



The Reception Baseline Assessment

Design and delivery informed by evidence and experience

Following the Department for Education's primary assessment consultation in 2017, the government has confirmed plans to introduce a new reception baseline assessment (RBA) as part of the primary accountability system. Following an open procurement process, the National Foundation for Educational Research (NFER) was awarded the 4-year contract to develop, trial and deliver the assessment.

The purpose of the new assessment is to provide a baseline for measuring the progress children make throughout their primary school career.

Progress measures help to identify the contribution schools make to children's development by taking into account some of the skills and abilities children already have when they start school. The new measure will recognise the contribution schools make throughout the whole of their primary education, rather than just from the end of Key Stage 1, as now. The aim is that the RBA will replace the existing end of Key Stage 1 statutory assessments as a baseline.

The design and content of the RBA will be based firmly on evidence, including existing research on the key factors affecting later performance, practitioner expertise and large-scale trialling. This will ensure it has robust measurement properties and is a positive experience for teachers and children.

This is an initial summary in which we have brought together some of the evidence, practitioner expertise and experience we have drawn on in our proposals for the design, content and delivery of this new baseline assessment. It also highlights some of the detailed investigation which will be undertaken to refine these proposals over the next two years.

Design of the reception baseline assessment

There is a wealth of assessment research and evidence available. The proposals for this new assessment have been informed by international research evidence and our extensive experience of assessing reception-age children, and will be subject to robust trialling of assessment questions and materials with teachers and children.

Our approach is underpinned by our in-depth knowledge of assessment design and development built up over the last 70 years, and our direct experience of developing other baseline schemes with young children and practitioners. Examples include the Early Years Foundation Stage Profile (EYFSP) and NFER's 2015 Reception Baseline Assessment (RBA15).

The close involvement of practitioners is always at the heart of our approach to assessment development and the RBA is no exception.

We are working with a wide range of individuals with expertise in early years' assessment, children with special educational needs and disabilities, and with a panel of Reception teachers. We will also be trialling and piloting the proposed assessment with many more schools and children to ensure it is a positive experience for them, as well as a robust assessment of children's early literacy and early mathematics skills.

This trialling plays a critical role in the assessment development as it enables us to find out how children and teachers understand and respond to questions, and to collect data that enables thorough analysis of the assessment's performance. We have worked with children and practitioners this summer and we will be trialling materials from September with nationally representative samples of schools.

A robust assessment

The RBA is designed to provide a measure of children's performance at a cohort rather than an individual level. The assessment therefore focuses on the information needed to provide a reliable and valid baseline for progress measures which will be reported at the end of Key Stage 2. As a result, the RBA does not aim to assess everything a child can do when they start school. Instead, it will focus on what children can do in the areas of early literacy and mathematics skills. Research shows that these skill areas are good indicators of later success in school. The tasks being developed for the RBA are based on this research as well as the performance of tasks included in RBA15. In particular, the research demonstrates that:

- Language development is crucial to children's future success in school, enabling them to access the curriculum and develop the literacy skills they need to progress (Bowman et al., 2000).
- Both receptive and expressive language skills are strongly related to literacy development (Cooper et al., 2002) so we are including both these elements in the RBA. The approach to early reading we are adopting takes into account the Simple View of Reading now accepted in the UK.
- Competence in early mathematics is crucial for later school success. The relationship between early number competence and later mathematical achievement is well established (Aunio and Nremiverta, 2010; Jordan et al., 2009).

- There is clear evidence that numeral identification is related to the acquisition of numeracy skills (Wright et al., 2006).

There is also a substantial body of literature that shows a strong relationship between numeracy skills and early literacy skills (Welsh et al., 2010). Research shows that early knowledge of numbers and mathematical concepts are also strong predictors of word identification and reading (Duncan et al., 2007; Scanlon and Vellutino, 1996), as well as strong predictors of later achievement

in mathematics. Studies report that numeral and letter identification are correlated at an early age and that both are equally predictive of word identification (Scanlon and Vellutino, 1996). Underpinning this is the ability to understand and manipulate symbol systems (Cook, 1996) and the fact that numbers and letters share similar perceptual qualities. The assessment of numeracy in young children must therefore also be understood in the context of both language and literacy assessments and the tasks in the RBA will reflect this relationship.

