

How educational technology can **transform** reading for pleasure

The importance of stamina and silent reading fluency at KS2

National Curriculum reforms in English, introduced in 2014, were a response to the UK’s falling placement in international student assessment league tables – and an effort to raise standards overall.

Raised expectations for vocabulary and comprehension, coupled with increased word counts and text complexity, brought to the fore the two challenges of stamina and silent reading fluency.

The impact of increased word counts in Y6 SATs Reading papers

In the first three years of reformed KS2 SATs Reading papers, the average word count was 1,737 words.

In 2019, this jumped to 2,168 words – just 132 words short of the government’s maximum word limit.

The impact of this increase meant that a child reading at a comprehension-based fluency rate of 110 words per minute would spend a third of the time allowed for the assessment, reading the texts.

Compare this with the expectation of the GCSE English Language papers.

In 2018, papers 1 and 2 of the AQA English Language exam had a combined word count of 2,126 – just 42 words more than their KS2 counterparts. A child reading at a comprehension-based fluency rate of 110wpm would spend just one-tenth of the allocated assessment time reading the texts in this context.

The impact of a more complex Lexile range in Y6 SATs Reading papers

It could be argued that the complexity of the texts at GCSE is greater. However, Lexile analysis of the SATs papers shows us that Y6 children are not being assessed on Y6 texts.

The 2017 and 2018 test papers both included texts with a Lexile range accessible by a Y7 pupil. In 2019, the ‘About Bumblebees’ texts had a Lexile range accessible to a Y9 pupil.

SATs Assessment Year	Average scaled core	% at exp	Word count	Highest Lexile range	Lexile reading age
2017	104	72%	1,937	900-1000	Y7
2018	105	75%	1,488	900-1000	Y7
2019	104	73%	2,168	1060-1160	Y9

It is clear that comprehension, vocabulary, stamina, and fluency are essential skills in enabling children in KS2 onwards to understand what is being asked of them in the SATs reading papers – and unlock the curriculum.



The **impact** of missing out on reading for pleasure

A child for whom the act of reading is laborious is not a child who will read for or with pleasure.

A child with low fluency will exhaust their working memory simply reading the text, with little remaining to dedicate to higher order thinking skills.

Put simply, if it is difficult and tiring, what pleasure is there to be had?

In March 2020, the National Literacy Trust reported:

- Children and young people's levels of reading enjoyment continued to decline and were at their lowest since 2013
- Children and young people's daily reading levels were at the lowest ever recorded, with just 25.8% of children saying they read daily in their free time in 2019
- Young people who enjoy reading are three times more likely to read above the level expected for their age than children who don't enjoy reading
- Young people who read daily in their free time are twice as likely to read above the level expected for their age than children who don't read daily

The impact of missing out on reading with confidence

'Unfortunately, many pupils do not like to read, and do not read unless they are compelled to do so'

(Mullis, Martin, Foy, & Drucker, 2013). A consequence of children not finding pleasure in reading is that they acquire less reading experience, spend more of their reading time stuck on unfamiliar words, and stumble through age level material at a pace far slower than normal speaking rates.

Understandably, these pupils do not develop an interest in reading or confidence in their reading ability.

The PIRLS international survey revealed that in English speaking countries, England had the lowest ranking for enjoyment and the lowest for pupil engagement in reading, except Australia (McGrane, et al., 2017).

How to remove the obstacles that prevent reading for pleasure

All schools know that 'Reading for pleasure has myriad other benefits such as a wider vocabulary and general knowledge, an enriched imagination and more developed narrative writing' (Senechal et al., 2018). Many refer to their schools' reading culture, the time devoted to independent and reciprocal reading, but how do you actually teach a child to enjoy reading? To do that, you need to remove the obstacles that prevent reading from being a pleasurable experience.

The implications of COVID-19 on reading and fluency

The coronavirus outbreak has highlighted the vital importance of technology for learning. As schools closed, well-stocked school libraries were locked, and physical books could no longer be swapped and taken home.



The Sutton Trust has reported that ‘the poorest children are already 11 months behind their better-off peers before they even start at school.’ Enforced school closures have only widened this gap.

