FORUM
Volume 62, Number 2, 2020
www.wwwords.co.uk/FORUM
http://dx.doi.org/10.15730/forum.2020.62.2.227

Education for Tackling Climate Change

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ABSTRACT Young people not only need to know about what is causing the climate to change for the worse as the Earth heats up, but also need to develop the personal skills to tackle the challenges that they may face in the future. For schools to support this effectively and in relation to community development, government control of the school curriculum must give way to collegial planning by teachers within their schools.

> Entire ecosystems are collapsing. We are in the beginning of a mass extinction. And all you can talk about is money and fairy tales of eternal economic growth. (Greta Thunberg addressing the United Nations General Assembly, September 2019)

> We need deep, transformational and systemic change throughout society which is crucial for a low-emission, highly-resilient and more sustainable future. (Patricia Espinosa, Executive Secretary, United Nations Framework Convention on Climate Change, June 2019)

Introduction

Education on climate change for schoolchildren and adults is essential if society is to cope with the future dangers that are predicted. Such education is much more than simply gaining knowledge of this phenomenon: it must embrace the attributes needed to tackle it. Greta Thunberg's analysis must be met by Patricia Espinosa's call for change.

In writing about education, I find it helpful to make clear what I understand by it:

> The great purpose of Education is to enable individual citizens to be capable of thinking for themselves, moral beings well equipped with the many and varied attributes that they learn in their years of schooling, and able to continue to develop and learn purposefully

> throughout their lives in a contented pursuit of worthwhile life, liberty and happiness. (Bassey, 2019)

Likewise, it is important to be clear about climate change and our current understanding of how it is being driven by global heating. This is how the Intergovernmental Panel on Climate Change has expressed it in a report of 2014:

> Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented ... The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen.
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> Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and are now higher than ever ... Their effects ... have been detected throughout the climate system and are *extremely likely* to have been the dominant cause of the observed warming since the mid-20th century.
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> In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans ... Changes in many extreme weather and climate events have been observed since about 1950. (Intergovernmental Panel on Climate Change, 2014)

How Schools Should Tackle Climate Change

It's not easy for adults to say to young people: 'our generation has failed to tackle the life-threatening future of climate change that your generation will experience'. But we should, unless we are ready now to do what is needed.

When Michael Gove was Secretary of State for Education and rewrote the national curriculum, he failed. The new science curriculum for 11-14-year-olds included 'production of carbon dioxide by human activity and the impact on climate', and geography included study of the climate and weather. But these were *about* climate change, not *preparing* for it (Department for Education, 2013).

What our schools and colleges should be doing is supporting their students in the political activity needed to tackle the causes of global heating – I have adopted the *Guardian*'s usage of 'global heating' rather than 'global warming' (Carrington, 2019).

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What will the United Kingdom, and the world, be like in 30 years' time, when today's primary school children are in the prime of life? Can we hope that the economic chaos of the early 2010s will have been overcome and that economic growth is no longer the goal of richer countries like ours? This is unlikely, but

we can expect that the supply of fossil-fuel oil will have peaked and the price soared to make petrol and diesel transport extremely expensive, if not obsolete. Personal transport is likely to be in electric cars for some, but on bicycles and public electric transport for many. As the freighting of goods becomes more expensive, there will be less of it. But the devastating change will be that the world is hotter, with serious changes in climate and consequent problems with food supply and water availability, with populations migrating to survive.

Undoubtedly, for today's young people, the world of their adulthood will be vastly different from that of today, but is their schooling preparing them for this? I fear that the answer is 'no'!

The current school curriculum is geared to the failing world of today: business as usual; financial whizz kids wanted; entrepreneurs needed to boost exports; obedient factory workers; clerical workers with high literacy and computer skills; and a focus on an ethos of competition which encourages a 'me-first' culture.

Many young people recognise this. The petition 'Put Climate Change Lessons in Schools!' (*Change.org*, 2020), initiated by four 15-year-old students in Oxford, has amassed over 90,000 signatures. Of course, it isn't just knowledge of climate change that is required, but the ability to respond to it.

For their survival as the Earth gets hotter, young people need to develop physical fitness, cognitive skills, social sensitivities, civic responsibilities and environmental understanding. Education should be based around these attributes. Obviously, learning must provide a preparation for a working life, but also it must prepare students for the perils of climate change. It must empower them to think for themselves about tackling danger.

Too little of this is happening in our schools today.

Schools should be nourishing values based on harmony – with society, with the environment and with the self – in order to help their students cope with coming change. As citizens, young people need to find empowerment to achieve a collaborative and sustainable way of life based on critical reflection about society. To this end, the responsibility of voting for Members of Parliament should be from age 16 and, at election times, schools should foster debate, not shy away from political issues.

In at least the last two years of school, young people should spend as much school time working in the local community as in the classroom.

