 'Ethnogeography: towards liberatory geography education', *Children's Geographies*, 6, 4, pp. 437–50.

Martin, F. (2015) 'What is geography's place in the primary school curriculum?', in Lambert, D. and Jones, M. (eds) *Debates in Geography Education* (1st edn), Chapter 1. Abingdon: Routledge.

Pike, S. (2016) 'Real geography: topical geography through issues and events', in Pike, S. (ed) *Learning primary geography: Ideas and inspirations from classrooms*. London: Routledge.

Roth, W.M. (2014) 'Personal health – personalized science: A phenomenological approach', *International Journal of Science Education*, 13, 3, pp. 113–19.

Standish, A. (2013) 'What does geography contribute to global learning?', in Lambert, D. and Jones, M. (eds) *Debates in Geography Education* (1st edn) (pp. 244–56). Abingdon: Routledge.

Syed, G.K. (2013) 'How appropriate is it to teach citizenship through main curriculum subjects?', *Citizenship, Social and Economic Education*, 12, 2, pp. 136–49.

Weiss, G. (2017) 'Problem-oriented learning in geography education: construction of motivating problems', *Journal of Geography*, 116, 5, pp. 206–16.

Critical thinking for achievement CPD

Gemma Mawdsley

Gemma outlines the rationale of the GA's 'Critical thinking for achievement' CPD programme and describes strategies which have been successful in schools.

Accompanying online materials

As a mother of young children I lose count of the number of times each day I am asked, in a range of different contexts and applications, 'But why, Mummy?' – and I love it! The enquiring minds of young children are incredible constructs, inspiring a real, innocent fascination for the world.

As a passionate geographer, I often wonder when we lose this desire to ask questions and just want to be told the right answer. And as a teacher, while it is flattering to be 'the font of all knowledge', isn't it refreshing to be challenged: 'Where is that information from, Miss?' 'Why is that data set significant, Sir?' 'What would be the impact of ..., Miss?' The effect of this interrogation on students' depth of knowledge and understanding and their ability to apply information, rather than rote learn and regurgitate, cannot be underestimated. And with changes to assessment models, never has critical thinking been so important: we must encourage our students to think, challenge preconceptions and apply newly acquired information.

Critical thinking

A succinct definition of critical thinking is elusive. Geographers, for instance Margaret Roberts (2013), cognitive scientists, for instance Daniel Willingham (2007) and educational theorist John Dewey, writing over a century ago (Dewey, 1909), have all described it in different ways. David Lambert (Lambert et al., 2004) put it simply: '… critical thinking involves recognising that "things are not always what they seem to be", or "there's more to this than meets the eye"'. Critical thinking is neither an isolated skill, nor a generalised way of thinking. Rather it combines capability, the tools to think more deeply, and the curriculum context in which to apply them. It is not a generic skill: it needs unpicking. Once we understand all this, we need to consider it in the context of our students. Practising critical thinking systematically in geography lessons makes it more likely that when they encounter unfamiliar contexts, for example forming an argument about a geographical problem, students will pick up contextual cues suggesting which strategies to use. Faced with examination command words such as 'evaluate', 'assess', 'discuss' and 'examine', students who have acquired critical thinking skills will be able to explore perspectives, confidently identify anomalies in data and debate answers before drawing a conclusion. Developing these skills, and allocating time in the curriculum to rehearse them, is fundamentally important if students are to attain the higher levels in examination mark schemes. They are also useful skills for life: perspective, and the ability to critically interrogate the media, are vital as we debate issues such as Brexit. Critical thinking is made up of three key components:

- becoming better at thinking
- making better sense of information
- becoming a more open thinker (Figure 1).

When applied to assessment objectives AO2, AO3 and AO4, it is clear how significant critical thinking is in creating an environment in which students have the breadth and depth to question all aspects of a geographical issue.

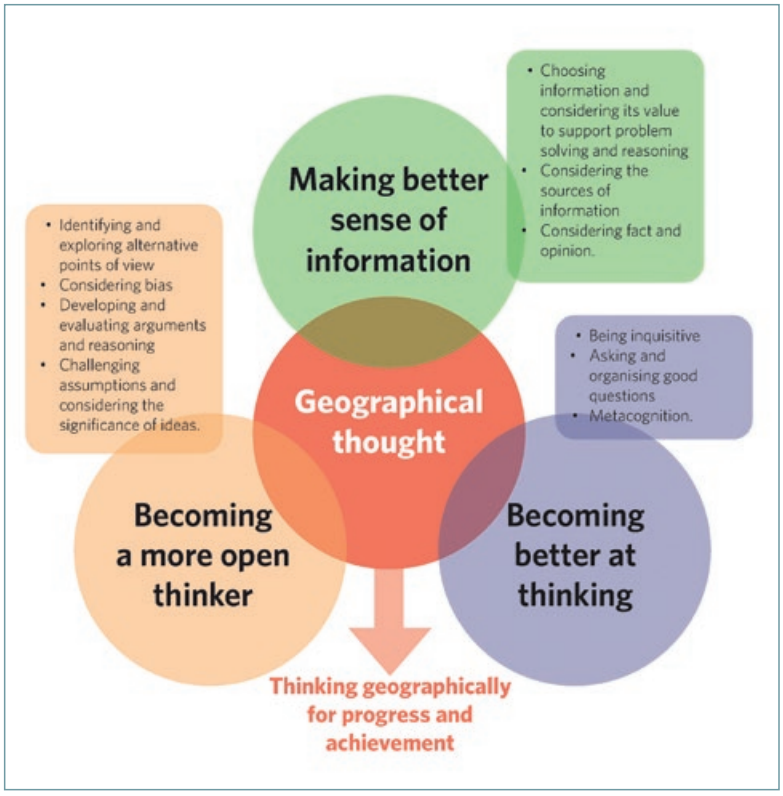

Figure 1: The three components of critical thinking applied to geography. **Source:** Geographical Association 2019.

How do we create opportunities for students to 'think critically?'

Before we expect our students to 'think critically' of their own accord, we need to give them a structure in which to do it. The GA's 'Critical thinking for achievement' CPD programme is a two-day course that follows a 'Plan-do-review' model and provides teachers with the strategies and techniques to develop their students' critical thinking skills. Having run the 'Plan-do-review' CPD in a number of schools I have been inspired by how the strategies and techniques have been applied on a practical level with the students. The examples that follow describe how two teachers have applied in the classroom what they learnt in the programme.

Case study 1: The ‘flat chat’ technique

Flat chat involves presenting groups of students with a stimulus (image, graph, data set, question) and, without discussing it, each student must write their comments about it on a large sheet of paper. As the paper moves around the group, students can reflect on each other’s comments; then the paper is passed to another group. By removing external pressures and influences, flat chat encourages all students to make uninhibited, anonymous contributions without the need to discuss what is recorded on the sheet. They can take risks and be open-minded, recording anything they think is relevant to the stimulus.

Claire used the flat chat technique suggested during the CPD to good effect, raised her students’ attainment and equipped them with the skills and confidence to cope with the demands of the higher-mark questions.

Case study 1

Claire Cooper from Meols Cop High School in Southport gives this account of how she used the ‘flat chat’ technique.

Over the past year I have been working on developing students’ geographical vocabulary, with a focus on tier 3 vocabulary, to improve both their understanding of geographical processes and their exam performance. As well as embedding the vocabulary in students’ long-term memory, it was clear that they needed to be able to think critically about how and where to use it.

Time constraints mean teachers hand out the information students need rather than the students developing their thinking skills so they can find it out for themselves. Even higher attainers want to be given the information, meaning they stay at level 2; level 3 requires a higher level of critical thinking. So in exam conditions, if the questions aren’t phrased exactly as in class, students are not equipped to adapt what they have learnt to come up with an appropriate answer.

