CONNECT

REPORTING THE EVIDENCE

CEM research on how the design of reports can impact educational outcomes.

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HOW CAN MIDDLE LEADERS USE ASSESSMENT DATA BETTER?

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INTRODUCTION

■ Welcome to the Summer 2018 issue of CEM Connect!

How can teachers use research to inform their practice and improve outcomes?

There is mounting interest in the ways in which practitioners engage with research and in developing an evidence-informed culture within schools.

We know that it's important to make it easy for time-poor teachers to identify effective approaches to engaging with research, and to recognise how they can use it to inform their practice.

In this Summer 2018 issue of CEM Connect, Dr Deborah Netolicky offers some pathways of practical guidance on how teachers can know what research is worth listening to, what is worth ignoring, and what has been debunked in *How Schools can Engage with Research and Evidence*.

In her article, *Reporting the Evidence*, CEM's Director of Policy Katharine Bailey shares some of the findings of her investigation into how engaging teachers with assessment data can positively impact pupil outcomes. You can also read our case study about how the reports from the InCAS assessment can help teachers in *Identifying Common Reading Problems* in primary schools.

Ensuring practitioners have time and space for engaging with data is crucial to creating an evidence-informed culture. Dr Karen Taylor shares her experiences of using CEM assessments, and how teachers engaging with the assessment data at The International School of Geneva has had a tangible impact in the classroom, while Matt McGinlay from Evidence Based Education explores some of the ways middle leaders might use CEM assessment data better.

We hope you enjoy reading this Summer 2018 issue of CEM Connect – we are always keen to have feedback, so do let us know what you think, or tell us if there is anything you would like to see in our next issue: info@cem.dur.ac.uk

Find out more about our range of assessments at www.cem.org/assessment-monitoring-systems

DELIVERING AN INCLUSIVE EDUCATION WITH CEM ASSESSMENTS

Q AND A WITH DR KAREN TAYLOR

Director of Education and Director of the Institute of Learning and Teaching for The International School of Geneva.

The International School of Geneva (Ecolint) was established in 1924, and was created originally to educate the children of the expatriate population that came to Geneva after the First World War to set up the international labour organisation and the League of Nations. Since then, our connection to the league and now the UN is quite deep and long-standing.

Key to the mission of Ecolint is an education for peace, and also we hope a quality inclusive education for every child that comes to the school.

Why do you use CEM assessments?

We have quite a number of students, across 3 campuses and the foundation, roughly 4,500 students, so we're using the CEM evaluations, InCAS, MidYIS, Yellis and Alis, at the different stages of a student's career.

How do you use CEM assessments at the International School of Geneva?

We use them actually in a variety of ways.

I think that for younger students, what's most important for their classroom teachers and for the school leadership teams, is that they can look at the CEM results, and really have a sense of individual students, to know where they are in their own development.

We speak with real pride of being an inclusive school, child centred,

the fact we can use these results to effectively and appropriately differentiate, especially in the younger grades, is tremendously important.

When we get to secondary, whether it's on the campus where they use iGCSEs, or all 3 campuses where we have the IB results, we really value the chances graphs that come out of Alis, and the way that we can predict potential student performance.

The value-added data that is offered in correlation to IB results is tremendously important, particularly in terms of longitudinal analysis of identifying where we have real strengths and weaknesses in terms of subject areas and departments.

So again, heads of departments, individual classroom teachers, and the leadership teams work very closely each year with the results.

What impact has the use of CEM data had?

I think that where we see the impact of the analysis of CEM data is really in the ways in which teachers begin to collaborate with each other differently, in terms of improving their own delivery, whether it's for the younger students across a range of subjects, or in the Diploma Programme in specific subject areas.

HOW SCHOOLS CAN ENGAGE WITH RESEARCH AND EVIDENCE

BY DR DEBORAH M. NETOLICKY

It makes sense that the most effective teaching methods are used in classrooms, and that the most effective leadership and governance practices are used in schools, but how do educators decide on which evidence they should rely, to whom they should listen, and how they might engage meaningfully with research findings? How do we know what research is worth listening to, what is worth ignoring, and what has been debunked?

In my post for the CEM Blog, I explored the dangers of educators accepting seemingly simple solutions to the complex problems of education. Here I suggest five ways in which teachers, schools, and systems can meaningfully engage in research.