The opportunities for teacher-led and student-led teams to engage in community work are tremendous: supporting elderly people, helping younger children in primary schools, growing vegetables, tending livestock, providing street theatre, enhancing local environments, erecting solar panels and planting trees – and through such teamwork learning democratic values and a convivial ethos based on harmony, cooperation, stewardship and self-sufficiency. It is actions such as these that will prepare young people for troubled times in the future, not endlessly sitting in classrooms listening to teachers and copying down notes.

This is how schools should be tackling climate change.

How Communities Should Tackle Climate Change

Every year, across England, about 600,000 rising five-year-olds start the schooling that will control much of their lives for the next 13 years. Parents at first worry about their happiness, then about who their friends are, and, six years later, about test scores and which secondary school they will go to. Soon, the worry is about the subjects that their children should choose. Then, when they reach 18, the worry becomes whether they are going to try for a university place or seek employment – and whether they will be successful.

If the parents are also sensitive to the worries of others, they will see teachers bedevilled by a government obsessed with standards, inspections, curriculum demands, pupil assessments, school league tables and international tables of pupil performance. This frenetic activity is underpinned by a rhetoric of concern to create a future workforce that can compete in the international race for economic growth.

Parents would do better to worry about whether this long period of formal learning will prepare their children effectively for the heating-up world they will inhabit as adults.

Let us suppose that parents, acting together through elections, cause politicians to recognise the harm of current educational policies and, as a result, schools are freed from government controlling measures.

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If, as suggested above, petrol and diesel transport declines and most people rely on public electric transport, one consequence may be that parents send their children to the nearest school. Perhaps choice of school will be a quaint memory of the second Elizabethan age and, hopefully, the whole edifice of competition, choice and league tables will disappear. If that happens, estate agents will lose one of their 'selling points'! Faith schools will have to open their doors to all the local children and schools boasting a 'specialism' may find it an unnecessary burden.

It will be important, of course, that every school is recognised as a good school, but since that goal is already the policy of government, we can hope that soon it will have been achieved.

When children go to the same school as all the other children in their community, there will be important consequences for the development of communities. In particular, schools can help communities recognise worthwhile responses to the potential dangers of global heating – for example, increasing the availability of allotments so that more food can be grown locally. Another would be children saying to their parents, 'Can we have solar panels on our home roof?' and the community organising the purchase and assembly of such.

Of course, there are those who predict that children will not need to travel to school but will attend virtual classrooms, sitting at a computer in their own homes. It is an unlikely scenario. It is the blinkered view of those who see education as no more than the transmission of useful knowledge from teacher to

student, and who fail to understand that the social situation of discussion, argument, experiment and presenting a case is an essential part of learning.

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Suppose that schools are freed from government controls and sanctions, and their teachers act collegially in relation to the needs of the local community, and design curricula along the lines suggested at the beginning of this article. Prominent in their planning should be the need to prepare young people for tackling the problems that they will face from climate change.

In collegial schools, teachers work as collaborating colleagues, sharing responsibility for determining the curriculum, the pedagogy and the assessment of students. Collegial schools will be very much more effective at providing every child with a worthwhile education than today's government-controlled schools, which are dominated by fiat, inspection and testing. Likewise, they will be far more effective than those schools of the mid-twentieth century, where each teacher was autonomous and the school lacked cohesion. Freed from government control, collegial schools will permit the professional commitment, experience and training of the teachers to flourish, while being accountable to the local community through the school governors for the effective education of their pupils.

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There are far too many external assessments in today's schools. These narrow the curriculum and detract from effective learning. Assessment is an important part of teaching, but, until the end of schooling, it should be done by teachers, and communicated to students and their parents, but no further. League tables of school results should be abolished. Teachers must be trusted, as part of their professional ethic, to do their best for every pupil. The only external assessment should be end-of-school diplomas, as advocated by the Tomlinson (2004) committee.

Ideally, secondary schools should be much smaller than today, perhaps no more than 600 pupils, so that there is a sense of intimacy and proximity to the local community. Primary schools should not be more than a third of that size and, as suggested here, could be the focal point of the local community.

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Schools and communities may need guidance on tackling climate change. A national council for education about tackling climate change is needed, financed by government but independent of it, and peopled by climate scientists and educators. It should publish guidelines and regular bulletins on how schools and communities are preparing for tackling the problems that global heating will cause.

Adult education also needs to have inputs on tackling global heating, and it will be valuable if schoolteachers use their pedagogic skills to raise the awareness of adult communities.

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These ideas demonstrate the essential role that teachers should have in preparing everybody, individually and in communities, for the coming hazards of climate change. As the late Professor Ted Wragg said: 'There is no higher calling. Without teachers, society would slide back into primitive squalor' (quoted in Brighouse & Woods, 2006, p. 80).

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