Some of the strategies discussed on the GA ‘critical thinking’ course have been invaluable to my research and pedagogy. They make the students think about the vocabulary they need to use, encouraging them to think critically to find those tier 3 words in their long-term memory. I have seen fantastic results.

Before

The exam question (Figure 2) is designed to elicit evidence of deeper understanding of the difference between command words and key words. Students had some understanding of what the question is asking for but were unsure what content to use. One student did not attempt the question. Most wrote a few sentences but offered only limited information.

(d) Study Figure 3b in the Resource Booklet.

Examine the role of different physical processes in the formation of the meander shown in Figure 3b.

Figure 2: An example of a question that students had difficulty in answering.

Flat chat

Flat chat encourages students to focus on what they see and think about the vocabulary they could use to describe it. It builds resilience and helps them make sense of information (understanding concepts – A02), become open thinkers (applying knowledge – A03) and better thinkers (select, adapt and use skills – A04).

In flat chat every student has a voice. If you give them different coloured pens you can check their individual thinking and progress. As you move groups around the tables, you start to see different perspectives through the vocabulary they use to describe the image they are investigating.

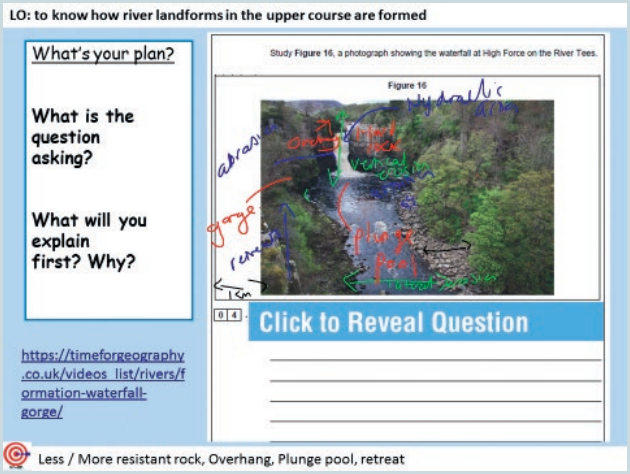

Figure 3: The exam question is hidden, so students must think critically and focus on higher-level vocabulary.

Techniques like flat chat give students the confidence to attempt a question or use a resource even if they don’t fully understand the question or have never seen the resource. If they can simply describe what they see they can get marks.

After

In the year 10 mocks (February 2019) students showed greater confidence in answering questions, yet they were still not achieving level 2 and above in the 8-mark questions (Figure 4). I incorporated the above strategies into my lessons to focus on vocabulary.

Four weeks later (March 2019) I gave the students the same questions and looked at their answers for evidence of them using the techniques in class. The red text is their attempt at the question after using the flat chat technique.

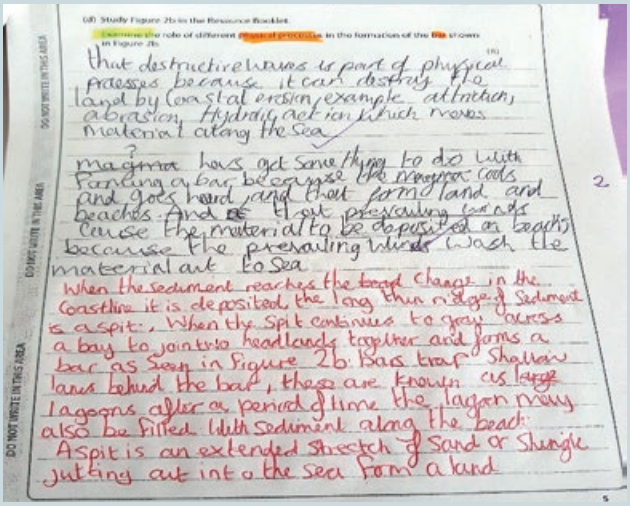

Figure 4: Before and after using critical thinking strategies.

Case Study 2

David Bill from Hillside High School, Bootle, used question generators to develop critical thinking skills in an international context.

Every year I am lucky enough to visit CSG Liudger in the Dutch province of Friesland. In the school's bilingual stream students are taught half their lessons in English. They must also have experience working with a native English speaker, which explains why I was there in early April asking year 9 students to create a tour guide outlining the delights of Liverpool.

In the 'Critical thinking' CPD we had looked at question grids, and I had thought them a great way of stimulating understanding and engagement through focused question construction. Following the CPD we experimented with a few ways of encouraging students to ask higher order questions.

Under the watchful gaze of their class teacher, the Dutch students worked in pairs to examine the transformation of Liverpool's Albert Dock from a derelict 1970s wasteland to the wonderful learning resource it is today. Although it was not essential to fill in the whole grid, many students took up the challenge, creating even the most difficult compound questions and developing a feel for the challenges facing the planners during the redevelopment of the former dock area (Figure 5).

At the end of the session students were asked to select the three best questions. Motivated by their ownership of the questions they researched answers, and the results were impressive.

Break time came, and word quickly spread around my Dutch colleagues. 'Where had I got this wonderful new way of introducing a new topic?', and 'Could we have copies?' I was too honest to do anything but give the credit to Gemma, our GA consultant; and of course I name-dropped the Geographical Association. As to the lasting impact of the strategy, I will hopefully find out on my next visit.

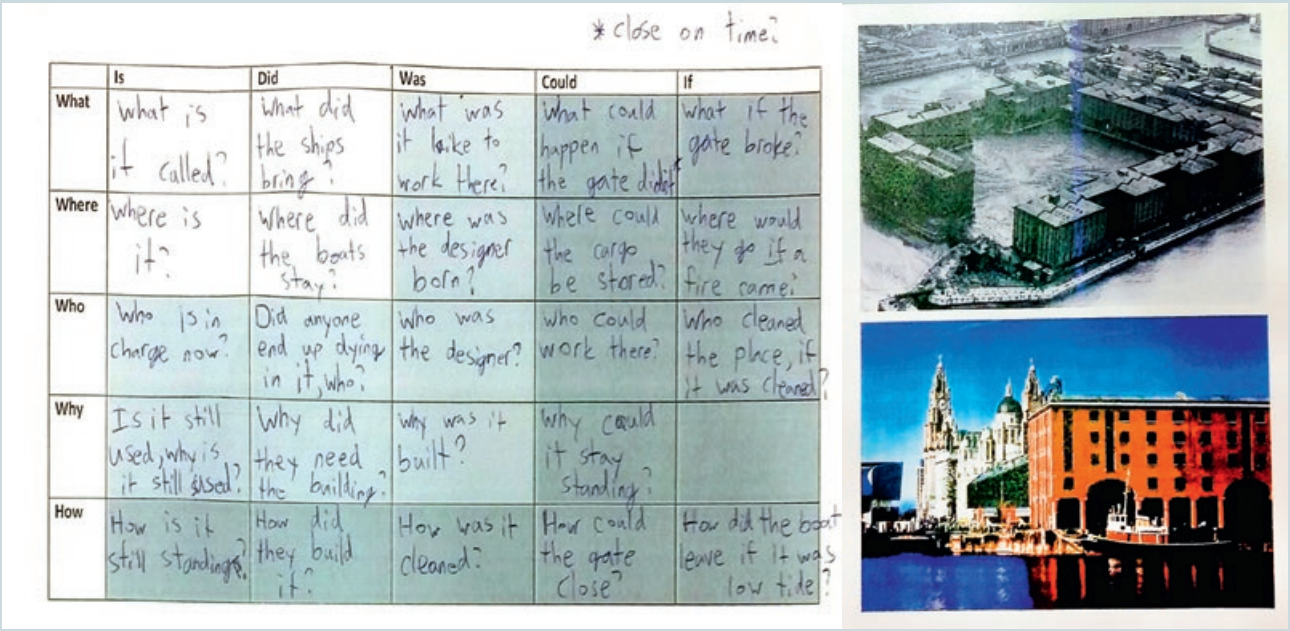

Figure 5 : A completed question generator using the regeneration of Liverpool's Albert Dock as a stimulus.

