

[News story: Energy innovation celebrated at cleantech awards](#)

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Innovate UK-supported ITM Power was the big winner at the Rushlight Awards, while another 5 organisations received accolades.

Specialist manufacturer of integrated hydrogen energy systems [ITM Power](#) walked away with the top honour at the [Rushlight Awards](#), which took place at the Royal College of Surgeons in London on 25 January.

The Rushlight Award is presented to an organisation whose contribution to addressing environmental issues has either had a significant impact in reducing the global footprint, or has the potential to do so. It recognises ITM Power's efforts to enhance and encourage the use of renewable energy and minimise unnecessary waste.

In addition to being announced as the overall winner ITM Power picked up the Clean Energy Award and the Hydrogen & Fuel Cells Award.

Other winners who have benefited from Innovate UK support include:

- the [European Marine Energy Centre](#), which won the Marine & Hydro Energy Award for harnessing energy from a marine or inland waterway environment
- Smart Separations Ltd, awarded the Rushlight Clean Environment Award for technological developments or innovations that prevent, reduce or treat pollution, noise or other contamination

Three businesses that have received help from Innovate UK were also commended:

- [Sustainable Pipeline Systems](#) in the category of Responsible Product or Service Award
- [ULEMCo](#) for both Hydrogen & Fuel Cells and Clean Energy
- WaterGEN for Power Generation and Transmission

[Speech: Nick Gibb: the evidence in](#)

favour of teacher-led instruction

It is a pleasure to follow the speech of my friend and fellow E. D. Hirsch enthusiast, His Excellency Dr Jareonsettasin.

The theme of this session contains 2 statements and 1 question. Firstly, that international rankings are useful for policy makers. Second, that today's students will be rewarded not for what they know, but what they do with what they know. And third, how can evidence or should evidence be turned into policy, action and change?

I shall begin by focusing on the second of these. And then what that means for the answer to the third – in particular for approaches to teaching. In the 12 years since I became a Shadow Minister for Education, I have never met anyone who advocates teaching children knowledge with the explicit intent that it not be used or applied. The absurdity of this thought highlights that the oft-heard statement we are discussing today is effectively a tautology. It is plain to anyone who considers the matter: one must possess knowledge in order to use and apply it. As E. D. Hirsch has said, knowledge builds on knowledge.

Consider the example of simplifying fractions: a child cannot simplify the fraction $21/35$ down to $3/5$ without first possessing knowledge of the 7 times tables.

The ability to use and apply knowledge necessarily rests on possessing knowledge. So long as we consider using and applying knowledge to be of benefit – and we all do – logic suggests that the statement under consideration is both true and so bland as to elucidate next to nothing.

But that is not to say that this statement is without consequence.

This statement and similar statements are used throughout the world to argue for so-called 'child-centred' pedagogies. These 'child-centred' approaches to teaching focus on eliciting and developing ethereal and often poorly-defined skills in pupils. Teacher focus is turned away from ensuring all pupils are taught the core of academic knowledge that they need, and instead teachers attempt to inculcate creativity and problem-solving as if these skills transcend domains of knowledge. We know from decades of research – and most recently from the boom in understanding the workings and limits of human cognition – that this view is deeply misguided.

Children need to be taught the body of knowledge that we all take for granted. In too many countries – including Britain – educationalists have argued against knowledge and in favour of skills. I believe this has been deeply damaging to millions of children, particularly those from disadvantaged backgrounds.

The question before us today is 'how can evidence or should evidence be turned into policy, action and change?' The answer is, I believe, important

but straightforward. We should eschew easy-sounding tautologies and truisms that advocate by stealth or accident teaching methods that are not effective and we should honestly assess what the evidence says about the efficacy of knowledge-rich curricula and teacher-led teaching methods.

The work of E. D. Hirsch – the educationist who has most influenced my thinking – has made clear the importance of ensuring all pupils are taught the body of academic knowledge they need to be culturally literate. His work on developing the core knowledge curriculum has inspired the work of many of the most successful and innovative academies and free schools in England.

Whilst the curriculum is possibly the most important component in great schools, the approach to teaching is also integral to the success of pupils in being able to use and apply their knowledge. Many in the world of education assume that for pupils to become proficient in using their knowledge of science and history, they must be allowed to behave like scientists and historians in lessons. Teachers are encouraged to prepare lessons that are centred on the interests of pupils and discouraged from teacher-led approaches.

