GL Assessment

Assessment in Focus

Data and the whole pupil view

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Since 2003 Alastair has been Head of Professional Development Services at GL Assessment, he has worked in education for over 30 years – as a primary teacher, education consultant, trainer and contract manager.

His passion is supporting the development of educational professionals. He has had the privilege of being responsible for major national programmes supporting thousands of teachers and leaders in education. At GL this is now focussed on helping professionals make the most of the data from our assessments to inform teaching and learning. This role has previously involved 12 years of educational leadership development through managing provision of National College programmes such as NPQH, NPQSL and NPQML.

Outside of work, Alastair now has 12 years' experience as a school governor in both primary and secondary, a Watford FC supporter for nearly 40 years and is also a season ticket holder at Saracens RFC together with squeezing in a bit of golf here and there too.

Prior to joining GL Assessment Alastair worked at RM for 13 years, a leading supplier of software, services and systems to UK education.

About GL Assessment

GL Assessment (known internationally as GL Education) is the leading provider of benchmarking, formative and diagnostic assessments to UK schools and has a growing presence in British, bilingual and international schools in over 100 countries worldwide. We also provide assessment services to ministries of education and their agencies.

Our assessments are developed in collaboration with a global community of experts from leading universities and research teams, and have been used by education, health and psychology professionals for over 30 years. We believe in a whole pupil approach to assessment and our integrated portfolio helps to reveal students' potential, track their progress and identify any barriers and learning difficulties they might have.

Recognising that technology is a driver for educational change, we have also pioneered an award winning digital assessment system, which has delivered over 7 million online tests across the globe, and we continue to innovate with adaptive testing and tablet-based assessments.

Find out more at www.gl-assessment.co.uk and www.gl-education.com.

Data and the whole pupil view

Generating and then triangulating the data to answer these questions will help professionals make well-informed decisions about the next steps required for each pupil to maximise their potential.

Introduction

Assessment data helps educational, and other, professionals make informed decisions. The whole pupil view proposition is that the 'whole' is greater than the sum of the parts. That is, having as complete a view as possible for each pupil will enable informed decisions to be made to help that pupil progress. The whole pupil view helps provide a methodology to investigate and analyse the data held on pupils to inform decision-making and maximise the outcomes for each pupil. The fundamental questions behind the whole pupil view are:

- What is the pupil's potential?
- What is the pupil achieving?
- Are there any barriers to learning?

Generating and then triangulating the data to answer these questions will help professionals make well-informed decisions about the next steps required for each pupil to maximise their potential. This model is then scalable to a whole class, year group, school or grouping of schools.

The whole pupil view

The whole pupil view philosophy is based on the premise that each pupil has the ability to achieve, and that by triangulating various data types (ability, attainment and barriers to learning) across the data available, it is possible to maximise student attainment. However, it should be noted that the opposite is also true: if there are gaps in the data sets, how is it possible to triangulate data to make fully informed decisions to maximise the outcomes for each pupil?

The whole pupil view has four distinct elements:

- teacher judgement, which is informed by a wide range of contextual information and data. This is held by the school.

There are then three data sets that support teacher judgement to provide the whole pupil view:

- ability;
- attainment;
- barriers to learning.

The whole pupil view philosophy is based on the premise that each pupil has the ability to achieve ...

"All models are wrong, but some are useful."

(George E.P. Box 1976)

We firmly believe that the whole pupil view model has the potential to be incredibly useful in providing a methodology to guide analysis and exploitation of data for the benefit of each pupil. This GL Assessment philosophy seeks to provide a model to enable educational professionals to exploit the data available in an optimal way to improve the teaching of, and learning for each and every pupil.

... a model to enable educational professionals to exploit the data available in an optimal way ...

Triangulation of data

A critical aspect of the whole pupil view is how the different data types (ability, attainment and barriers to learning) relate to each other, i.e. how the data are triangulated and, in turn, what questions this raises.

... how the different data types [...] are triangulated and, in turn, what questions this raises.