Case study 2: Question generators

Question generators, or grids, are frameworks which help students to ask better and deeper questions as part of an enquiry. The framework gives students presented with a stimulus a scaffold to enable them to devise questions about it.

Conclusions

Teachers have found these strategies both powerful and easy to implement in the classroom. The CPD experience has enabled them to teach quality, contemporary geography lessons permeated by the cognitive skill of critical thinking. Applying this skill, learnt in the classroom, will shape the ability of future generations to engage with an ever-changing world by refining their ability to think and question critically.

The CPD is available until March 2020. It is aimed at priority schools (primary and secondary schools with Ofsted category 3 or 4) and schools within priority areas (Department for Education category 5 or 6 and Opportunity Areas). Please contact Julie Beattie (jbeattie@geography.org.uk) for further information. | **TG**

Online resources

Another example of the impact of using critical thinking strategies is available online. Go to www.geography.org.uk/journals/Teaching-Geography and select Autumn 2019.

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References

Dewey, J. (1909) *Moral Principles in Education*. Cambridge, Mass: Riverside Press.
Lambert, D., Morgan, A., Swift, D. and Brownlie, A. (2004) *Geography: The Global Dimension*. London: DEA.
Roberts, M. (2013) *Geography Through Enquiry*. Sheffield: Geographical Association, p. 125.
Willingham, D.T. (2007) 'Critical thinking: why is it so hard to teach?', *American Educator*, Summer 2007, pp. 8–19).

David Alcock

Optimism, progress and geography – celebration and calibration

In an article based on his lecture at the 2019 Geographical Association Annual Conference, David suggests geography teachers should present positive as well as negative aspects of human geography themes to our students.

Accompanying online materials

One of Hans Rosling's most frequent questions to his audiences was: 'Thinking generally about the world, all things considered, do you think the world is getting better or worse, or getting neither better nor worse?'

If you had asked me this question twenty years ago, when I spent seventeen months travelling around the world, I would have been tempted to answer, 'Getting worse'. I saw manifestations of human suffering first-hand, for example extreme poverty, severe air pollution, and homelessness. These travels led me to get more deeply involved in environmentalism, politics, and, ultimately, in education: I worried about the state of the world.

However, crucially, I didn't put what I was seeing into a temporal context. Things *were* bad, but in the long run, they were improving – at least socially and economically, and for most people in the world. And they have continued to get better.

In *Factfulness* (2018), Hans, Ola and Anna Rosling tried to reconcile this contradiction by adopting a mantra: 'bad and better'. They suggested thinking of the world as a premature baby in an incubator – it is simultaneously in a bad way but also gradually improving.

As geography teachers, we should help our students to become aware not only that the world faces severe challenges, but also that progress has been made, and to learn about past successes so that they can be built upon.

Misconceptions about the state of the world

Misconceptions about the state of the world are common. I asked a sample of thirty students, plus ten teachers, Rosling's question: was the world getting better? Less than a quarter of the students said yes. My students were more optimistic than most people: in the 2016 IPSOS-MORI global attitudes survey, only 8 % of the UK public thought that the world was getting better (Duffy, 2018).

I asked my students and fellow teachers a number of other questions from Gapminder's 'Ignorance test' (Gapminder, n.d.: a) and, predictably, they all underestimated trends relating to poverty reduction, electricity coverage and girls' access to education, reflecting the responses of most people from all countries, all ways of life, and all levels of education (Rosling *et al*., 2018).

Most people are not aware of the progress that the human race has made in almost all social, economic and political areas in the last 200 years (Figure 1). During this time the world has become more healthy, wealthy, well-nourished, educated, peaceful, democratic, connected, gender equal and tolerant. Progress occurs at different paces in different places; there are hundreds of millions of people who are in desperate straits and there have been short-to-medium term and local-to-regional scale slippages; nevertheless, these trends have demonstrably occurred (Rosling *et al*., 2018; Pinker, 2011; 2018).

Some of these themes are central to human geography, and students' ignorance about the progress that has been made makes me wonder: are we, as geography teachers, failing them?

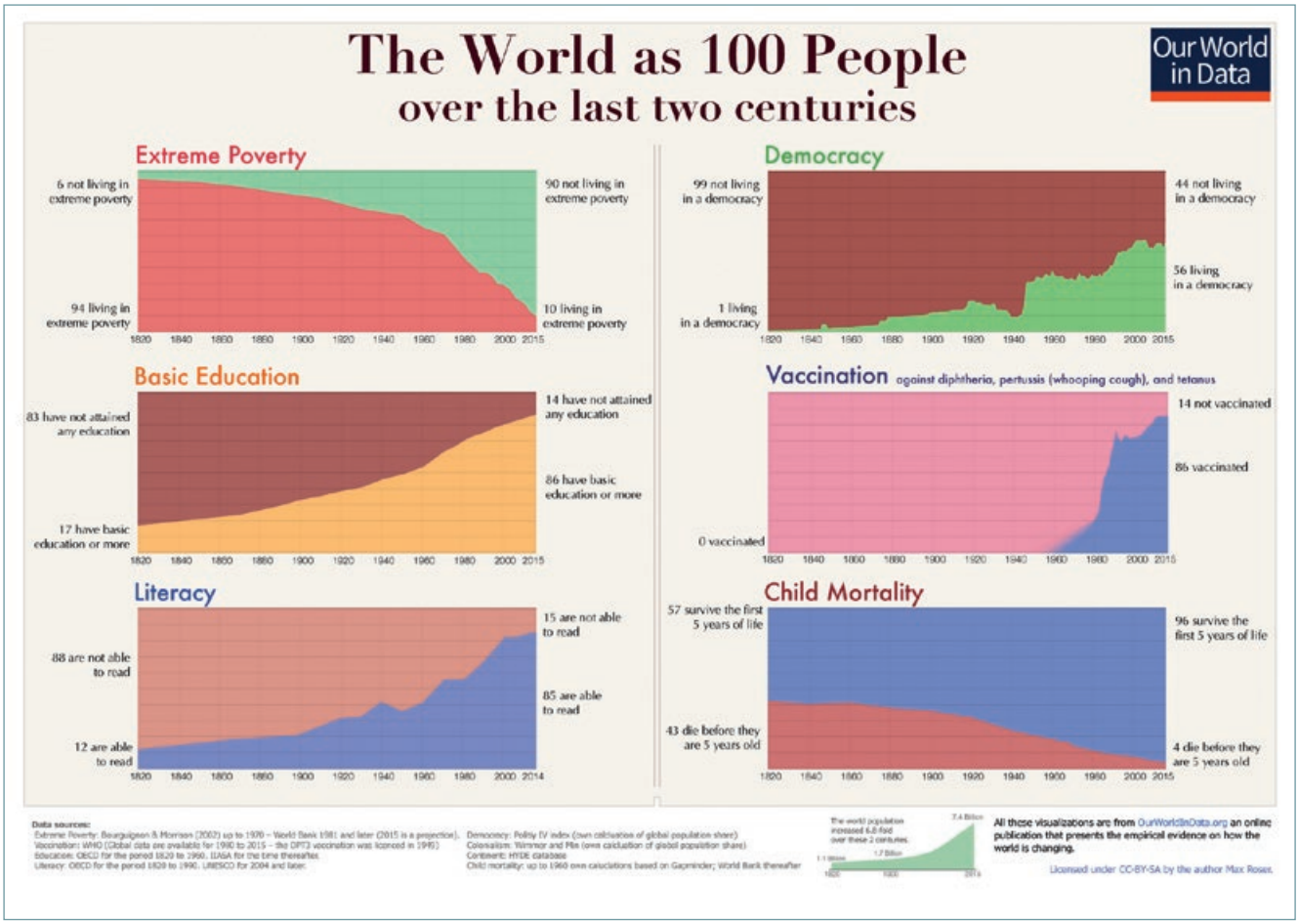
I acknowledge that we face challenges: geography is a wide-ranging, dynamic subject, and the emphasis on 'core knowledge' is limiting. But we should be concerned that improvements in global living standards and quality of life are going unnoticed. There can be a temptation to highlight extreme examples and negatives in order to more effectively engage students – witness Greta Thunberg and the Climate Strike movement. However, it is possible that students' perceived impotence in the face of seemingly overwhelming problems may turn them away from geography, or even harm their well-being. As geography teachers, we play a key role in presenting students with an accurate 'big picture' of the world. The dominant narrative of despair must change.