Educational technology is already supporting home learning

Access to texts to read online through programmes such as MyON, Reading Eggs, and Reading Plus have been a lifeline for schools and children for extended periods of home-learning. Some of these programmes were developed in response to the pandemic, while others were already embedded as part of schools’ reading curriculum offer. And while some are designed purely to provide access to online texts, those that explicitly model best practice for reading development have enabled children to progress their reading skills, despite the closure of schools.

Paul Finnis, Chief Executive of The Learning Foundation, weighs up the necessity for access to technology with the efficacy with which it is employed: ‘more than 1 million school-aged children do not have the access they need. The enforced school closures bring this disparity and digital divide starkly and brutally into focus... devices and access to the internet are critical, but the use to which they are put is where the real learning dividend is to be found.’

Official guidance and expectations of schools during lockdown

Responding to the January 2021 national lockdown, the government announced that Primary performance data ‘will not be published’ for the second year in a row, but teacher assessment in English reading and writing will remain.



The need for long-term support

Mary Bousted, National Education Union joint general secretary, responded:

‘With the pressures of SATs lifted, schools will have some space to address the urgent issues of educational recovery. Pupils are going to need long-term support for their learning. Now is the time to encourage and resource schools to develop a rich and engaging curriculum.’

Assessment, accountability - and pupil attainment

In the publication ‘Restricting attendance during the national lockdown: schools Guidance for all schools in England January 2021: Assessment and Accountability’ the DfE made it clear that ‘schools will continue to use assessment during the summer term to inform teaching, to enable them to give information to parents on their child’s attainment in their annual report and to support transition to secondary school. We strongly encourage schools to do this, using past test papers if they wish.’

On the 1st February 2021 the Gov.uk website updated that schools:

- should provide a minimum of 2-4 hours a day remote education for KS2
- should have a system in place to check pupils’ engagement with work on a daily basis

Schools can decide how this check will take place. It could include:

- checks that pupils have understood and completed their work
- scaffolded practice and opportunities to apply new knowledge
- feedback that is timely and frequent on how to progress
- digitally facilitated or whole-class feedback where appropriate
- assessment to ensure teaching is responsive

The DfE also introduced requirements for schools to publish details of their remote education offer on their websites from the spring term.

The DfE’s expectation on remote education provision

The DfE laid out their expectation on remote education provision, saying that ‘where technology is used to

support the school’s remote education provision, schools should consider providing practical support and guidance to pupils on how to use the technology.’

Schools have been urged to seek out technological solutions to teaching, learning and assessment. This is to ensure a smooth transition between year groups and key stages - and so children can continue to develop age-appropriate skills.

The role of adaptive learning software in remote education

The ‘Ofsted Guidance: What’s working well in remote education’, published 11th January 2021, advocated that where digital learning is used, the ‘platform we use shouldn’t be too complicated ...remote education often benefits from a straightforward and easy-to-use interface.’

Ofsted also suggested that it is ‘harder for pupils to concentrate when being taught remotely...it’s often a good idea to divide content into smaller chunks.

The guidance reinforces that ‘feedback, retrieval practice and assessment’ are more important than ever, identifying adaptive learning software as a way in which to ensure immediate, personalised feedback.

Implications of remote learning

Professor Becky Francis, Chief Executive of the Education Endowment Foundation, has said: ‘Schools closures could have a potentially devastating impact on learning for the poorest children and young people in our society.

However, we can take steps to mitigate this. Of particular importance is making sure that all pupils have access to learning online, by providing them with access to devices and a good internet connection... in the long-term, we need to focus on how best to help pupils bounce back when schools open again. Catch-up teaching targeted especially at those who have fallen furthest behind during this period will be essential.’

