

International rescue?

The misuse and oversimplification of international surveys and comparisons can lead to misleading statements being made about English education. **Dr Newman Burdett** looks at how we should be interpreting international data

“The Programme for International Student Assessment (PISA) figures show that the standard of education offered to young people in this country declined relative to our international competitors. Literacy, down; numeracy, down; science, down: fail, fail, fail.”

Education secretary Michael Gove (February 7, 2011)

“Increasing the social mix in schools is the way to close performance gaps. Ministers should return to comprehensive ideals if they are serious about concern for the poor – and Britain’s global ranking. The results from the latest of the influential surveys in the Organisation for Economic Co-operation and Development (OECD) and PISA makes this abundantly clear and is chilling reading.”

The Guardian (April 19, 2012)

Media coverage of the UK’s performance in international educational surveys often makes depressing reading. But if we scratch beneath the surface, it becomes clear that many of these gloomy reports have, arguably, oversimplified the interpretation of the data.

This is an all-too-common problem neatly summed up recently by an NFER colleague, who said: “Probably the greatest risk in the use of large-scale international datasets is the ease with which it is possible to draw overly simplistic – or erroneous – conclusions.”

The tragedy, here, is that such oversimplification detracts from the huge amount of useful and relevant information the international survey data contain, and what they can usefully tell us about our education system – especially where we are succeeding and what we should be doing more of.

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These surveys help us to develop research-informed policies when looking at reforming and evolving our education system, and enable us to move to a position where everyone can agree on the best way forward; one that delivers genuine benefits to learners. For a start there are a number of different surveys, including:

- The OECD’s PISA study, which provides evidence about reading, mathematics and science for 15-year-olds.
- TIMSS (the Trends in International Mathematics and Science Study) which provides evidence about mathematics and science for year 5 and year 9 pupils.
- PIRLS (Progress in International Reading Literacy Study), which provides evidence of the reading ability of year 5 pupils.



In each of these studies we perform differently. In some performance appears to be improving, in others it is largely stable, and in some we seem to be going down.

If we look in more detail at some common misconceptions, starting with whether we are really plummeting down the tables, it quickly becomes apparent that it is not a sensible question – in fact the reports make it clear it is not possible to give any country an absolute rank.

At best we can say our achievement in a given survey is similar to this group of countries which performs well, but not as good as these countries and better than these countries.

And, it all depends on what aspect of performance you value. For example:

- Do you want to be top of an international league table but not worry that young children are studying 13-hours-a-day and are disengaged?
- Do you want parity of esteem between vocational and academic routes?
- Do you want to be producing future world leaders?

Achievement

Let’s turn again to the idea that achievement is falling. An investigation of the data over time shows clearly that the change in rankings quoted above by Mr Gove is as much a result of other countries improving their achievement scores or a differing mix of countries participating rather than a drop in educational standards here.

Looking at how other countries are achieving this improvement is very interesting. Many of the countries that have improved have done so by targeting their low achievers – not just for educational reasons, but for very sound economic and social reasons too.

Wherever the UK stands overall on the international surveys, it does have a higher range of scores between its highest and lowest performers than we should be happy with.

So a key message to take from the performance of other countries is that if we want to improve, a good starting point would be to target those who are not achieving at the basic level (*PISA In Focus 2: Improving Performance: Leading from the bottom*) – those who are at risk of disengaging from school and becoming NEET (not in education, employment or training).

The issue is far more complex than simply requiring a better social mix in schools, as the extract from the *Guardian* would have us believe.

What we need to do is to understand why a significant minority of our young people do not achieve at school, and put in place strategies to keep them engaged. It may be possible to learn from other countries that have done this well.

The *Guardian* quote is right in that a wider social mix in schools is linked to better social mobility, but this is as much about quality of teaching, aspiration and equity of access as about social mixing. That is to say, equitable systems allow social mixing; altering the school system to enforce social mixing will not neces-

sarily ensure equity. There are some very complex economic and social factors in play here as well as the educational ones, and this highlights one of the big challenges in how we use the international surveys to inform the debate.

It cannot just be a simple case of “policy tourism”. Many of the top performers have small and relatively homogenous populations – the UK is large and has issues of diversity (geographical, social, economic etc) that many of the top ranking jurisdictions do not need to worry about.

“I think it is this idea – that we need to look at the complex web of policies and how they interact – that is the real take-home message from international surveys”

Engagement

So far we have only been talking about achievement. But education is also about engagement, motivation and the development of wider skills beyond the academic curriculum. The international surveys have very rich data and there are some surprising findings in there.

Take STEM education as an example. We have been making great efforts in the UK to make science and mathematics education more relevant to learners – and the latest data from TIMSS suggests we are succeeding.

If we look at how students judge mathematics as relevant to everyday life and its importance in finding a job, students in England rate it as more important than students in the high-performing jurisdictions that England is most often compared with.