A reliable assessment

Reliability describes the degree to which results would be repeated if the assessment were used again in the same circumstances¹. For an assessment to be robust and to have value as a progress measure, we need to know how reliable it is.

Our thorough trialling of RBA15 confirmed that it is possible to develop a reliable assessment of reception-aged children's abilities in early literacy and mathematics. The trialling showed that the assessment produced consistent results when taken on different days and when administered by different people.

For the RBA we are also trialling the inclusion of questions designed to look at self-regulation. The outcomes from trialling these questions will determine whether self-regulation is included in the final RBA.

¹ Statistical tests are used to evaluate an assessment's reliability, with the results reported as correlations. Correlations over 0.9 are considered excellent. The test-re-test reliability of RBA15 for literacy was 0.94 and for numeracy was 0.93. The "internal test reliability" was 0.89 for literacy and 0.93 for numeracy. This tells us that these two parts of the assessment are effective at assessing the specific areas we've called literacy and numeracy.

A valid assessment

Validity describes the extent to which assessment results are appropriate for the uses for which they are intended. In this case, we are interested in the extent to which the new assessment will identify the skills and abilities which most affect children's performance at the end of primary school.

Our starting point for ensuring that the assessment is valid has been to use the existing research about the key indicators of children's future performance. This has enabled us to identify the areas to be included in the new assessment, as well as those which should be excluded.

Secondly, we have collected feedback from the teachers and expert groups with whom we are working. This confirms that the questions and tasks we are developing for inclusion in the RBA are

age-appropriate and have a 'face validity' i.e. they appear to these groups to be appropriate tasks given what we have set out to assess. We have also organised detailed reviews of the assessment by experts to strengthen their effective and acceptable use with children who speak English as an additional language, and those with additional assessment needs. We will include extensive trialling of their recommendations within the broader trialling of the assessment in schools with children and teachers which begins in September.

There will be ongoing collection and review of evidence about the alignment of the RBA to its purpose as a baseline assessment throughout the development process, and following its implementation.

A positive experience for children and straightforward for teachers

The trialling process is not just designed to inform the design, robustness and validity of the proposed assessment; it is also a critical opportunity to gain feedback on how children and teachers experience the assessment.

The new RBA, like RBA15, will be task-based and children will answer questions asked by their teacher or a teaching assistant during a one-to-one session. In RBA15, children used picture prompts, sorting cards or counting bears in the tasks. We are trialling a similar approach for the RBA. Other key features being trialled include the following:

- The assessment is expected to take around 20 minutes and may be completed in one session or through a series of short sessions, if the teacher feels that is better for the child.
- The assessment will progress in difficulty and with some adaptation so that children won't be asked the next question if they haven't successfully completed an easier one in that skill area. This ensures that children are not introduced to tasks that are much too difficult for them.

- Practitioners will record each child's response in an online recording system to make the process as easy to manage as possible and to help them focus on the child during the assessment rather than the administration. There is no intention for the child to have any interaction with the technology, only the teacher or teaching assistant, for administration purposes.
- The practitioner is guided to the next question or task if a child does not successfully complete the preceding one. This approach ensures that the RBA promotes a standard approach to the way questions are asked and answers recorded.

A standardised design, in which all children are assessed in the same way, with the same materials, adds to the robustness and fairness of the assessment.

Observational approaches are very important for teaching, and for understanding children's full range of abilities and how they can be developed, but concerns have been raised with their use in accountability measures. In particular, any assessment used in an accountability system needs to avoid unintended bias such as that identified by Campbell (2013) and to ensure parity of opportunity.

The additional value of the RBA

We are working with the DfE to consider what findings from the RBA can most helpfully be shared with schools, and when.

As well as its primary purpose in providing a baseline assessment of a cohort of children starting school, the RBA also provides other more immediate opportunities for schools to gain information about their new reception children.

Firstly, as the practitioner sits with the child they

will learn about the child's approach to the tasks, their attentiveness, and their confidence levels. This is valuable information for practitioners and we know it's one of the reasons why most schools choose to undertake on-entry assessments currently. We are working with practitioners and school leaders to ensure that the RBA is as useful as possible whilst also fulfilling its primary purpose.

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