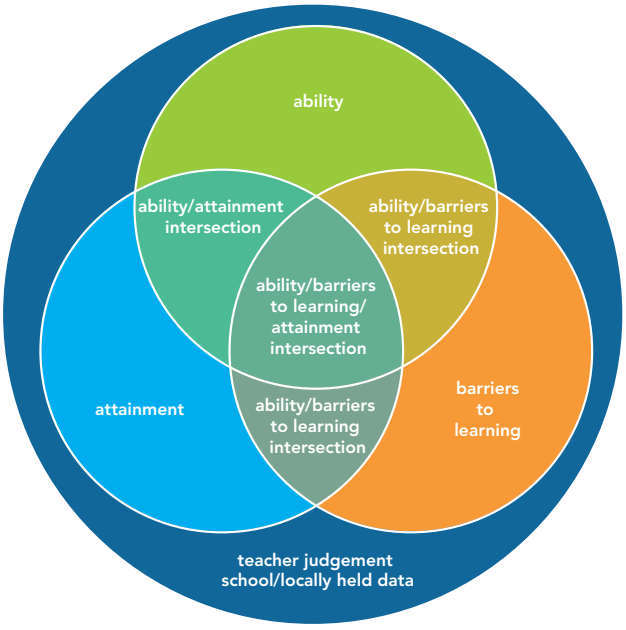

Figure 1. This figure provides a visual overview of the four key intersections.

The data 'sets' become whole at their intersections where these are compared/contrasted and analysed. Figure 1 on the previous page outlines the various data intersections:

- where attainment and ability data intersect;
- where ability and barriers to learning data intersect;
- where attainment and barriers to learning data intersect;
- where all three – attainment, ability and barriers to learning – intersect.

The whole pupil view hypothesis is that optimal decision-making is based upon being fully informed.

The guiding principle is that the power within data has its use in generating questions. With this approach there is the potential of combining data. This model can support the community of experts through framing smart questions around the data combinations/ intersections provided to help schools define and develop processes that will best support their pupil outcomes.

> "Our model of assessment allows us to target our teaching to meet the needs of the children, whether they are SEND, EAL or academically able. We are able to deliver a personalised programme of learning for each child based on the information derived from GL Assessment's tests to ensure that every child is a learner every lesson."
>
> (Jill Wilson CBE, Headmistress, The Gleddings)

The whole pupil view hypothesis is that optimal decision-making is based upon being fully informed. As we work towards exploring this further in this document, we will first explore single data set analysis, then triangulation across two data sets and ultimately, triangulation across the all three data sets, the whole pupil view.

Teacher judgement

The guiding principle is that the power within data has its use in generating questions.

Schools, by no means, work with GL Assessment data in isolation which means that the whole pupil view always takes account of teacher judgement, which is informed by school/local data, as the starting point. Schools may already have data that support their view on ability, attainment and barriers to learning derived from other in-school assessment.

The school typically knows a great amount about each individual pupil including:

- demographics – attendance, ethnicity, gender, first language, socio-economic mix of the school's catchment;
- attainment – prior and current from a range of non-GL sources e.g. teacher assessment, national tests, etc.;
- expectations (targets) – projections based upon prior attainment e.g. RAISE online, Fisher Family Trust;
- attitudes – behaviour, effort, attendance etc.

Schools value this data, and monitoring and inspection regimes examine this data to inform judgements. The whole pupil view narrative begins

here; it acknowledges the wealth of data that schools possess and the wider system recognises, prior to linking to benefits that can be derived from triangulating this with GL Assessment data.

Single data set analysis

A critical theme here is having data to analyse only one aspect/set of performance can, by definition, only ever provide a partial view.

This stage reflects the analysis from one set of GL Assessment data. A 'set' of data is defined here as either 'ability', 'attainment' or 'barriers to learning'. It should be noted that schools, in all likelihood, will be using data from a single GL Assessment and triangulating this with a variety of 'local' data, for example, teachers' assessment, attainment, effort, prior attainment, attendance, etc. In this way, schools will be using GL Assessment data in the least complex triangulation.

With single data set analysis there is room to support greater benefit – guiding exploitation and questioning, through providing a set of key questions, signposting school processes via case studies (leveraging the community of experts), and guiding improved learning by utilising this data. A critical theme here is having data to analyse only one aspect/set of performance can, by definition, only ever provide a partial view. How useful is attainment data devoid of a view on a child's potential? How useful is ability data devoid of current attainment? The answer has to be 'somewhat useful' and with any partial view, decisions based on this are unlikely to be optimally informed.

Having said this, there are useful questions that can be raised with one data set to inform next steps for individuals, groups or even schools. GL Assessment reports are incredibly useful in providing data on single aspects and also, in many cases, interpreting these data to inform teaching and learning possibilities.

Attainment

If only one set of data is available to support teacher judgement, it is most likely to be attainment data as many education systems have focussed upon measuring attainment across a range of subjects and skills at different points in time, for example, termly or annually. GL Assessment provides a breadth of assessment data to support specific single aspects of attainment, for example, progress attainment data in English, maths, science and reading.