In Finland, the golden child of international education, less than 28 per cent of students think that mathematics is really useful in daily life compared to 61 per cent of their English counterparts (for relevance to employment it is similar: 22 vs 56 per cent).

Even in the Pacific Rim countries, where we assume mathematics and science have huge cachet, only Singapore comes close, and scores lower than England on these two important student perspectives.

We are obviously doing something right in how we teach mathematics and science in England – let’s

not lose sight of that when we try to boost achievement.

So how do we keep our education system as one we can continue to be rightfully proud of? How can we ensure we improve achievement – especially at the lower end of the achievement spectrum?

One of the best ways of achieving greater social equity is to address the problem at the start. Evidence shows that good quality early childhood education is a significant factor in later achievement (*PISA In Focus 1: Does participation in pre-primary education translate into better learning outcomes at school?*).

The evidence also shows that making this freely available can go a long way to addressing the issues of socio-economic background on educational achievement.

Accountability

Other factors that need to be considered are more subtle and complex. Accountability is a word that is very popular (or unpopular depending on your standpoint) in the current debate.

Most would agree that while accountability is very important, and wholeheartedly support it as a means of improving the educational experience of our young people, there remain serious concerns about how it is currently being used in schools.

Unfortunately, the international surveys do not tell us how to introduce good accountability, but from the teaching profession’s point of view these surveys do give a very clear and very interesting message for policy-makers to contemplate.

As the OECD has said: “It is a combination of several autonomy and accountability policies, not just a single, isolated policy, that is related to better student outcomes.”

In other words, accountability needs to be coupled with autonomy to be useful, and you have to look at the whole educational picture.

I think it is this idea – that we need to look at the complex web of policies and how they interact – that is the real take-home message from international surveys.

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• Dr Newman Burdett is head of the Centre of International Comparisons at National Foundation for Educational Research. NFER has a long history of delivering international surveys and benchmarking studies, including TIMSS, PISA and PIRLS.

Further information:

- *PISA In Focus 2: Improving Performance: Leading from the bottom* (March 2011): www.oecd.org/portugal/47271471.pdf
- *PISA In Focus 1: Does participation in pre-primary education translate into better learning outcomes at school?* (February 2011): www.oecd.org/pisa/pisaproducts/pisa2009/47034256.pdf
- PISA 2009: www.nfer.ac.uk/pisa/
- TIMSS and PIRLS 2011: www.nfer.ac.uk/nfer/publications/TMEZ01/



How do you define 21st century skills?

What would be on your list of the 21st century skills that all students must be exposed to? **Niel McLean** discusses how evidence and research must contribute to this debate

broadly comfortable identifying skills such as problem-solving as essential to young people's future success.

Of course, the needs of employment in a world where the old certainties no longer hold have not been the only driver in the discussion. The uncertainties around employment are matched by uncertainties in wider society. Politics has become less tribal, sources of information are diverse and contested, and the skills associated with critical-thinking are, as a consequence, seen as increasingly important.

While educators in the developed economies of the West may have been the first to focus on "key skills", "core skills" or "transferable skills", a quick search of the web shows that interest is global.

The move towards a new century has provided an attractive banner to draw together the debate. Typing "21st century skills" into a search engine generated more than six million results.

So, what does the evidence tell us about what these skills might be – how they might be best developed in our young people, what the relationship is between these skills and subject knowledge, and, perhaps more challengingly, how they might be assessed? Let's start with the issues around definition.

A variety of approaches have been taken to identify the skills. The ATC21S project, led by the University of Melbourne and supported the IT industry, puts 21st century skills into four broad categories:

- Ways of thinking: Creativity, critical thinking, problem-solving, decision-making and learning
- Ways of working: Communication and collaboration
- Tools for working: ICT and information literacy
- Skills for living in the world: Citizenship, life and career, and personal and social responsibility.

Others have produced their own lists. Tony Wagner, at the Harvard Graduate School of Education, talks of "critical-thinking and problem-solving, collaboration and leadership, agility and adaptability, initiative and entrepreneurialism, effective oral and written communication, accessing and analysing information, and curiosity and imagination".

While, to some extent each list bears the hallmarks of its originator's cultural, economic and social circumstances, it is worth making two important observations.

First, there is a significant degree of consensus. Given that there are differences in how national curricula and standards across the globe describe knowledge in skills in well-trodden subjects such as maths and science, it would be remarkable if identical descriptions of such a new area had arisen from such diverse starting points.

Second, researchers have been able to identify descriptions that work for them in their educational communities. Perhaps our starting point should be to describe 21st century skills in a way that best matches the needs of our learners and their futures – local definitions building on global understandings.

What all of these lists share is a degree of abstraction. There is an assumption that skills can be described independently from the context in which they are used or the knowledge drawn on when they are used, that they are "transferable".

While this belief is attractive, it needs investigation. Does deciding whether to end a relationship and deciding the best approach to designing a ship draw on the same set of transferable skills? It is not immediately obvious that they do. Both draw on different sets of knowledge and there are certainly cases of people who could perform more effectively in one domain of decision-making than the other.