1. Engage teachers in research thinking

I work with teachers and teams in my school who are involved in action research projects in their own areas, helping them to apply research methodology to their education practice. I also run small professional groups based around reading, understanding, interrogating, and acting on research.

While often presented with arguments that begin with sweeping and unsubstantiated statements like 'the research says', teachers need to be encouraged to ask questions of research such as: Where did the studied intervention work? For whom? Under what conditions? How many participants were in the study? From what school contexts? How were data generated? What were the ethical considerations and how were these dealt with?

2. Consider creating a research role for school, department, or district

While budget constraints might make this difficult for some schools or education departments, a role of 'Research Lead', 'Head of Research', or in my case 'Dean of Research and Pedagogy', can provide a conduit between a school or system and the world of education research.

3. Build a professional reading culture for your school, district, or system

This might include subscribing to practitioner or academic journals, as well as access to research-based practitioner books or academic books. There are also affordable subscriptions, like those of the Media Centre for Educational Research Australia, the researchED Magazine, and the Chartered College of Teaching's journal Impact. Online publications such as the EduResearch Matters blog, The Conversation and the Times Education Supplement are also vehicles used by scholars to make research accessible to education practitioners. In my Dean of Research and Pedagogy role, I publish regular Research Reports which draw together relevant recent research for staff, and make it accessible.

4. Engage with academics and universities

This can be through professional learning or school-university partnerships in order to bridge the gap between those doing educational research, and those seeking to understand and enact it in practice.

5. Encourage post-graduate study for teachers and school leaders

While no-one should be expected to do post-graduate study, undertaking a Masters or a doctorate gives educators a grounding in research methods, access to research literature, and access to relationships with other researchers. Schools and systems can provide incentives, such as financial support.

Evidence-based education does not need to be an embracing of simple solutions to the complexities of education. Using evidence or a research basis to help make decisions that best serve the students in our schools is about honouring teacher expertise and bringing a research lens to the teaching profession in a way that combines the best of the wisdom of practice with what research can tell us. It is by engaging with research in ways that are meaningful to their daily contexts, and drawing back the curtain to 'see the workings' of research, that evidence can become part of teacher professional practice, and ultimately improve outcomes for students.

Dr Deborah M. Netolicky

Researcher, school leader, and teacher Dr Deborah M. Netolicky has almost 20 years' experience in teaching and school leadership in Australia and the UK. She is Honorary Research Associate at Murdoch University and Dean of Research and Pedagogy at Wesley College in Perth, Australia. Deborah blogs at theeduflaneuse.com, tweets as @debsnet, and is a co-Editor of Flip the System Australia.
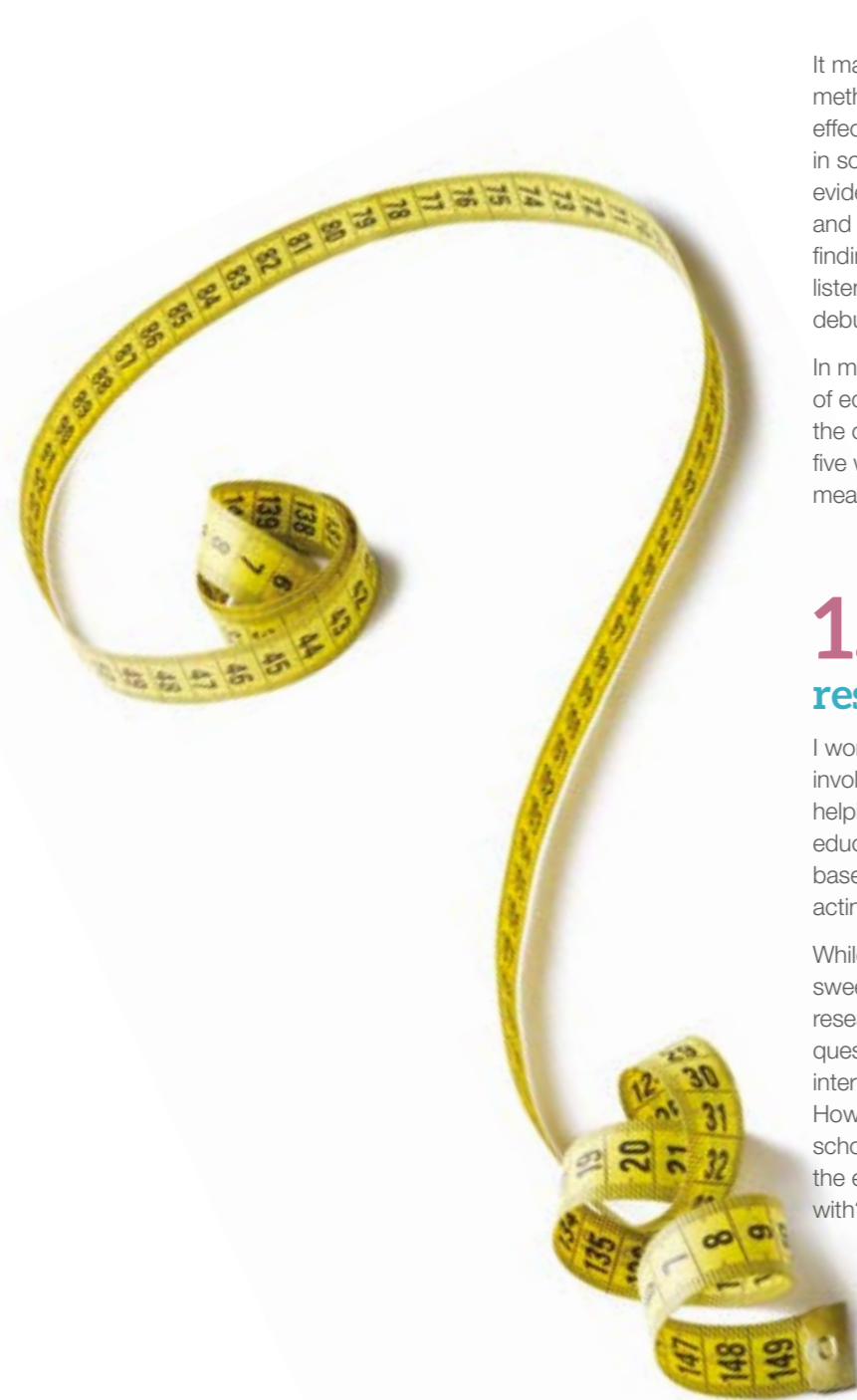
REPORTING THE EVIDENCE