Teachers are implored to allow pupils to debate and discuss ideas, design and carry out their own scientific experiments and analyse historical sources. In the immediate aftermath of the [PISA report publication](#) last year, many educationists seized on the results to call for a more ‘child-centred’ approach to teaching.

One example was Eric Mazur, Harvard physicist and creator of ‘Peer Instruction’, a ‘child-centred’ group-work approach to teaching. In the immediate aftermath of the PISA results, he implored Australians to recognise that there is something amiss about education in the Western world – which he sees as too focused on traditional methods.

He said:

If you teach interactively, where students are being taught through questioning and helping each other, you can actually accomplish a lot. If you teach the old-fashioned way with the instructor being the source of knowledge, then the highest level you set for the students is the teacher. If you teach by inquiry, then it is possible for students to exceed the teacher.

This seductive sounding remedy to Western education was made after Mazur reviewed the PISA 2015 results. And yet, in all but three countries, pupils reporting higher levels of teacher-directed instruction achieve significantly better results. In the majority of countries pupils reporting higher levels of enquiry-based instruction achieve significantly worse results.

This is what the PISA report has to say:

Perhaps surprisingly, in no education system do students who

reported that they are frequently exposed to enquiry based instruction (when they are encouraged to experiment and engage in hands-on activities) score higher in science. After accounting for students' and schools' socio-economic profile, in 56 countries and economies, greater exposure to enquiry-based instruction is associated with lower scores in science.

In fact, the PISA report found that teacher-led approaches such as explaining how a science idea can be applied to a number of different phenomena had a net positive impact on pupil scores. Whereas allowing pupils to design their own experiments; allowing pupils to investigate and test their ideas; holding class debates about investigations; and requiring pupils to argue about science questions and a number of other 'child-centred' teaching approaches resulted in a net negative impact on science outcomes.

And the pupils who took the PISA exams were not being tested on their ability to recall scientific facts. That is not what PISA sought to test. PISA was testing how well pupils could use and apply their scientific knowledge. And the results were clear: teacher-led approaches were more effective than 'child-centred' approaches.

But it's that word 'surprisingly', used by PISA in their report, that troubles me. Why was it surprising to the authors of the PISA report that enquiry-based approaches produce lower results? I believe it is because much modern education thinking continues to be influenced, often deeply entrenched, by well-established, but poorly evidenced educational doctrine.

A 2016 OECD report into the teaching of maths – making all too familiar assumptions about the importance of 'child-centred' approaches – stated that 'educationalists have encouraged giving students more control over their own learning' for decades.

John Dewey – the famous American educationist and godfather of the 'child-centred' education movement who was born in 1859 – is quoted as having said:

Give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking; learning naturally results.

In 'Democracy and Education', written in 1938, Dewey criticised the teacher-led approach to teaching science. He wrote:

Pupils begin their study of science with texts in which the subject is organized into topics according to the order of the specialist. Technical concepts, with their definitions, are introduced at the outset. Laws are introduced at a very early stage, with at best a few indications of the way in which they were arrived at. The pupils learn a 'science' instead of learning the scientific way of treating the familiar material of ordinary experience.

Dewey's ideas and arguments remain influential in education around the world, but as Douglas Carnine wrote in 'Why Education Experts Resist Effective Practices':

In education, the judgements of experts frequently appear to be unconstrained by objective research.

The question before us today is how can evidence inform policy. The evidence is clear – however much it may shock the pre-conceived expectations of some education experts. It is imperative that pupils are taught a knowledge-rich curriculum. And the body of evidence on effective teaching practice is now overwhelming. The PISA results from last year serve to confirm the ever-growing body of international evidence on this point, that teacher-led instruction is more effective than child-centred, enquiry-based approaches.

Project Follow-Through is, to this day, the most expensive piece of education research ever carried out. Throughout the 1960s and 1970s, teaching approaches were measured across the United States. Direct Instruction, a teacher-led programme, comprehensively out-performed a multitude of 'child-centred' approaches.