Identifying the extent to which 21st century skills are really transferable should be a priority for

educational research. At some time in the future, neuroscience may provide a definitive answer in terms of how neural networks enact those skills in the brain. Until then a systematic programme of practice-based research will be needed.

While there is broad agreement about the importance of 21st century skills, there is far less agreement about the best way to develop them. Some educators believe they are best developed tacitly – leadership did not feature explicitly on the Eton curriculum.

The argument is that they emerge from rigour in subject teaching together with a whole-school ethos that supports the learner's wider development. Others argue that specific 21st century skills are best taught within home subject contexts, much like the argument that Latin develops logical thought.

Similar arguments are presented about the value of computational thinking within the ICT curriculum. Some schools have restructured their curriculum, using 21st century skills as the core organising idea with subject knowledge in support, rather than the other way round. Others have experimented with dedicated teaching time addressing core skills such as problem-solving.

There is much we do not know, and the importance of an evidence-informed approach cannot be overstated, particularly as we move to greater autonomy within the curriculum at school level.

Finally there is the issue of assessment. If these skills are important, surely we should assess them, both formatively to help pupils progress and develop the skills, and summatively, given the extent to which the assessment system influences practice in schools.

Again, a variety of approaches is emerging. PISA has announced that it will assess collaborative problem-solving skills in 2015, and the OECD has talked of the "critical gap between existing basic research on assessment design and methodologies, on the one hand, and the implementation of large-scale assessments that provide reliable data at reasonable cost, on the other".

There are also the issues around 21st century skills in the context of the planned changes to the English qualifications system. It is difficult to envisage a truly rigorous and demanding EBacc Certificate in mathematics that does not require candidates to solve demanding problems.

We now have a unique opportunity. In the old model of curriculum reform, 21st century skills would have been centrally prescribed, with curricula and teaching programmes "rolled out" and evaluated. In the new world of distributed innovation we have the opportunity to adopt a different, though equally evidence-based approach.

How we teach 21st century skills aligns perfectly with a more "research and design" or even "design and research" approach, where innovation is disciplined, strategic and meets the school's needs; teachers and researchers work together to both develop and evaluate ways of teaching iteratively in a spirit of continuous, evidence-based improvement; and where the school contributes to the development of new knowledge.

• Niel McLean is head of research at Futurelab.

Further information

To learn more about the possibilities of school-based enquiry, visit www.enquiringschools.org.uk

During the consultation on Butler's 1944 Education Act, employers were asked what they expected of state education. Their response was straightforward: it should teach literacy, numeracy and obedience. At the same time, the great public schools were focusing on developing leadership skills and character.

Nearly three quarters of a century later few would argue for a system that simply prepares young people for their allotted place in life. The world has changed. From the 1980s onwards commentators on all sides of the political divides have argued that new circumstances may demand new skills or, at the very least, that the skills and competencies once required by the few are now needed by the many.

Perhaps our starting point should be to describe 21st century skills in a way that best matches the needs of our learners and their futures – local definitions building on global understandings

The change in emphasis is nowhere better illustrated than in the latest recruitment advertisement for the British Army, which features an ex-supermarket checkout worker claiming that "the main skill I have developed is leadership". It is interesting to speculate as to whether the view of leadership expressed in the ad – the ability to step back, think about what needs to be done, and say "right here's what we're going to do" – aligns with that developed in past centuries on the playing fields of Eton.

James Callaghan was one of the first to question the dichotomy between life and employment in his famous Ruskin College speech, and it is interesting that, whether through the Technical and Vocational Educational Initiative or its later progeny, educationalists have felt



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Getting careers advice right



How can schools keep pupils who are at risk of becoming NEET engaged and on track to progress?

With around one million young people not in education, employment or training (NEET), the NFER Research Programme has highlighted practical advice for secondary schools in helping to prevent young people falling into this category.

Secondary schools are naturally on the front-line, whether they have post-16 pupils or not. Many decisions, conscious or unconscious, for young people about their future are heavily influenced by schooling. So, there is no doubting their important impact on pupils when it comes to career choices and the steps needed to get there.

More and more evidence is being produced about ways of addressing the issues around young people who are NEET and this gives some valuable pointers as to the strategies and tactics school headteachers can best deploy in order to help.

A recent suite of publications in the NFER Research Programme's *From Education to Employment* theme presents four substantial reviews that establish what recent research says about ways to help those students at risk of becoming NEET. Here are some of the key messages for secondary schools from the NFER reviews.

Identify and encourage a positive relationship between each of your pupils and at least one trusted adult role-model in the school. This need not be solely with teachers. Even a single such connection can help those most 'at risk'

Parents

Parents need to be effective partners in ensuring their children's progression into further education or employment. Increase your support for this by ensuring they are positively involved in choices and decisions, and they understand their own roles in any interventions. School-home support workers can help a great deal here.