By Katharine Bailey, CEM Director of Policy

How do you know if the data you get from assessments has an impact on pupil outcomes?

Of course, what we hope is that the data we get out of assessment will improve the rate at which our pupils learn. But hope and reality can be different things.

In fact, to date, there has been very little research to investigate any causal link between the amounts of progress pupils make in relation to the way assessment data is used in schools.

Do we know, for example, if student outcomes are affected by the way in which the assessment data is reported? Does it make a difference if staff are trained in data interpretation? How important is the way the reports are designed? Does the school's approach to data use have an impact?

Understanding what mitigating factors are at play when teachers use assessment data, may help teachers more accurately interpret the data and therefore positively influence the decisions they make in the classroom.

Impact of BASE data use on pupil outcomes

Since 2015, CEM has been conducting research into the impact of assessment data used in the reception year.

We have looked at the progress made by reception children who were assessed using our BASE assessment at the start and end of year.

Analysing the data of over 37,000 children from around 1000 schools, we have found a significant association between the type of assessment data provided to teachers and children's outcomes in literacy and maths at the end of the school year.

Impact of enhanced reporting

The two kinds of enhanced reporting teachers get from BASE Progress and BASE Inspection Ready, provides increased content, an interactive dashboard that enables teachers to explore data by gender, EAL status and other relevant characteristics and provides information at pupil, class, cohort and school level.

Using these reports as a basis, CEM researchers have explored whether the amount of progress pupils make may be related to the content and level of interactivity of the reporting option chosen by the school.

Mitigating factors

A range of mitigating factors were taken into account, such as whether the school was state-funded or independent, the socio-economic status (Income Deprivation Affecting Children Index – IDACI), which BASE package was chosen, the start and end of year literacy and mathematics standardised scores and the gender of the pupils.

CEM's researchers built multi-level models with this information, meaning these factors were controlled to check the impact they have on the outcome and therefore rule out the significance of these effects.

Results show impact

The results of the analysis indicate that those schools who chose the higher level of reporting saw higher levels of progress in their reception class.

All models showed positive effect sizes for reading and maths that, although small (between 0.12 and 0.18), are statistically significant. However, the policy implication of these results is important, as to have this size of effect over a large number of schools represents meaningful improvement for the education system as a whole.