How useful is ability data devoid of current attainment?

Much can be derived from attainment data alone, this is as follows.

- Tracking and monitoring progress: it is useful to see how individuals and groups are currently performing,

> "*New Group Reading Test* (*NGRT*) has proved effective in the way it is an adaptive test, focused on reading ability rather than chronological age, thus extending more capable students whilst also attending to the needs of others. Despite proving more effective with the older girls (who are more familiar with using a computer), *NGRT* has also been regarded as a particularly effective assessment in how both sentence completion and passage comprehension are covered in determining the child's reading skills."
>
> (Melanie Charles, St Hilda's School, Bushey)

- Measuring progress: collecting data at different points over time is also incredibly useful and allows progress to be measured between these data collection points. *Progress Test* reports will provide an additional statistically-derived interpretation in terms of whether the progress is average, below or above average, helping to determine the quality of the progress made.
- Benchmarking nationally: how does my school compare to the national average?
- Comparison of groupings: within school, boys' performance compared to girls', students with English as an additional language compared to the main student body, etc.

How should the school organisation be arranged based upon findings from this data?

These sets of attainment data then raise further questions. How are any differences explained? For example, are there any specific causes that can be identified? Some may be evident from other data sources the school may be aware of, for example, poor attendance is statistically correlated with poor performance. Where there are gaps in attainment, what should be done to address these gaps?

Ability

Many schools will derive ability data from GL Assessment only in the form of *Cognitive Ability Test* (*CAT*) data. Schools that generate *CAT* data are interested in understanding pupil potential to help inform expectation and set targets. A typical scenario is that schools will assess ability on entry to the secondary years. Some schools will also have a regime of assessing with *CAT* at a number of fixed data points to track and monitor progress, and then refine targets.

Much can be derived if only ability data is available, from identifying potential, personalising learning, through to measuring value added.

Much can be derived if only ability data is available, from identifying potential, personalising learning, through to measuring value added.

> "*CAT4* helps us to set ambitious but realistic attainment targets for students across the whole school. This is essential to enabling teachers to ensure that every child is achieving well within the context of holistic development."
>
> (Dr. Derek Cassells, Principal, Maharishi Free School)

As with attainment, ability data can be used for comparison between groups and for national benchmarking.

These sets of ability data then raise further questions. How should the school organisation be arranged based upon findings from this data? For example, to support students deemed gifted and talented? To support students with lower ability? To support students with strengths or weaknesses in the various aspects of ability assessed by *CAT*?

It is likely that most schools will use data from the GL Assessment *CAT*, measure and compare and contrast this with other locally-held data, for example, prior attainment, current attainment, perhaps based on teacher judgement, etc.

Barriers to learning

Many schools will derive data to help understand barriers to learning from a single GL Assessment test. This may help diagnose whether a student has a very specific barrier, for example, dyslexia or dyscalculia, perhaps driven by a desire to better understand poor attainment in literacy, numeracy or, indeed, across the curriculum more generally.

Analysis of barriers to learning assessments will help provide data which, in turn, raise further questions ...

Another potential barrier to learning – limiting access to most academic subjects – is the reading ability of students. Assessing reading ability in the context of barriers to learning is focussed upon diagnosis of underperformance in literacy/English and curriculum subjects where reading ability is key. In a similar way poor communication skills' development can also be a barrier to learning, assessing and better understanding pupil's communication skills can help professionals in unlocking this.

> "It can be upsetting to discover your child needs additional help, but *Wellcomm* provides good evidence in a friendly, straightforward manner. It doesn't bamboozle with technical jargon."
>
> (Beccie Hawes, Head of Service, Rushall's Inclusion Advisory support team)

Many schools will also seek to understand hidden or subtle barriers to learning through using the *Pupil Attitude to Self and School* (*PASS*). It is useful as a general screener to help build a picture for each pupil, or perhaps targeted at specific pupils, where there is a specific question around underperformance, poor attendance, poor behaviour, etc.

It is unlikely that any school will use single data set information in isolation ...

As with attainment and ability, barriers to learning data can be used for comparison between groups and for national benchmarking. Analysis of barriers to learning assessments will help provide data which, in turn, raise further questions:

- Are there specific trends across the school that should be addressed?
- If so, how could school organisation be arranged based upon this data?
- What interventions will best meet the needs of individual or group of students?
- How will we know if interventions have been successful?

It is unlikely that any school will use single data set information in isolation, but will be comparing and contrasting data derived from GL Assessment with other locally generated or held data.