Careers education

Begin appropriate, good-quality careers education and

information, advice and guidance (IAG) as early as you can in the secondary phase, from the start of year 9 at least – with careers education from year 7. This helps shape young people's goals (and their grasp of the routes to those). All careers education and IAG should be impartial, and involve outside agencies and employers where possible. Implement coherent careers education strategies across the key stages by developing close internal partnership working between your subject departments and their individual staff – and simultaneously between them and those who deliver your specific careers support.

Role-models

Identify and encourage a positive relationship between each of your pupils and at least one trusted adult role-model somewhere in the school. This need not be solely with teachers. Even a single such connection can help those most "at risk". Staff members in co-ordinating and supporting roles for this across the school can be very helpful.

Teaching

Encourage more innovative experiments with teaching and learning that mean learners are given greater responsibility and control – find new and different settings in the workplace, community and colleges. There is good evidence that more learning which differs from traditional schooling – both in style and location – is vital for creating pupil enthusiasm and commitment, especially in at-risk categories.

Employers

Involve local employers in your curriculum planning, for advice on content, materials they can supply and the work-related opportunities they can offer, such as visits, shadowing or placements. That can strengthen and extend learners' employability and life-skills.

Avoid stereotyping

Avoid replicating social and other divides when matching your pupils with work-related opportunities of all kinds, within the school and beyond it – look to challenge their and other's stereotypes and expectations. This can be even more important with those learners who can be disruptive in school: they will often shine, in response.

Early action

Look to intervene early, wherever that is practical. Examples of the aspects to concentrate on include: spotting early misbehaviour and absence patterns, reducing barriers to learning in the home environment, addressing literacy and numeracy deficits, and even boosting confidence and inter-personal skills.

Empowering students

Engage more learners, more often, in designing and monitoring their own learning, through co-constructing their own individual learning plan. This can boost motivation, commitment, attendance, behaviour, and the learning itself.

Help your students manage their independent learning workload more effectively, to feel that they are not falling behind – especially when there has been significant absence. Catch-up sessions outside normal class hours can be very helpful.

Understanding diversity

One feature underpinning all the NFER reviews is a new segmentation showing the diversity of this group. NFER research identified three sub-categories within the NEET population likely to benefit from different forms of intervention:

- Open to learning NEETs: young people with

relatively high attainment and positive attitudes to education, and thus more likely to re-engage.

- Sustained NEETs: who have multiple disadvantages and more negative attitudes to education and low attainment, and therefore are more like to remain NEET.
- Undecided NEETs: a sub-group dissatisfied with the educational and training options available, and/or their ability to access them – even if their experience and attainment means they are similar in attainment and attitude to the "open to learning" sub-category.

The four NFER Research Programme reviews concentrate particularly on the "open to learning" and "undecided" sub-groups and cover the following areas: Effective general approaches to supporting young people at risk of becoming NEET or to re-integrating them into education and training; the best use of careers

professionals within schools; relevant curriculum and qualifications strategies; and ways to make best use of employer involvement.

Practical guides for heads

For each of these areas free materials are available to download from the NFER website, including a detailed research review paper, a summary of the key findings that have emerged from the review, and a practical guide for headteachers that offers advice based on the evidence from the review. The last of these, the practical guides for headteachers, are cross-referenced wherever possible to the new Ofsted inspection framework. They show the potential connections from the tips and ideas offered to the main grading aspects – achievement, quality of teaching, behaviour and leadership.

Key questions

So, what are the key questions for secondary schools that emerge from these NFER investigations:

- What helpful distinctions are there in the segmentation of young people who are NEET – and thus in the characteristics and long-term experiences of school students at risk of becoming NEET – and what can that tell us?
- What support, during the years of compulsory schooling, can help keep different groups "on track", and thus to progress constructively into further education, training or work?
- How can heads focus their resources to provide a positive impact on reducing NEET figures?
- And how – in a period of growing independence married to increasing external scrutiny – can schools ensure their work in preventing pupils at risk from disengaging is recognised as effective?

The issues around young people who are NEET are long-standing and complex, and this needs long-term and multi-faceted solutions throughout the education system. Headteachers of all kinds should take a range of strategic approaches and practical steps both within their schools and alongside their stakeholders and communities.

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Further information

If you would like more information on the NFER Research Programme or to download any of the reports or guideline documents, visit www.nfer.ac.uk/eteb/

The National Foundation for Educational Research (NFER) Research Programme targets key areas of education, highlighting gaps in existing evidence and conducting new research. Current areas of focus are: *From Education to Employment*, *Developing the Education Workforce* and *Innovation in Education*.



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Engaging teachers in research to inform best

Creative thinking

Michael Gove suggested that he could be one of the most important figures in world education. Dr Schleicher is the special advisor for education at the Organisation for Economic Co-Operation and Development and is passionate about using evidence to support school improvement. Earlier this year he published *Building a High Quality Teaching Profession: Lessons from around the world*.