Reasons behind our misconceptions about the world

When trying to make sense of the world, humans fall foul of heuristics (psychological biases) – what psychologist and social researcher Bobby Duffy (2018) calls the 'mistakes and shortcuts made by the human mind'. These include:

- a bias towards information that confirms what we already believe
- a focus on negative information
- a susceptibility to stereotyping
- a desire to imitate the majority.

Our students will take on board the beliefs and misconceptions of their peers and parents. They will also absorb the overwhelmingly negative output of the mass media and political discourse (Pinker, 2018). To compound these problems, Daniel Kahneman (2012) suggests that our judgements are typically the result of 'fast thinking': unless or until they are modified or overridden by slow, deliberate reasoning it is difficult for us to put news and other information into context. The fact that there has been



progress makes it harder to appreciate that there *has* been progress, because we hold ourselves to higher standards than previous generations did, so the baseline rises. More people expect to have a decent education, healthcare and quality of life, and to have their human rights respected, and in this context, exceptions are more salient and attention-grabbing, obscuring the overall trend.

The role of geographical education

Examples of good practice abound, but there are some factors that deserve closer interrogation, including:

- In the 'development' chapters of textbooks at various levels of study, the space devoted to past problems and current and future challenges often exceeds that given over to improvements and how they have been achieved.
- There is frequent use of case studies showing extremes of poverty, inequality, and human rights failures, with disproportionately fewer uses of examples showing steady progress (one exception is 'The unusual case of Botswana' in Dunn *et al.* (2017)).
- A count of the graphs in all three Edexcel A level textbooks shows that 'negative' trends were graphed more frequently than 'positive' ones. I suspect that this is not unusual.
- Sometimes, information is inaccurate, and teacher inertia combined with long publication lead times for textbooks (and long lifespans in school) mean the material we put before our students is often years out of date.

Steps for geography teachers to consider

What can we do to recalibrate and redress the balance? Duffy (2018) put forward proposals for how we could 'manage our misperceptions'. I have used these as a starting point to consider how we could apply them to geographical education, although I will consider not only misperceptions (the way we see the world in ways other than it 'really' is), but also misconceptions (the ways we misunderstand the world).

1. We should appreciate that things are not as bad as we think – and most things are getting better

This chimes with the whole gist of 'factfulness'. In geography, we could set the Gapminder 'Ignorance test' (*ibid.*). Alan Parkinson and Paul Turner have both created schemes of work based on factfulness which they have shared freely (Parkinson, 2018; Turner, 2018). Infographics such as those from Our World in Data (www.ourworldindata.org) could also be used more often (for example, Figures 1, 3 and 4). I have also shown students all or part of the two documentaries on the Gapminder website: 'Don't Panic – The Facts about Population' (Gapminder, n.d.: b) and 'Don't Panic – End Poverty' (Gapminder, n.d.: c).

2. We should cultivate scepticism

We should constantly question the veracity of information and encourage our students to do so too. 'Layers of inference' photo interpretation

Figure 1: The world as 100 people over the last two centuries. **Source:** https://ourworldindata.org/wp-content/uploads/2017/01/Two-centuries-World-as-100-people.png

activities (Roberts, 2013) (See accompanying download) are one way of achieving this – and why not apply this grid to other kinds of sources, such as newspaper headlines, cartoons, speeches, and so on?

3. We should seek out opportunities to see things from others' points of view

Decision-making and issues-based exercises could help, as could using resources such as Gapminder's 'Dollar Street' (Gapminder, n.d.: d) – and diary extracts and video footage from people around the world.

4. We should acknowledge that our focus on extreme examples leads us astray

As Duffy writes, 'We're naturally drawn to extreme examples, which means that true but vanishingly rare events or populations take up more of our mental capacity than they deserve' (2018, p. 241). When asked about migration, our students may think about people on boats in the English Channel without putting these flows (a few hundred people a year) in the context of economic migration (hundreds of thousands of people a year in and out of the UK). Judicious use of proportional symbols, graphs and maps could help us to counter this tendency. I recall a student asking 'Have you heard about the 12 people killed in that high school massacre?', but no student has ever said 'Did you know that yesterday 137,000 people were lifted out of extreme poverty?' (Figure 2).

The importance of context is also demonstrated in Figure 3, which shows how many deaths it takes for a natural hazard to be newsworthy, using data collected by Eisensee and Strömberg in a 2007 study (cited by Tzvetkova, 2017). The authors found that for every person killed by a volcanic eruption, nearly 40,000 people have to die as a result of food shortages to get the same probability of coverage in US televised news.

Figure 2: Mock-up of breaking news story. **Source:** David Alcock. Created using www.breakyourownnews.com; statistic courtesy of Our World in Data. **Photo:** The Ali family, Bangladesh. Luc Forsyth for Dollar Street https://creativecommons.org/licenses/by/4.0/ (CC BY 4.0)

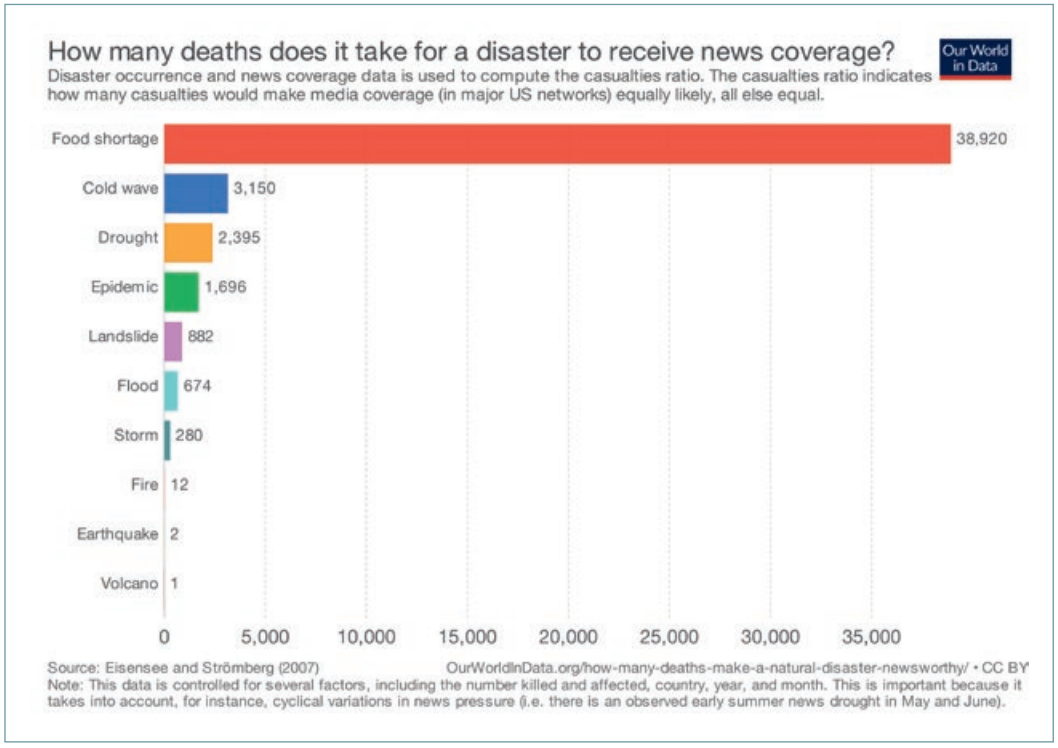


Figure 3: How many deaths does it take for a disaster to receive news coverage? **Source:** https://ourworldindata.org/how-many-deaths-make-a-natural-disaster-newsworthy