Whitepaper Survey: How educational technology can transform reading for pleasure

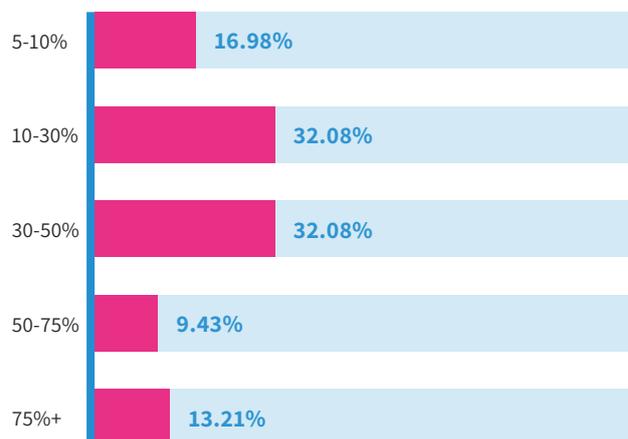
In our February 2021 survey, we asked 80 teachers and senior leaders:

1. How has technology supported their pupils’ engagement, assessment and progress in reading over lockdown?
2. How will technology support their transition back into the classroom?

As of February 2021, 64% of those surveyed responded that at least 75% of their pupils were engaging with remote learning. A clear increase from the first national lockdown of March 2020, when some schools reported that as few as 5% of their pupils were engaging with remote learning.

Without new technologies, 81% of those surveyed indicated that less than half their pupils would be engaged with remote learning.

Approximately, what percentage of your pupils would engage with remote learning without technology?



The top three barriers for engaging disadvantaged children

In the same survey, the top three barriers for disadvantaged children engaging with remote learning were identified as:

1. Parental engagement
2. Access to technology
3. Personalised support

Practitioners and senior leaders elaborated that specific programmes, which provide adaptive and personalised support, address the parental engagement barrier by explicitly teaching and providing the child with instruction and instant feedback. Furthermore, 70% of those surveyed agreed that technology has allowed them to track progress in reading more efficiently.

The importance of automaticity in reading for pleasure

One factor that distinguishes more successful readers from their less able peers is automaticity.

That is, the ability to navigate lines of text, decode common words, and construct meaning from text without having to devote a great deal of conscious effort or attention to the process of reading (e.g., National Reading Panel, National Institute of Child Health and Human Development, 2000).

Automaticity develops from reading practice and the development of efficient silent reading habits. With practice, word decoding speed increases, sight vocabulary expands, and word recognition becomes increasingly automatic.

At some point, given sufficient exposure to appropriately levelled texts, an adequate percentage of words in a text will be sight words and, according to prevailing theories, cognitive resources formerly required for word decoding can be redirected toward processes that support comprehension (Hamilton, Freed, & Long, 2016; LaBerge & Samuels, 1974).

Adaptive reading technologies support ongoing learning

The provision of electronic texts that are suitably challenging, age-appropriate and of interest to children is a key consideration for schools. The provision of such texts is one thing.

Still, schools must look to how technology can not only provide access to reading materials, but how it can actively develop vocabulary, comprehension, and silent-reading fluency.

Without it, the 9% gap between boys and girls achieving the expected standard in reading and the 16% gap between disadvantaged and non-disadvantaged pupils can only widen.

How reading technologies can instil a lifelong love of reading

The motivation to read and continue to read comes from a sense of curiosity about the text, knowing what you are successful at and the associated sense of

achievement – and from knowing what to do to be even more successful. Where parental engagement does not support this and when the practical logistics of providing one-to-one support to all pupils to develop their reading efficiency is not possible, technology can provide a solution.

Transitioning back into classroom teaching

Leaders are telling us their concerns over the long term impact of extended lockdowns and the focus for bespoke catch-up and intensive intervention.

This focus includes:

- Re-embedding foundational skills in Reception and Y1
- Improving poor phonics retention in Y2-Y3
- Ensuring Y4-Y5 reach expected standards at the end of their primary education
- Ensuring Y6 pupils are ready for their transition to secondary



Sir Kevan Collins, the new education catch-up tsar, has said:

‘If you’re going to secondary school in the next couple of years, it’s vital you’re reading at the level you will need.’

Assessment and technology will be vital to inform teaching, intervention, support transition, project outcomes and determine skill deficits.