Looking at international best practice in teacher development, Dr Schleicher notes that high quality is most likely to be achieved when teachers are “active agents in school reform, not just implementers of plans designed by others”. He calls for “a culture of research and reflection in schools so that teaching and learning can be based on the best available knowledge”. His work shows that while you may mandate compliance, you need to unleash excellence.

So how might it be possible to engage teachers as active agents in innovation and enquiry, unleashing their energy and imaginations to create better learning for children and young people?

There are a number of professional development programmes helping teachers to bring innovation into the classroom and inspire learners. An increasing number of schools in the UK are using enquiry-based methods as an important part of their approach to CPD and school improvement. These schools are engaging with action-research, not as an academic exercise, but as a means of developing teachers as reflective professionals and driving improvement in lessons and learning.

Among those supporting this growing trend, is Futurelab at the National Foundation for Educational Research, where we have developed a practical seven-step toolkit for managing school-based enquiry and evidence-informed practice. And evidence is emerging that schools joining this Enquiring Schools Network are beginning to see the benefits of using research-based methodologies.

Staff at City Academy Norwich have all chosen very different areas to research – from enquiry-based drama to the development of Assessment for Learning techniques.

All have identified success indicators, and in order to document any change they are looking at where the students are now and what differences they want to see. Once their ideas are put into action in the classroom, they will be guided in looking for evidence of improvement and links to current research.

Hannah Swain, a teacher at the academy, found the experience useful. She explained: “The programme is helping me to focus on teaching and learning in a new way. The format has given me a powerful structure for innovating and tracking the impact of change. I really value the opportunity to take a step back from my routine practice and spend time reflecting on where we can improve.”

“It has given me the confidence to move our curriculum forward in new and exciting ways. It is having a hugely positive impact on my practice and on the development of our team.”

At Copland Community School, enquiry-based research is being used not only to improve standards and transform teaching and learning within the school, but across its challenging location in inner city London. Headteacher Graeme Plunkett said: “The work we have done with the Futurelab programme is central to our mission: to transform learning and teaching by engaging students. There is so much potential here that has, in the past, been untapped, but now the ingredients are in place to create something innovative and unique.”

Alongside a robust methodology, it is important to feed research evidence into a school’s development programme in a timely and accessible way. This is why it is important to have a credible research organisation as a partner. Schools can move forward reassured that their innovations, whatever their particular priority, are incorporating strategies “most likely” to have an impact on pupil outcomes.

Educational research can often be dense and full of academic jargon so it is important to produce “research insights” that capture the key ideas in an accessible way for busy teachers.

Wilmington Grammar School for Boys in Dartford is seeking to develop a disciplined approach to enquiry-based innovation within the curriculum. Denise Jackman, assistant head, explained: “We decided to join the programme to make sure we adopt a rigorous methodology into school development and improvement. Our chosen development is ensuring that all staff and students know what is needed for them to become outstanding learners.”

The school is working with students in developing a powerful learner voice to inform and support teachers creating resources for lessons.

The test of true professionalism, in teaching as in medicine, says Professor Robin Alexander, is that the practitioner “is able to justify his or her actions by reference to evidence, aims and principles”.

Similarly, Professor Dylan Wiliam cautions that: “Too often, education policy, and teachers’ practice,



is driven by fads and fashions. Research can never tell teachers what to do, but it can suggest the directions that are most likely to lead to improved student outcomes.”

Undoubtedly, the movement for evidence-informed practice is growing. At a time when schools have a real opportunity to innovate it is important that we are guided, not by narrow dogma or the unsubstantiated claims of the “salesmen”, but by research and the evidence of successful professional practice.

Engaging in and with research will increasingly

be seen as an important part of what it means to be a professional educator. Here at Futurelab and across our family of enquiring schools everyone is a learner – and that means teachers as well as students. **SecEd**

• Gareth Mills is head of learning and innovation at Futurelab at the National Foundation for Educational Research.

Further information

www.futurelab.org.uk

It is important that education change is not driven by opinion or passing fad but by the informed expertise of professionals

With increased freedom, however, comes increased responsibility. As professionals we need to act ethically and rationally in the best interests of learners. This is why, I believe, we are seeing a growing call for more evidence-based practice and for new opportunities for teachers to engage in and with educational research.

It is important that education change is not driven by opinion or passing fad but by the informed expertise of professionals. Perhaps one of the most droll observations made by Professor John Hattie in his book *Visible Learning* is that a selective reading of research would suggest that “everything seems to work”.

As a result of 15 years’ work and a synthesis over 800 meta-analyses of research studies, Prof Hattie has built up an authoritative evidence-informed picture of the key influences on student achievement. Teachers engaging with his work can make informed judgements about teaching strategies based on a credible weight of evidence.