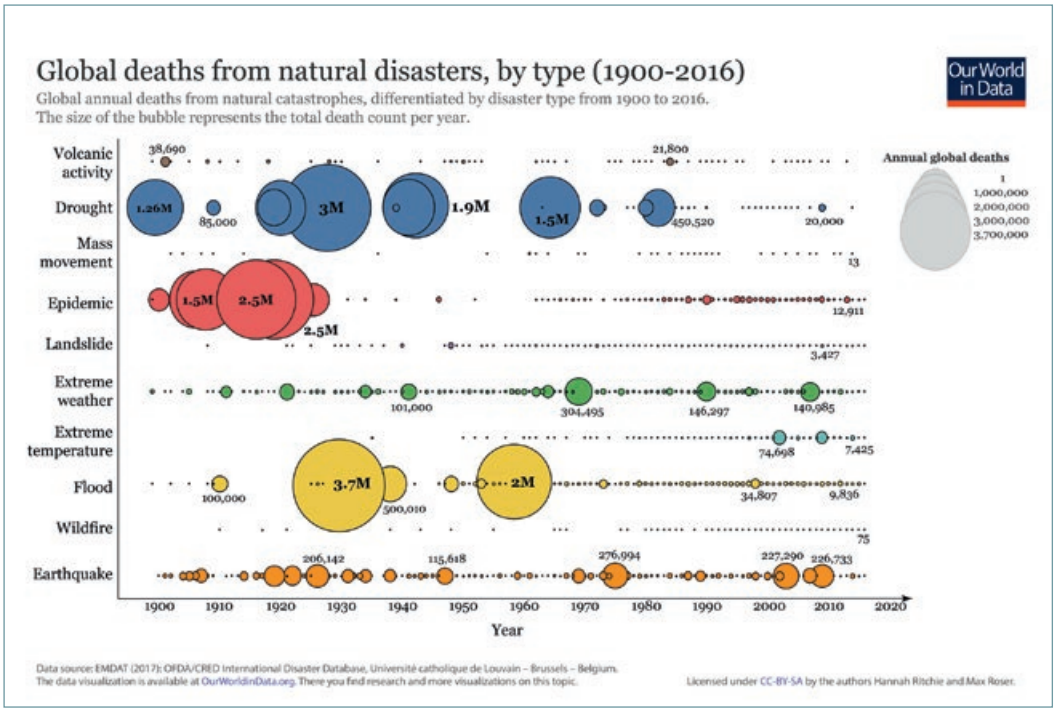


Figure 4: Global deaths from natural disasters, by type (1900–2016). **Source:** https://ourworldindata.org/natural-disasters

Earthquakes and volcanoes are 'exciting' topics, but we should pause to ask if our focus on extremes is damaging our students' worldviews.

5. We should make more reference to trends

Deaths from hazards are distressing, but in the long term, they have been falling. Our World in Data and Gapminder are both fantastic resources in this regard.

6. We should try to 'unfilter' our students' worlds

To challenge the 'echo chamber' effect of social media, old favourites like 'devil's advocate' debates could be used more often, and students could be given a range of media articles to compare on issues such as migration and population growth.

7. We should keep our teaching up to date

This means using the newest data and teaching resources; we could also re-invigorate debates about the future by studying not only Malthus and Boserup, but also Simon and Ehrlich, Vogt and Borlaug, and more recent writers such as Bjorn Lomborg, Steven Pinker, Max Roser, and Matt Ridley, for example. (See download for further information about the work of these authors.)

Concluding thoughts

'Optimistic' approaches to human progress carry a risk of complacency. It is crucial to geography – and humanity – that we continue to open our students' eyes to challenges such as climate change, extremism, environmental damage, inequality. Nevertheless, the raison d'être of geography is to 'write about the world', so, for the sake of our students, our discipline and wider society, let's give it our best, most accurate, shot. | **TG**

Online resources
Suggestions for additional resources and reading for this article can be found on the GA website. Go to www.geography.org.uk/Journals/Teaching-Geography and select Autumn 2019.

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References

All websites last accessed 14/08/2019.

Duffy, B. (2018) *The Perils of Perception*. London: Atlantic Books.
Dunn, C., Adams, K., Holmes, D., Oakes, S., Warn, S. and Witherick, M. (2017) *Edexcel A Level Book 2 Geography* (3rd edition). London: Hodder Education.
Gapminder (n.d.: a) *Reusable slide chunks*. Available at https://drive.google.com/drive/folders/0B9jWD65HiLUnTTJNQ3Bna2w2blU
Gapminder (n.d.: b) *Don't Panic – The Facts About Population*. Available at: http://www.gapminder.org/videos/dont-panic-the-facts-about-population/
Gapminder (n.d.: c) *Don't Panic – End Poverty*. Available at: www.gapminder.org/videos/dont-panic-end-poverty
Gapminder (n.d.: d) *Dollar Street*. Available at: http://www.gapminder.org/dollar-street/matrix
Kahneman, D. (2012) *Thinking, Fast and Slow*. London: Penguin Books.
Parkinson, A. (2018) 'Factfulness: KS3 Scheme of Work – a collaborative document'. Available at: www.tinyurl.com/factful1
Pinker, S. (2011) *The Better Angels of our Nature*. London: Penguin Books.
Pinker, S. (2018) *Enlightenment Now: The Case for Reason, Humanism and Progress*. London: Penguin Books.
Roberts, M. (2013) *Geography Through Enquiry*. Sheffield: Geographical Association.
Rosling, H., Rosling, O. and Rosling-Ronnlund, A. (2018) *Factfulness*. London: Sceptre.
Turner, P. (2018) *Factfulness Scheme of Work*. Available at: www.tinyurl.com/factful2
Tzvetkova, S. (2017) 'Not all deaths are equal: How many deaths make a natural disaster newsworthy?' Available at: https://ourworldindata.org/how-many-deaths-make-a-natural-disaster-newsworthy

Christopher Hoare

Kelham Island: a model case study?

Christopher proposes Kelham Island in Sheffield as the basis for a 'model' GCSE or A level case study on changing places.

Accompanying online materials

One challenge facing geography teachers nationally is ensuring that GCSE and A level students develop their understanding of place and changing places rationalised through social, economic and demographical relationships. However, doing this is often quite perplexing, for both teachers and students. It would be useful if there was a 'model' case study that enabled students to conceptualise the geographical processes they are taught, and see how they can be applied to 'real life' geography.

This article focuses on the changes in one of Sheffield's smallest quarters, Kelham Island. The breadth and complexity of these changes help to make Kelham Island a model case study for geography students, allowing them to investigate a changing place in a '… broader context with a greater breadth and depth of knowledge and understanding' (AQA, 2019), which is a requirement in several GCSE specifications.

Background

One of Sheffield's oldest industrial sites, Kelham Island was the result of a goit, or millrace, constructed in the twelfth century to divert water from the River Don to the town corn mill. Over the centuries, numerous workshops and forges were established on this flat, 'greenfield' site, and in its heyday Kelham Island was a hive of industrial activity: edge tools, cutlery, iron grate casting and handmade process machinery. From 1845, under the impetus of the railways, the heavy steel industry developed in the Lower Don Valley to the east of the city, and for twenty years this was the heaviest concentration of steel-making in the world. Kelham Island became a centre for the cutlery, silverware and associated trades (Figure 1).