Next steps

These results are promising but there is more work to be done. We cannot be sure, for example, if the effects we are seeing are due to the reporting alone or other factors such as school culture and leadership.

We may not yet understand, for example, the extent of the impact of creating a data-rich culture in school, with strong leadership which enables open access to the data and provides time for teachers to develop their personal understanding and skills to engage with the data.

What we do know, however, is that the interactivity of the reports we produce is effective in engaging teachers. And teachers who are more engaged with the assessment data are, of course, much more likely to be more confident when analysing data, which is crucial to better decision making.

For more information about BASE go to cem.org/BASE

HOW CAN MIDDLE LEADERS USE ASSESSMENT DATA BETTER?

By Matt McGinlay, CEM Training Manager at Evidence Based Education

Many of the schools that use CEM assessments use the feedback data slightly differently.

A classroom teacher might use baseline data to inform their planning and teaching. Senior leaders and governors might use value-added data to monitor the progress that pupils make in the school.

But what can middle leaders do to get the most out of their CEM data?

1. Help colleagues to understand the value, and limitations, of the data

Fundamental to using assessment data effectively is ensuring that there is a basic level of trust in the data. It can be a journey for staff to understand that the data can have a great deal of formative value.

Typically, when teachers are first introduced to CEM data, they tend to focus on the outcomes such as predicted grades. This can then lead to a lack of trust in the data as students often do better or worse than the predictions suggest.

Understanding more about likely outcomes for students by looking at trends in chances graphs rather than simply looking at a single predicted grade is a much better way of using the data.

Emphasising that CEM data is a supplement to teacher professional judgement, not a replacement, is an important first step in ensuring they are used sensibly and appropriately.

2. Use intake profiles as part of the strategic planning process

Looking at a new cohort's intake profile will help heads of department to identify areas which need attention. How can the EAL students be supported? How can the high ability students be stretched? Where can resources best be deployed?

Intake profiles of new cohorts can vary considerably from year-on-year, and having this data to hand early on gives teachers an insight into the new students.

3. Use predictive data to set aspirational targets

Single grade predictors can indicate how an individual may go on to perform in later examinations, if they make average progress.

However, when used alongside the chances graphs, middle leaders can facilitate a much more personalised target-setting process that also considers the characteristics of the students – Do they attend all lessons? Do they complete homework activities? Are they involved in a lot of extra-curricular activities?

Middle leaders can also use the 'Teacher's adjustment' function as part of the target setting process for colleagues. If your department has a target value-added score, the grades that individual pupils should aim to achieve in order to obtain that value-added score can be shared with teachers.

4. Identify strengths and weaknesses by using value-added data formatively

Value-added feedback can also provide a powerful perspective on student achievement which might not be immediately evident from raw attainment data such as the percentage of higher grades or the number of passes.

We've all heard teacher comments such as 'I wish there had been more A grades', or 'my students didn't do as well as the students in the other set'.

Middle leaders can use CEM value-added data as a motivational tool for hardworking and dedicated colleagues, and the feedback can be used to show colleagues that, actually, most of their students met or exceeded their potential, as well as highlighting what their department does well, and to identify opportunities for further staff development.
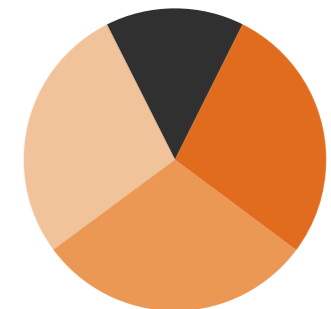
Evidence Based Education

CEM's approved training provider, **Evidence Based Education**, have trained thousands of teachers, across the UK and internationally, in how they can use CEM assessment data effectively in school.

For more information and to arrange a visit, visit the website at:
www.evidencebased.education
or contact
cem-training@evidencebased.education

IDENTIFYING COMMON READING PROBLEMS WITH InCAS

Lily is 7 years old and in Year 2 of a large primary school in the north of England. She is open and sociable, and likes to help other children with their work. Her favourite subject is Maths, and she especially likes measuring things and drawing graphs. Lily's mother is a teacher and she, too, has said that she wants to be a teacher when she grows up.

Lily's school uses the InCAS assessments in each year to provide a unique profile for each pupil and to measure the progress they make.