Dr Andreas Schleicher is not a household name in the UK, yet in a speech this year, education secretary

The NFER Research Programme

Research-led practice is one of the types of teaching development featured in the NFER Research Programme’s report, *What Leads to Positive Change in Teaching Practice?*, published in June 2012.

This report is one of a pair of studies that consider creating change in schools through workforce development. It presents the findings of a study in which NFER maps the key research evidence about what leads to positive change in teaching practice in schools.

A number of recent reports have emphasised effective teaching as a crucial element in securing positive outcomes for young people. NFER will be trying to evaluate the impact of such practice in schools in a more formal way and is interested in hearing how others have tackled this.

Developing the Education Workforce is one of three themes in the NFER Research Programme, that focuses on important undeveloped research areas within education where it feels its research skills and depth of subject expertise offer a valuable insight.

To read *What Leads to Positive Change in Teaching Practice?* or for more about the NFER Research Programme, visit www.nfer.ac.uk/rctsh



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What can pupils' attitudes towards how they eat and exercise tell us about the role schools play in promoting healthy habits? Surveys and research by the NFER reveal some interesting insights.

With the London Olympics just around the corner, and renewed calls from personalities like Steven Gerrard and Jamie Oliver for the government to do its bit to tackle childhood obesity, the state of our young people's health is very much back on the agenda.

Most of us would agree that schools have an important role in helping young people learn to make healthy choices, and that physical health is an important part of providing the energy needed for learning.

Analysis of data from the National Foundation for Educational Research's (NFER) Attitude Surveys of more than 40,000 secondary school pupils and 14,000 parents reveals some valuable insights.

Girls giving up

The vast majority of young people exercise regularly, but when asked how often they exercise for at least an hour, almost one in six say they do this less than once a week. This figure changes dramatically with the age and gender of respondents.

Among year 7s, only nine per cent of boys and 13 per cent of girls say they exercise for at least an hour less than once a week. By year 13, this figure doubles to 18 per cent among boys and a massive 42 per cent among girls.

Although the lack of exercise among older teenage girls may not be a surprise, what is more striking is that the decrease goes hand-in-hand with a drop in the number reporting they are encouraged to exercise by their school. More than 80 per cent of girls in year 7 agree that their schools encourage them to exercise, but this figure drops to around 60 per cent by year 10, and to less than half by year 13.

This indication that schools give less encouragement to older children to exercise is backed by parents. More than 80 per cent of parents of year 7 children (boys and girls) agree that the school encourages their child to exercise, but by year 10 this drops to around 70 per cent, and further still to below 60 per cent by year 13. This indicates that schools could do more to encourage their older students to exercise.

Desire for regular exercise

So is it fair to say that young people who do not exercise regularly are not interested in doing so? Not really. In fact, just under 40 per cent of those young people surveyed who are not getting regular exercise indicate that they would be interested in taking part in indoor or outdoor sports outside of PE lessons.

An additional seven per cent say they might be interested in such activities, but do not know enough about what is available. This suggests that providing more information about available opportunities to take part in sport and exercise in the local area, and offering a different range of fitness activities for children may be effective in encouraging regular exercise.

This approach may be useful in addressing the apparent gender gap in young people's attitudes to exercise. It is something reinforced by research at Loughborough University by the Institute of Youth Sport (*Changing the Game for Girls*, 2011) which suggests that despite statistics showing low levels of activity among girls, the overwhelming majority want to take part in physical exercise, and would participate with more enthusiasm if consulted about alternative forms of exercise both within PE and as part of extra-curricular activities.

Healthy eating: what can we do?

- Make a point of encouraging older students to exercise.
- Offer a range of fitness activities outside of PE lessons.
- Deliver activities more attractive to older girls.
- Provide more local information on sport and exercise opportunities outside school.
- Include school-based nutrition and food-growing initiatives to reinforce healthy lifestyle awareness.
- Ensure school meal times are attractive to pupils.
- Involve parents whenever possible on healthy eating and lifestyle initiatives.



A useful toolkit has been produced by the Women's Sports and Fitness Foundation to help you think through these issues and get more girls involved in PE and school sport (see further information).

Five-a-day and junk food

Less than a third of the young people surveyed report eating at least five pieces of fruit or veg most days. Instead, crisps, sweets or chocolate are more popular, with more than a third indicating that they eat these most days and almost a quarter report eating takeaway or fast food at least once a week.

While there is a strong correlation between the amount of fruit and veg young people eat (as well as their participation in exercise) and their agreement with the statement "I make choices that help me to keep healthy", the association between the amount of crisps, sweets, chocolate, takeaways and fast food young people eat and this statement is much weaker.

This suggests that although the message of eating five-a-day as part of a healthy lifestyle has been understood (if not universally enacted), the need to reduce the amount of junk food they eat has not been taken on board so clearly.