From the middle of the twentieth century Sheffield's steel industry, and its associated trades, settled into a long period of decline. Technological change, globalisation and China's 'industrial revolution' meant UK steel was unable to compete internationally, and by the early part of the current century the iron and steel industry had more or less abandoned Kelham Island. Its derelict buildings became the haunt of squatters, prostitutes, graffiti artists and a crime hot spot. Sheffield band Arctic Monkeys reflected its bad reputation in 'When the Sun Goes Down', which makes direct reference to an area 'on the river heading out of town' and its 'girls of the night'. This song is a useful resource: it gives context to a study of the area, and the music video is an excellent opportunity for students to engage with its demographic background. However, since the song was released in 2006 Kelham Island has undergone extensive regeneration.

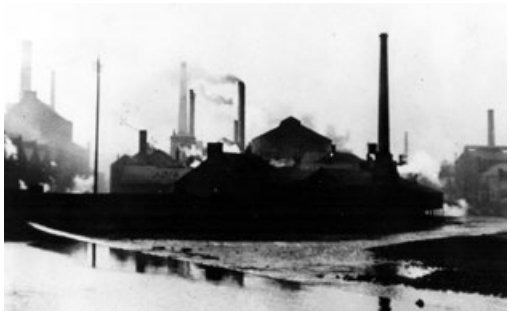


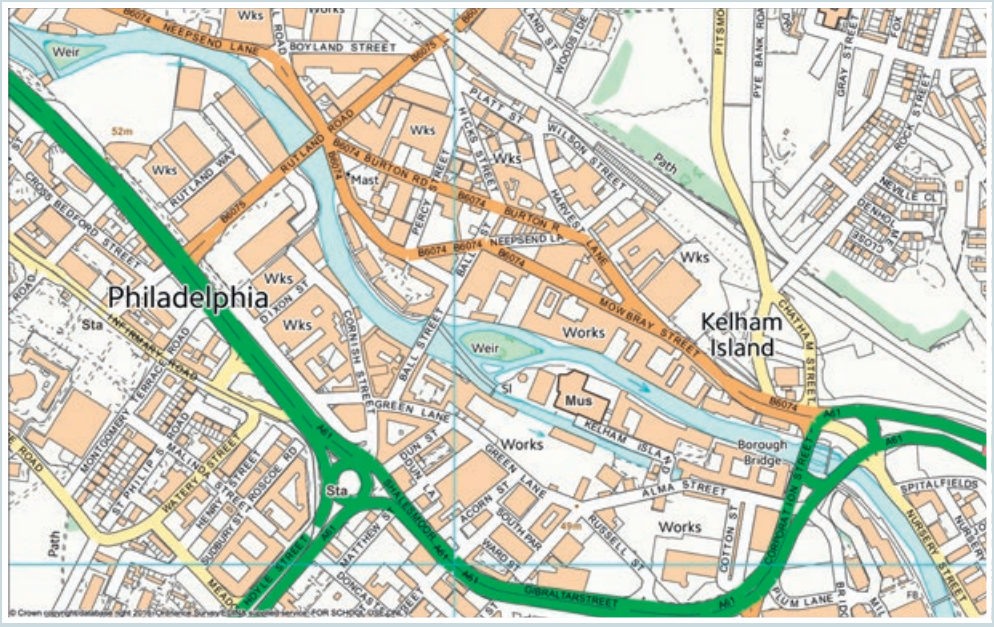
Figure 1: Kelham Island in 1880 at its zenith – the centre of Sheffield's world-famous cutlery and silverware trades. **Photo:** © Sheffield Libraries and Archives.

Regeneration

Sheffield Council began attempts to conserve and develop the area in the early 1980s, restoring the Globe Works. Then in 1988 the Sheffield Development Corporation (SDC) was established. Its mission was the regeneration of the Lower Don Valley, an area covered with abandoned foundries and warehouses. At that time regeneration focused on major developments such as the Meadowhall shopping centre. It wasn't until 2008 that the Kelham Neepsend Action Plan (KNAP) recognised that to sustain and enhance Sheffield's economic and social future this area of Sheffield needed to change (Figure 2).

The Action Plan aimed to ensure that by 2018 Kelham Island had become an '… attractive place to live … a thriving and accessible business location … the home of a well-managed and ecologically rich river ecosystem … nationally recognised for its history, heritage, food, fairs and festivals … and all historic buildings restored' (ibid.). The document would be a useful introduction to the case study, as it describes the character of Kelham Island, gives the aims of the regeneration and lists the many urban change policies directed at improving, restoring and regenerating the area put in place by Sheffield's Liberal Democrat Council. Towards the end of the topic it could also be used to evaluate how successful the regeneration has been.

Extensive regeneration has taken place; listed buildings have been restored, the area's industrial character has been maintained, and new buildings incorporated with the old. Investors have bought up derelict buildings and brownfield sites for development. A significant element has been the conversion of old factories and warehouses into apartments for professionals and students, as well as spaces for galleries and markets which celebrate local innovation and business. Notable buildings, for instance the Green Lane Works and Cornish Place, have had their ornamental facades carefully restored (Figure 3).



Kelham Neepsend is a place unmistakably of Sheffield, a place that brings together both its proud history and forward looking business, living and leisure. This document sets out clear guidance for the protection of the area's rich heritage, for the growth and development of its residential and business communities, and for improvements to public spaces and the river. All of this will help build and sustain Kelham Neepsend and its emerging community.

Councillor Tom Rippon, Cabinet Member (Economic Regeneration, Culture and Planning)

Figure 2: Map of Kelham Island and foreword to the *Kelham Neepsend Action Plan 2008–2018* (Sheffield City Council, 2008).

Figure 3: The restored entrance to the old Green Lane Works.
Photo: © Chris Hoare.

Figure 4: Little Kelham houses and apartments.
Photo: © Chris Hoare.

Perhaps the most innovative project has been 'Little Kelham'. Little Kelham sits at the heart of Kelham Island and in 2018 won the Academy of Urbanism 'Great Neighbourhood' award for the best social, economic and environmental governance and commercial success in an urban community. Partnering with Historic England, Citu, the company behind the project, vowed to '… restore these beautiful old buildings in a way that retains their original features, but integrates the latest sustainable technology to ensure they're ultra-low carbon' (Citu, 2019a). The polluted soil and groundwater of the industrial era was decontaminated, and the development focused on sustainable living to ensure a residential area 'built for our time'. Citu has built 214 carbon-neutral homes with triple glazing, solar heating, green roofs, carbon offsetting timber frames and recycled insulation, averting the emission of 'two tonnes of CO_2 per year' (Citu, 2019b). The houses have won a number of design awards based on Citu's principles of communal living, creating car-free landscapes and promoting sustainability (Figure 4). The modern, sleek, industrial look has been a success: houses and apartments costing over £300,000 quickly sold.

Future issues

However, the residential development has not been without controversy. Citu continues to own the houses, technology and land until the development is complete; then the development is handed over to a Community Interest Company (CIC) in which all households have an equal stake. Theoretically, this should reduce utility costs and promote the spirit of community living, but community-run enterprises can hold pitfalls. Some residents are worried that the company could create a 'community'-run business which may not uphold the interests of the majority living there. Investigating the pros and cons of CICs would be an interesting topic for students; other potential drawbacks worth exploring include being tied to one utility supplier, and 'hidden' costs of purchase such as annual ground rent and the £10,000 price tag on a car parking space. In spite of these possible downsides, however, it must be emphasised that Citu's Little Kelham has been pivotal in the development of the area into a unique, quirky and fashionable place to live that has '… done more than just preserve the character and the functions of the area …' by ensuring '… that current economic demands can integrate with traditional ones and provide a sustainable base for a thriving and close-knit neighbourhood.' (Academy of Urbanism, 2018).