Kirschner, Sweller and Clark's 2006 paper 'Why Minimal Guidance During Instruction Does Not Work' dispels many of the myths which surround the belief in 'child-centred' instruction. Despite being popular and intuitively appealing, argue the authors, 'these approaches ignore both the structures that constitute human cognitive architecture and evidence from empirical studies over the past half-century that consistently indicate that minimally guided instruction is less effective and less efficient than instructional approaches that place a strong emphasis on guidance of the student learning process.'

Andersen and Andersen's 2015 paper 'Student-Centred Instruction and Academic Achievement' carried out extensive investigation into teaching methods in Denmark. Andersen and Andersen concluded that 'a student-centred instructional strategy has a negative impact on academic achievement in general, and for students with low parental education in particular.'

It is for this last reason that Douglas Carnine's swipe at education experts is so pertinent. Poor teaching methods harm all pupils, but a growing body of research suggests that it harms disadvantaged pupils most of all.

The evidence must constrain education experts. Their recommendations must be evidence-based. As education ministers, we have a vital role – and I would even say a duty – to base our policies on sound evidence, not fashionable, experimental theory. And as I hope I have made clear, I believe that the evidence is overwhelming.

The most effective, teacher-led practices should be twinned with a knowledge-rich curriculum. That is how evidence can and should be turned into policy, action and change.

Speech: “People are really good at heart” : speech to the Anne Frank Trust

“In spite of everything I still believe that people are really good at heart.”

That idea, so simply and so beautifully expressed by a young girl more than 70 years ago, has been sorely tested of late.

In recent months and years, hatred, bigotry and sometimes violent intolerance of others has crept back into popular consciousness.

It springs from and targets all communities, and it manifests itself in a variety of ways.

We’ve seen vicious abuse doled out online, going way beyond the boundaries of legitimate debate.

We’ve seen a spike in hate crime on the streets of Britain, including a significant surge in reports of anti-Semitic abuse.

And of course we’ve seen the shocking, disgusting murder of a bright young Member of Parliament at the hands of a hate-fuelled extremist.

Brendan, I think I speak for everyone here when I say that your strength, courage and positivity in the face of such a tragedy has been an inspiration to us all.

Of course, hatred of people who are different is nothing new.

What’s different today is that we have no excuses for not tackling it.

We have all seen, too many times, where hatred leads if left unchecked.

We all know the harm that can be inflicted on people and the damage that can be done to communities if we allow bigotry to spread and divisions to grow.

In 2017, we can’t look the other way and pretend we didn’t know what was happening.

Each of us has a moral duty to tackle hatred and prejudice.

And the Anne Frank Trust is undoubtedly leading from the front in doing just that.

Every year the Trust reaches out to 30,000 schoolchildren, shaping and changing attitudes in the next generation.

It has delivered more than 100 projects in 70 prisons, bringing its vital message to people who are too often overlooked in the fight against bigotry.

And its touring exhibitions have taken the lessons of Anne's life and death into the heart of communities right across the UK.

Thanks to the Trust, countless men, women and children around the world have pledged to stand up for what is right, to defend those who cannot defend themselves, and to strive for a world in which our differences make no difference.

It's incredible work and I'm proud to support it.

I'm also proud to be part of a government that's serious about tackling hate crime.

We already have one of the strongest legislative frameworks in the world.

Last year we published our new [anti-hate crime strategy](#), which included £1 million for projects specifically targeted at young people.

Today I'm delighted to announce that [we're giving another £375,000](#) to five groups working with communities that face challenges in reporting hate crime.

These organisations work with a huge range of people.

Gypsies and travellers, religious and ethnic groups, even members of alternative sub-cultures such as goths.

The scope of these projects shows that hatred and bigotry is something that affects millions of lives across the country.

And I should know.

It's something I've experienced myself.

Growing up in the 70s and 80s, and looking like I do, it was kind of inevitable.

There's one incident that stands out, when I was at school and a fellow pupil called me a "Paki" to my face.

I should have taken the moral high road and challenged his behaviour.

Instead, I did what you probably wouldn't expect of a future Cabinet Minister.

I punched him.

In the face.

And then he hit me back...

And all that happened was that we both got in trouble with the head.

20 years later I was in a lift in a Bristol shopping centre, when the doors opened and this guy stepped in.

I recognised him instantly.

And he recognised me.

And then, out of nowhere, he said:

“Saj, I’m sorry for what I did. I’m so sorry.”

He’d changed.