Although trying to get teenagers to ditch their chocolate or crisps habit may not be easy in practice, there is good evidence that school-based initiatives can help. An NFER evaluation of the Food for Life programme, for example, found that where meal times have been made more attractive to the school community (such as through improvements to the menu and the dining environment), there has been an increased uptake of school meals. This in turn may be associated with improvements in pupil nutrition as well as improved behaviour and attention in class.

The NFER research (*Food Growing Activities in Schools*, 2011) found that, in particular, children's involvement in food-growing activities is associated with increased fruit and vegetable consumption and better awareness of food taste and type, as well as contributing towards a less sedentary lifestyle.

At school and at home

Schools can clearly have a positive effect on the health of young people. This is seen from a significant association in our Attitude Surveys data between young people knowing they are encouraged to eat healthily and their actual diet.

Among young people who strongly agree that their school encourages them to eat healthy food, 43 per cent say they eat five pieces of fruit or veg most days. In contrast, among young people who disagree that their school encourages them to eat healthily, only around a quarter report eating five portions on most days.

However, parents also have a crucial role to play. Indeed one concern is parents leaving the issue of healthy eating entirely to the school; a recent NFER investigation in primary schools, for example, found that children's diets were actually worse in schools where parents were more satisfied with the canteen. (*Let Them Eat Pizza*, 2012).

The Attitude Surveys specifically asked parents about areas where they may want more support from school and 42 per cent agreed that "schools should do more to help parents to teach their children about a healthy lifestyle".

In more than one third of schools surveyed, the majority of parents agreed with this statement, indicating that many parents are open to receiving additional support in the area of healthy eating

and that schools could play a part in providing this information. This is certainly borne out by our research, which suggests that where schools have involved parents in programmes designed to promote better understanding of food, it has helped to foster healthier habits at home.

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Further information

- The *Changing the Game for Girls* report: http://wsff.org.uk/sites/wsff.org.uk/files/Changing_The_Game_For_Girls_Final_0.pdf
- The toolkit from the Women's Sports and Fitness Foundation: <http://wsff.org.uk/publications/factsheets/changing-the-game-for-girls>

- The NFER report *Qualitative Impact Evaluation of the Food for Life Partnership Programme* (2011): www.nfer.ac.uk/foodforlife
- The NFER report *Food Growing Activities in Schools* (2011): www.nfer.ac.uk/nfer/publications/OFGA01
- The NFER report, *Let Them Eat Pizza: An investigation into the healthy eating patterns of primary school children* (2012): www.nfer.ac.uk/publications/ASUR05
- NFER attitude surveys help schools to find out what pupils, parents and staff really think to help inform development and marketing plans. For details, visit www.nfer.ac.uk/pp3

CPD Workshop

The Flipped Classroom



10 July and 16 October 2012

Modern technology has spurred a new trend in education: **flipped classrooms**. Students watch lectures at home so classroom time can be used for rich, interactive learning. **Explore this new concept for your own classroom.**

For more information and programme details visit www.futurelab.org.uk/events

Futurelab at NFER
The Mere, Upton Park
Slough, Berkshire
SL1 2DQ

info@futurelab.org.uk



Claire Easton looks at the importance of collecting

evidence for self-evaluation and improvement and offers some best practice advice

Unannounced inspections, a new framework, no more self-evaluation form (SEF) – the Ofsted landscape is changing rapidly, with more pressure than ever on schools to keep track of what they are doing, and how well they are doing it, through on-going self-assessment and reflection.

An “outstanding” rating can be won or lost over the quality of evidence showing a school’s commitment to improving outcomes for its pupils, which makes collecting this information more critical than ever.

Why collect evidence?

It is not possible to know what pupils, teachers and school communities think about school life, to know how and where improvements have been made, and can be made in the future, without collecting the evidence and weighing it up.

Not only is this information necessary to support inspection processes, but perhaps more importantly it helps drive improvement, raise standards and provide better outcomes for pupils.

Research evidence also develops understanding of efficient and effective ways of working and can help justify, promote and explain decisions around policy and practice. This will become increasingly important for schools in an era of greater autonomy.

How to collect evidence

There are number of methods for collecting information or data, which broadly speaking fall into two categories: qualitative and quantitative.

Qualitative data lends itself to exploring issues in detail and in greater depth than quantitative methods allow. Qualitative research most often involves interviewing, generally with small numbers or groups of people; it tells you the reasoning and answers the “why?” questions, but does not tell you how many people think the same thing and cannot be used to make generalisations. Quantitative methods, such as surveys, provide an overview of “what?” and “how many?”. Quantitative research does not tell you why something is the case; it just tells you what the situation is. Often research organisations will employ quantitative methods to provide a rounded picture of what is happening within a population and then follow up the “why?” questions through qualitative methods.

Planning is essential – be clear about what you are exploring and why. You should refer back to your research questions and aims throughout any research period or project to ensure the focus throughout remains on its intended topic area. It is easy to get distracted by new, interesting, unexpected and emerging issues.