Gentrification

The effect of the regeneration hasn't all been positive. Kelham Island was formerly an industrial area with few residential properties; its workers lived in the surrounding areas to the north of the city centre. Its population now consists largely of students and middle-income professionals, working in the many design and architecture firms across the island. This is in stark contrast to its surrounding residential areas: in 2015 Sheffield ranked 26th in England for the most deprived local authority districts (HM Government, 2015), and most of these surround Kelham Island. They include Netherthorpe, Burngreave, Hillsborough and Park Hill, all in the top 10% of the UK's deprived neighbourhoods (Rae, 2011). If Sheffield has one of the highest proportions of deprivation in the land, is the creation of a sustainable urban area with bars, gastro pubs and galleries justified? This could be a prime example of a 'fertile' question (Enser, 2019) we could put to our students to spark a geographical enquiry or add a layer of depth to an investigation. However, the assumption that the people living in Kelham Island are wealthy incomers can only be tested through further investigation. Time and research will reveal the full picture of Kelham Island's changed demographics; it will probably not be until the 2021 census that the true impacts on the area can be reliably quantified.

Figure 5: Graffiti in Kelham Island. **Photo:** © www.rmc.media.co.uk.

Based on current interpretations, however, is it surprising that the regeneration has come up against some opposition? Recently, a wave of vandalism has hit Kelham Island (Figure 5). Slogans are insufficient evidence for the reality of the situation, but they have provoked debate about whether the regeneration has pushed aside Sheffield working people in favour of incoming professionals. Traffic congestion is also a concern: hundreds of new apartments, businesses, shops, bars and restaurants have put parking space in the traditional narrow streets under pressure. Additionally, the area's historic cobbled streets are unable to cope with the huge increases in visitor numbers; this issue, yet to be tackled by Sheffield City Council, would be a great problem-solving activity for a student enquiry.

A model case study?

Kelham Island captures the essence of changing places, as outlined by Phillips (2019) in his report on A level geography subject content. Changing places is not only about how a space has changed physically, but also how its meaning is affected by economic, cultural and social influences. In my interpretation Kelham Island symbolises these influences, and offers the following advantages for a changing places case study:

- it is a living record of industrial prosperity and decline, reinvestment and changing social attitudes that can develop an extensive range of GCSE and A level skills and content
- it is a good place to conduct fieldwork: environmental quality surveys, land use mapping, crime data and public opinions on the area can all contribute to an effective and engaging human geography enquiry or NEA
- the Kelham Island regeneration is something young people can relate to; it symbolises the kind of sustainable living students may aspire to for their own local area
- progressive, engaging geography must be based on relevance and reality, and Kelham Island is a recent, ongoing development
- it provides opportunities for investigating geographical futures at the same time as developing students' understanding of the opportunities and challenges of urban living
- Sheffield being home to the GA and two universities, there is a wide range of material online to support a Kelham Island case study.
- an exemplar scheme of work for a Kelham Island case study, and guidance on fieldwork in the area, are available to GA members on the website.

Kelham Island will continue to evolve, helping students to understand the complex interactions of changing places. | **TG**

Acknowledgement

Thanks to Robin Fielder, former Education Officer for Sheffield Museums Trust, for his help with historical aspects of the steel industry.

Online resources

A scheme of work , key ideas for fieldwork and useful online resources can be found on the GA website. Go to www.geography.org.uk/Journals/Teaching-Geography and select Autumn 2019.

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References

All websites last accessed 20/06/19.

Academy of Urbanism (2018) 'Past Finalists of the Urbanism Awards'. Available at: https://www.academyofurbanism.org.uk/past-finalists/

AQA (2019) Subject content for GCSE Geography . Available at: https://bit.ly/33fkWJk

Arctic Monkeys (2006) 'When the Sun Goes Down'. Available at: https://www.youtube.com/watch?v=EqkBRVukQmE&feature=youtu.be

Citu (2019a) 'Great Living: Sustainable Planet'. Available at: https://citu.co.uk/

Citu (2019b) *Little Kelham: Scandinavian living in the Heart of Sheffield*. Available at https://content.citu.co.uk/wp-content/uploads/2019/04/LK-Brochure_April-20191-1.pdf

Enser, M. (2019) *Making Every Geography Lesson Count*. Carmarthen: Crown House Publishing Ltd.

HM Government (2015) 'The English Indices of Deprivation 2015'. Available at: https://bit.ly/2KhoLVH

Phillips, R. (2019) 'Changing Place; Changing Places: A Level subject content overviews'. Available at: https://www.rgs.org/schools/teaching-resources/changing-place;-changing-places/Sheffield City Council (2008) 'Kelham Neepsend Action Plan 2008–2018'. Available at: https://bit.ly/2OxjxdG

Note perfect! Taking notes in classes and lectures

Kenny Lynch

In this article Kenny outlines three principles that students can follow to improve their note taking skills.

Have phone, will capture…

Teachers of A level students should be helping to prepare students for higher education and for the style of learning they will experience there, as much as preparing them for A levels. Year 12 and 13 students often attend lectures as part of their course (including local GA branch lectures) so might already need note-taking skills. Note-taking can also be done while watching a lecture online (e.g. TED talk) so could be set as part of a homework/extension task while in school to aid current studies.

In a modern technological world, with access to all sorts of technology for recording events, it seems obvious that the most effective way of recording a lecture or teaching session is to use a tablet or phone to record it in audio or video, right? Well it depends on what you want out of it. I am a strong believer that geography students should leave courses with really good note-taking skills because of their experience on field trips. However, as a lecturer of evening classes, I once taught part-time students, a remarkable number of whom had audio-typing skills – which meant that I was regularly faced with a barrage of Dictaphones. It sometimes felt a bit like a press-briefing! The resulting essays often included direct quotations of what I said in lectures! While these examples demonstrated excellent precision in the capture of precisely what I said, they did not always capture the meaning and the context of what I said or promote learning. So, how can we build students' skills of note-taking to maximise learning? In this article I am going to propose three principles for better note-taking.

Active note-taking

One of the concerns I have about the lecture format of teaching is that it can be very passive, with the students quietly basking in the glory of the 'sage on the stage'. Advocates of a more active style of learning would rather see the lecturer or teacher step to the side to point out features, trends and processes, encouraging students to take note of the key learning points, as they act as more of a 'guide on the side'. The same can be true of almost all learning events, whether they are fieldwork visits, watching a film, listening to the radio, or reading.

The first principle to work by is to adopt an *active* approach to note-taking, interrogating the content of the class or other learning event to identify the main points and *not* all of the word-by-word details. This requires focusing on trying to understand the concepts and the theories – the meaning and significance – rather than capture all the facts for recall, though some of these may be important. Understanding is best achieved through interaction with the teacher and the ideas the teacher is teaching about. Details can be looked up later in textbooks or online. This means that note-taking should involve students trying to put the ideas in their own words rather than yours.

Figure 1: Taking notes should be an active process. **Photo:** © Kenny Lynch

How to…

There are several approaches to capturing the key ideas from a learning event. The second principle is for students to empower their note-taking by developing a template that is consistent so they can find the material in a range of learning settings. There are a number of examples of this. Figure 2 illustrates a Cornell template, which can be quickly created on a sheet of paper or refill pad by drawing wide rugby posts on their side (following the white lines in Figure 2). Ask your students to try this – the next time they attend a class ask them to set out the template, fill in the title information and then use the Rough Notes section to take cryptic, bullet-pointed notes on every page. As soon as they can after the learning event is complete, write the main ideas or cues into the left-hand sidebar in their own words. Once that is complete, they should write a narrative summary, again in their own words, in the box at the bottom. To promote learning, ask them to do some reading to ensure their main ideas use terminology in the textbooks, and maybe link to the textbooks. The Cornell template can be used for any kind of learning event.