Exploring each intersection in more depth is key to the strength of this approach.

Intersection Analysis

This section explores triangulation of teacher judgement with two GL Assessment data sets, thus providing a fuller view for each pupil. This stage reflects customers who are looking at data from two GL Assessment data sets, i.e. ability and attainment, ability and barriers to learning, or attainment and barriers to learning. Exploring each intersection in more depth is key to the strength of this approach.

Ability/attainment intersection

This intersection is perhaps understood by many schools in a different way as an intersection of 'expectation' and current attainment, regularly expressed as a target of pupil attainment outcomes. Often this 'expectation' may be defined externally and based upon some measure of prior attainment. School success is then measured by achievement against this expectation and therefore, this is a powerful driver of school decision-making.

The GL Assessment approach to this intersection is different and provides schools with the capability to give additional depth to the attainment/expectation intersection. The GL Assessment approach looks at the intersection of ability, as measured by *CAT*, and attainment.

> One of the very useful things you can do with *CAT4* scores is to compare them against the standardised age scores from *Progress in English* and *Progress In Maths*. In this way, any students who are underperforming are immediately brought to the fore.
>
> (Dr. Derek Cassells, Principal, Maharishi Free School)

When compared to attainment the key question is whether the pupil is achieving to their potential.

CAT data will provide a highly personalised indication of each pupil's potential, most powerfully via the standard age score (SAS). When compared to attainment the key question is whether the pupil is achieving to their potential. This question can then be asked across a range of attainment assessments, for example, English, maths, science, reading, as well as in-school assessment. This comparison can be at an overview level, for example, their SAS for *CAT* compared to their SAS for the individual attainment assessments. Is the pupil on track or is there a deficit/residual?

Starting to work across more than one set of data begins to develop more in-depth questioning. In this particular intersection it most importantly gives a raw attainment scores perspective – is attainment at, below or above expectation?

Looking at the intersection of ability with specific attainment assessment data in more detail provides an opportunity to develop more specific questioning, such as, contrasting in more detail the finer-grain data which closely correlates across ability and attainment, for example, *CAT* Quantitative data with maths, verbal reasoning data with English and reading, etc.

However, comparing two sets of data combined with teacher judgement, although providing more information and the potential for more insightful questioning and decision making, still only provides a

partial view. For instance, if comparison of ability and attainment data demonstrates underachievement, why is this pupil underperforming? This has to be one of the key questions requiring investigation; it is not explained by ability compared to attainment alone. Unanswered questions still remain.

Ability/barriers to learning intersection

This intersection can provide a rich set of data that can be exploited in order to understand the reasons why potential is not being achieved. Many schools may have GL Assessment *CAT* data in combination with a range of data from barriers to learning assessment data; in turn this may be triangulated with school-based attainment data. If barriers to learning are identified and are yet to be addressed, then it is logical that the pupil's potential is not yet being fulfilled. The key question is why is this pupil not achieving their potential? Using the barriers to learning assessments will investigate some of the specific reasons.

Attainment/barriers to learning intersection

This is the intersection more commonly understood and systematically analysed in every school, with or without GL Assessment data. This is certainly true where assessments are focussed upon specific learning needs, for example, dyslexia screeners. It is arguably the easiest area to craft the question bank to support data exploitation; indeed this intersection is systematically ingrained within school systems through SEN support structures and, therefore, most questions derived from the single barriers to learning data 'set' are linked to attainment by default.

... a complete data set upon which to make the best informed decisions to support the most appropriate next steps for that student.

> "The combination reports have been useful in helping us to identify pupils who are not making expected progress. The combination report highlighted individuals who would benefit from some of the intervention strategies provided by GL Assessment, which we have taken advantage of."
>
> (Melanie Charles, St Hilda's School, Bushey)

Ability/attainment/barriers to learning intersection

With ability, attainment and barriers to learning data available and combined with factors that inform their judgement, the teacher has the whole pupil view, a complete data set upon which to make the best informed decisions to support the most appropriate next steps for that student.

If barriers to learning are identified and are yet to be addressed, then it is logical that the pupil's potential is not yet being fulfilled.

> "For our students, the benefits of these assessments are extremely wide ranging. We can personalise teaching, implement a range of interventions, support and challenge appropriately, grow aspirations, and equip them to take best advantage of life's chances. Ultimately, we want them to believe in themselves, the way we believe in them."
>
> (Cath McCarney, Vice-Principal, Bluecoat Academy)

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