InCAS is a personalised computer-adaptive assessment, tailored to each individual pupil according to their age and abilities, generating an age equivalent score (the age that the child is actually working at).

InCAS measures Reading, Maths, Spelling, Mental Arithmetic and Developed Ability, but also provides a breakdown of scores from each section enabling teachers to establish each pupil's strengths and areas for development.

Assessment	Age (Yrs:Mths)	Age Equivalent Score (Yrs:Mths)	Age Difference (Yrs:Mths)
Reading	**7:2**	**7:0**	**-0:2**
Word Recognition	7:2	7:5	+0:3
Word Decoding	7:2	5:9	-1:5
Comprehension	7:2	7:2	+0:0
Spelling	7:2	7:3	+0:1

*Age equivalent scores show the age at which the pupil is performing.*

Identifying unusual patterns

Lily was assessed using InCAS in November and, although her results were generally as expected, her teacher noticed an unusual pattern in her Reading assessment results.

Supporting Word Decoding

By examining the Age Difference column Lily's teachers noticed that, although Lily's overall Reading scores are generally around her chronological age, her Word Decoding score is very low, and is nearly a year and a half below her chronological age.
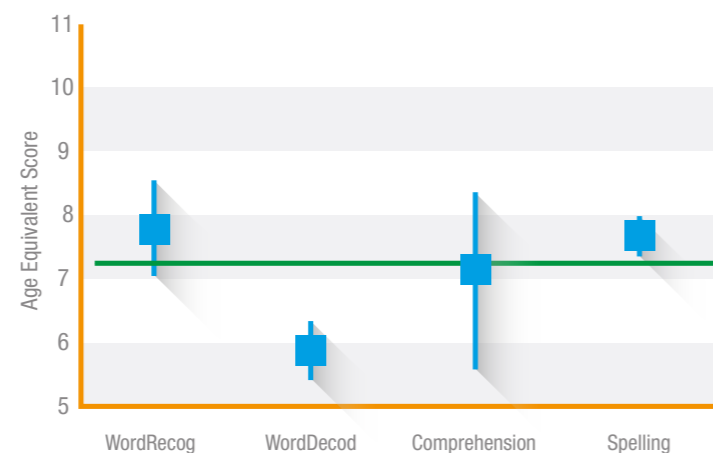
It is recognised that a child's reading comprehension is underpinned by two key skills: decoding and listening comprehension.

Decoding begins with children learning some letters of the alphabet and recognising a few simple words. Teaching children phonics also provides the means to understand the words they don't know immediately. Thus children become able to read new words using both recognition and decoding strategies.

Common reading problems

Lily's low Word Decoding score indicates that she is unable to distinguish the correct spelling from the alternatives offered, and that this is a consistent issue.

It is common to see this pattern. Children with scores like these are likely to be associating the spoken word with the written word without considering the sounds the individual letters in the word make. Using this technique they are able to build a large sight vocabulary of common words, enabling them to read with a high degree of fluency but it does not provide them with a strategy for reading unfamiliar words.

Lily's Word Recognition score which is a little over her chronological age, provides further proof that she has no issues recognising words with which she is already familiar.

Next steps

For children who have difficulties decoding text, phonics-based programmes and training in phonological awareness have been found to be particularly effective.

Lily's teacher finds that when asked to 'sound out words' she becomes frustrated and she often guesses at words based on the first letter or two.

Now that Lily's teacher has identified the particular strand affecting Lily's reading, she can support her and develop her word recognition skills with a range of activities, such as:

- Look, Read, Cover, Say, Check
- Simple word games such as matching, snap or word bingo
- Teaching phonics in a systematic and explicit way
- Use manipulatives to help teach letter-sound relationships. These can include counters, sound boxes, and magnetic letters

To find out more about InCAS visit www.cem.org/incas

Join us at the 2018 Festival of Education

21st and 22nd June 2018, Wellington College

Professor Rob Coe will be discussing how teachers can learn to be better teachers - come and see us to pick up your free copy of his presentation, and have a chat with the team!

> **Value-added on results day this year was excellent.**
>
> It was very handy to receive the feedback so quickly as it allowed me to have value-added conversations with staff and governors right away."

Mr John Maguire, Deputy Head at Haberdshers' Aske's Boys' School

Your value-added reports are now available on the day you upload students' GCSE and A-Level results. Simply upload your GCSE and A-Level results through the Secure sites and we'll do the rest.

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