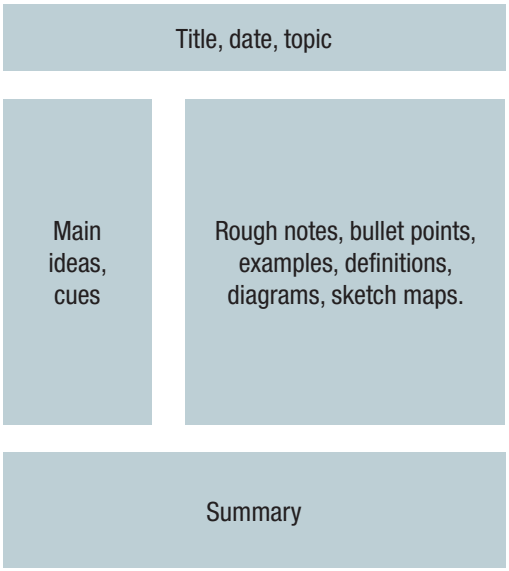

Figure 2: Cornell note-taking format

Finessing

In order to finesse this approach, the third principle is for students to adapt the process of note-taking to suit their approach to learning. There are a number of variations to the Cornell template and there are alternatives to this one. Some educational researchers have tested the Cornell template and found it is a good method, but not necessarily the best – it depends a lot on what students want out of their notes and how well they are taken.

If Cornell doesn't work for some of your students, encourage them to look for an alternative, for example the SQ3R method – they can do a websearch for this – to support the three principles I have suggested.

Finally, here are some suggestions you can make to help students improve the quality of their notes:

1. Before the lesson do a little reading of the textbook(s) so that you have some knowledge of the topic with which to help you make sense of the content.
2. Write your rough notes on alternative lines and read up on the subject after the learning event, so you can add in details. You could insert the additional materials in a different colour.
3. Use coloured or highlighter pens to emphasise particular things. This may be for theories, concepts, geographical processes, examples and case studies.
4. Develop your own set of abbreviations for words that you use regularly, such as those depicted in Figure 3.
5. After the class:
   a. go back to the textbooks to clarify, add additional concepts, examples, technical terminology and fill in any gaps in your understanding
   b. gather the notes pages you have for a particular theme and use them to draw a spider diagram or mindmap.

It is a technological world, so students may also want to consider using device apps or programmes to support their note taking, for example MS OneNote or EverNote for note-taking or Mindmeister or Mindmup for mind maps (there are lots of alternatives!). My bonus principle is to develop the technique with analogue technology before moving to digital technology. Students have to learn how to use the tools before they pick up new ones. | **TG**

↑	increase	govt.	government
↓	decrease, declines	>	greater than
=>	leads to, or causes	<	less than
NB.	important note	B4.	Before
=	Equals, equal to	#	number
≈	Equivalent	btwn	between
△	change	yrs	years
w.	with	sth.	something
w/o.	without	s.o.	someone

Figure 3: Examples of abbreviations

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References

Kneale, Pauline E. (1998) 'Note taking for geography students'. *Journal of Geography in Higher Education*. 22, 3, pp. 427-33

Pieronek, F. (1994) 'Using maps to teach note taking and outlining for report writing'. *Social Studies*, 85, 4, pp. 165–69

Wehry, S., Monroe-Ossi, H., Cobb, S. and Fountain, C. (2012) Concept Mapping Strategies: Content, Tools and Assessment for Human Geography. *Journal of Geography*, 111, 3, pp. 83–92

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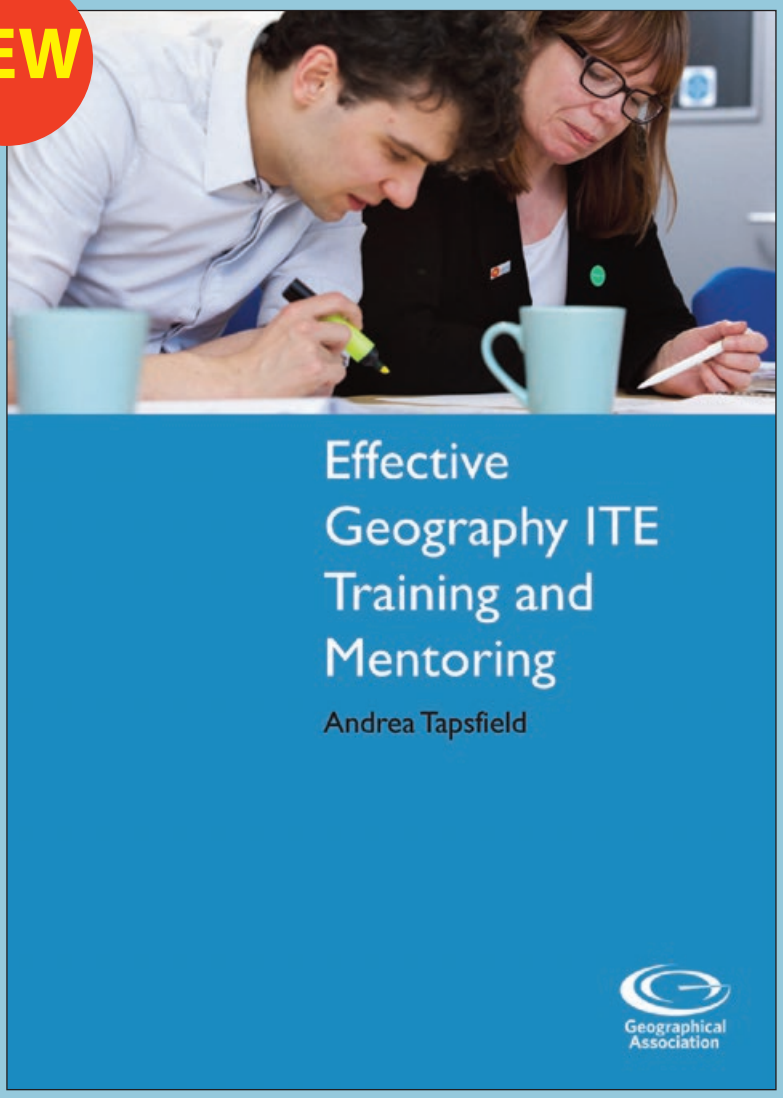

This resource has been written to provide guidance and support for those who lead geography initial teacher education (ITE) training drawing on the materials available in the ITE section of the GA website.

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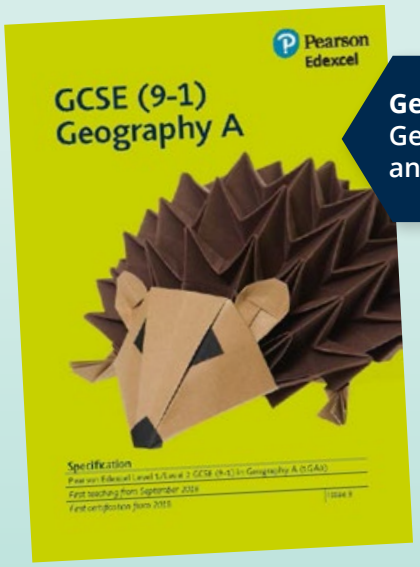

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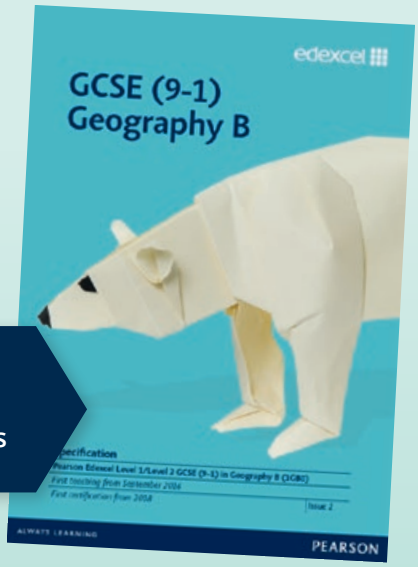

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