Ethics must be considered when carrying out any research, regardless of whether it is an in-house exercise or has been commissioned externally. You must get participants’ consent and it is essential to be clear with them about how the information they provide will be used now and in the future.

Consideration and protocols around safeguarding and disclosures must be decided at the outset, even when the research topic is not deemed “sensitive”. Additional ethical considerations must be applied when working with vulnerable people and those with disabilities, learning difficulties or SEN.



Data for self-evaluation

Action research

Action research is very common within school settings, with teachers and students carrying out their own research on a live topic. Action research is a way of investigating a situation, relationship or problem that strives to seek a better understanding in order to bring about improvement.

Action research enables the person or people carrying out the research to be part of the process and encourages reflection and change through its process. It is carried out in collaboration with the research participants and is not “done to” them. Essentially, action research follows the principles outlined in the graphic below and which can be very useful for schools trying to self-evaluate and improve.

Research with young people

Getting pupils to carry out their own research can be a great way of unearthing the real issues facing young people at school and in the wider world, as more often than not youngsters are more willing to talk openly with their peers – particularly around personal or sensitive topics.

Developing young people to become researchers can help engage gifted and talented pupils or conversely those that are disengaged in education as it helps them find their “voice”, feel listened to and empowered.

It can help build confidence and provides the opportunity to develop new skills such as teamwork, communication and analytical thinking. For schools and teachers, working with students to carry out their own research offers authentic insights into the real issues facing them, helps build positive relationships and enhances professional development.

As part of a case study for the NFER, one deputy headteacher said: “It’s something every school should do. It’s very powerful and changes lots of things in a school when children do it. Children see things adults don’t.”

Attitude surveys

Within many schools, research organisations are commissioned by the schools themselves or local and national government to carry out research on a larger scale. National surveys are carried out to provide an overview of issues within a local authority, region, or at a national level. These provide a snapshot of an issue in time across different contexts.

While providing a national picture, attitude surveys for pupils, parents and staff, for example, can also offer schools an efficient way to consult effectively where schools are given direct feedback on their setting’s community view.

Gathering such information at a wide and local level can help schools evaluate the views of pupils, parents and staff, providing data for school’s self-evaluation based on objective evidence. Furthermore these surveys, when carried out across a wider population, can help provide other settings by which to compare results. Surveys provide:

- Impartial results to help schools to identify areas of strength and weakness as part of their ongoing improvement.
- Data to help prepare for inspection.
- Opportunities to track effectiveness compared to other schools in supporting improved outcomes for children and young people.
- A less time consuming way of collecting information for schools.

Getting an external body to carry out research provides independence to the results and enables schools to receive the findings without needing to carry out their own analysis and reporting.

The prospect of embarking of data-gathering and research can be daunting, but is unquestionably worth the effort in terms of the potential benefits at a pupil,

teacher and school-wide level. In some respects schools do not really have a choice but to undertake evidence-gathering, but putting some time and effort into considering which methods will work best in each individual context will reward you with the right information to feed into the life of the school. **SecEd**

• *Claire Easton is a research manager at the National Foundation for Educational Research (NFER) with special interest in participative research, the empowerment of children and young people, school improvement, and conducting research to support children’s services authorities.*

Further information

For further information on carrying out action research in education, download the NFER report *Action Research Making a Difference in Education (Volume 1)*, authored by Alison Lawson. Visit www.nfer.ac.uk/nfer/publications/yoy01/

For a research tool-kit – *The How-to Guide from Practical Research for Education* – also by Alison Lawson, visit www.nfer.ac.uk/publications/33301/

Top research websites for teachers

Teachers are uniquely placed to carry out research on teaching because they are the ‘experts’ who are doing the work every day. The following websites are useful to teachers who want to do research, showing where they can look for information, advice and help.

Centre for the Use of Research and Evidence in Education

CUREE aims to support and develop the effective use of research and evidence in education to improve practice and policy, and to help raise standards. They have resources on mentoring and coaching, including the National Union of Teachers’ e-learning mentoring and coaching package – which is fun to use and offers insights into how these techniques can be used. A useful site for teachers who are either working on their own professional development or in a school which is planning to use mentoring and coaching to provide CPD. Visit www.curee-paccts.com

The National College for School Leadership

This site is primarily aimed at leaders – of early years, schools and children’s centres – and offers research, guidance and tools in its leadership library. Resources are categorised into different areas covering succession planning, multi-agency working and models of leadership. Particularly useful is a guide on how to use research to improve your school, which provides handy tips on how to get started with your research, as well as supporting information and resources to help you on your way. Visit www.ncsl.org.uk/research

Research in Practice

This site is aimed at those wishing to start doing education research as well as those already practising. It provides guidance and tips on how to run your research. Look out in particular for the evidence bank, which contains reports on research reviews, the content of which relates to the Every Child Matters agenda. Visit www.rip.org.uk

• *Compiled by Emily Houghton, information and reviews officer at the NFER.*