He’d learned that the way he treated me back then was wrong.

He’d learned the damage that abusive language could do.

And he was raising his own kids to see that racism was unacceptable.

For me, it showed that, yes, “people are really good at heart”.

We are capable of changing.

We can see the error of our ways.

That’s why it’s so important that we educate young people about where hatred can lead.

They are the parents, the leaders, the opinion-formers of tomorrow.

The new national Holocaust Memorial will have a huge role to play in making this happen.

I’m proud to be leading the project, and very happy to say that concept designs will be unveiled later today.

I’m also very happy to have Robert on our educational advisory panel.

Few people know as much about using education to challenge bigotry.

That’s why I applaud the work of the Anne Frank Trust, and of anyone who devotes themselves to tackling prejudice in all its forms.

Because we all have a moral duty to stand up to hatred.

And we’ve all seen what can happen if we don’t.

Thank you.

Press release: UK and Japan strengthen Defence ties

The UK and Japan have today (26 January 2017) signed the Defence Logistics Treaty to make it easier for our Armed Forces to work together on a range of activities, including UN peacekeeping operations and joint humanitarian aid and disaster relief missions.

This agreement follows the success of the first ever joint exercise in Japan between the Royal Air Force and Japanese Air Self-Defense Force during last year's historic Asia-Pacific [tour](#).

This was another example of our ever closer defence cooperation with Japan as the UK's closest security partner in Asia.

The agreement includes practical arrangements that will allow both countries' forces to share equipment, facilities and services in a simpler and more efficient way. It covers the exchange of supplies and services, removing the need for individual agreements on a case by case basis.

Signing the treaty at the Foreign and Commonwealth Office, the Foreign Secretary Boris Johnson said:

The UK is working together with Japan as our closest security partner in Asia to promote global security, stability and prosperity. As two leading supporters of the international rules based system, this close collaboration between our forces will help support collective efforts to tackle international and regional challenges and threats.

Defence Secretary Sir Michael Fallon welcomed the agreement and said:

Japan is an important British ally and this treaty will enable closer joint work on operations and exercises, including sharing equipment, supplies and services. As Global Britain steps up, we will continue to stand alongside our Japanese friends to meet shared interests and challenges. This agreement underlines our commitment to tackling international threats which makes Britain safer and more secure.

Japan's Ambassador to the UK, Koji Tsuruoka, who signed the treaty on behalf of the Government of Japan, said:

This treaty marks a significant moment in Japan's security and defence relationship with the UK, Japan's close partner that shares

fundamental values such as the rule of law and democracy. The two countries will work together on security cooperation, as well as other global issues in this changing world.

Further information

Photographs of the signing are available at [Foreign and Commonwealth Office Flickr](#)

The Defence Logistics Treaty is also referred to as an Acquisition and Cross Servicing Agreement (ACSA). It was a commitment of the second 2+2 Foreign and Defence Ministers' [meeting](#) in January 2016, when Japan also agreed to host RAF Typhoons in October 2016 in an historic joint air force exercise – the country's first ever with a military partner other than the USA.

UK-Japan defence and security cooperation is going from strength to strength. The UK and Japan continue to develop new defence technologies, with a particular focus on missile technology. 2016 also saw our cooperation in third countries expand from South East Asia to Africa.

As Japan prepares to host the 2020 Olympic and Paralympic Games, our cooperation on cyber security is also expanding. Japan's Olympics Minister, Tamayo Marukawa visited the UK in January to discuss the UK's cyber expertise from London 2012 and the UK's experience of crisis preparedness in managing large sporting events.

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[Press release: Secretary of State and Justice Minister briefed on investigation](#)

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Chief Constable briefs Secretary of State for Northern Ireland and Justice Minister on attempted murder investigation

The Secretary of State and the Justice Minister met the Chief Constable today to receive a briefing from him and senior police colleagues on the ongoing investigation into the attack by Dissident Republicans on a police officer in North Belfast on Sunday Evening.

The Secretary of State and the Justice Minister repeated their condemnation of the attack and highlighted the public duty and service provided by PSNI officers across all parts of the community in Northern Ireland to keep people safe and secure. They also repeated their appeal for anyone with any information to contact the police.

The Chief Constable will continue to keep both the Secretary of State and the Justice Minister fully informed of the developing investigation.