Example of the innovations

There is a range of online reading programmes available to schools, including Reading Plus, which is detailed below:



Reading Plus has been shortlisted for the 'Best Educational Resources for Parents or Home Learning' award, at the 2021 Bett Awards. Primarily for KS2 and KS3, Reading Plus has been designed as a follow-on, once children are secure in phonics. The programme can benefit all students in Years 3-4, emerging and expected readers (Years 5-6), and catch-up (Years 7-9).

Reading Plus also supports EAL learners, SEND (including KS4) and more able children in KS1. The impact of Reading Plus is closely linked to long-term attainment and success at KS2 SATs, as well as nurturing a love for reading.

Reading Plus is built on decades of foundational research in silent reading development, vocabulary improvement through contextual analysis, decoding practice, reading stamina, efficiency development, and comprehension improvement. UK case studies in support of this can be found [here](#).

Reading Plus is the only adaptive intervention that addresses inefficient reading, or fluency.

Inefficient readers expend energy and attention simply trying to read the text, diverting attention from the critical step of information processing and understanding. As a result, inefficient readers may struggle with both comprehension and motivation to read - reading is slow and laborious, and their reading level is well below age-related expectation. Slow readers also read less and take in less information which sets them back further. As with any activity, the more a pupil reads, the better they are at it. By making the act of reading more fluent, working memory is freed up to take in the meaning of the text.

Reading Plus improves comprehension, vocabulary, and motivation by providing individualised scaffolds to build fluency.

Reading Plus can be used for both whole-class/small-group instruction. The programme begins with an adaptive, online assessment that provides baseline data and a clear picture of who every pupil is as a reader. Pupils are then placed on a personalised learning path, working independently through the instructional components (Reading, Vocabulary, Visual Skills, and Writing).

When pupils need support, the Reading Plus programme automatically adapts to the needs of each learner, providing scaffolds as and when necessary. For the teacher, formative assessment provides actionable reports and resources, together with teacher-directed instruction in specific comprehension skills and strategies. Through its design, pupils may move seamlessly between home, school, or a blended approach.

Reading Plus is easy to implement and simple to manage. Teacher-Hub online resources provide tips and tools for teachers to use to support pupil success. A management system gives teachers information on individual/class progress and achievement. Comprehensive customer support is included as part of the package, and is available to teachers, parents and pupils.

Reading Plus is currently used in more than 700 UK schools. Since September 2020, 80,000 children in the UK have read more than 3 billion words using the programme.

Conclusions and implications for practice

When children do return to the classroom (also for those that do not, for a myriad of reasons) the ways in which technology has been utilised during enforced remote learning has the potential to revolutionise teaching, learning and assessment.

From a purely practical basis, there will be far greater access to hardware, with many schools investing in this since September 2020 to ensure equal access for all children.

Children have become proficient at using programmes such as DoodleMaths and Reading Plus, where learning is independent, personalised and adaptive. Such technologies provide teachers with a wealth of information about which skill areas are secure and where more development is needed. Invaluable information that can be used in planning what support each child needs on their return to the classroom.

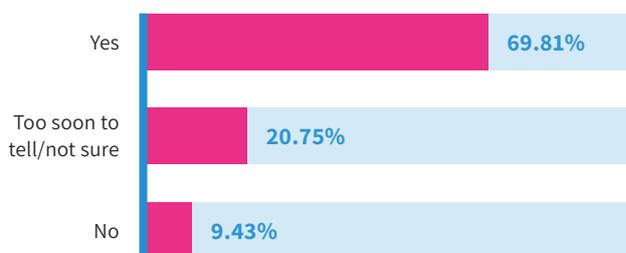
Also, the very nature of remote learning has potentially created learners with a greater sense of independence.

The return to the classroom

A survey anticipating the return to school in September 2020 found that 'Assessment (to help identify gaps and ascertain what learning has been remembered/forgotten) was identified as the top priority by headteachers, both primary (32%) and secondary (43%), to support disadvantaged students when schools reopen for all pupils' (TeacherTapp, May 2020).

The use of efficient software has allowed teachers to accurately track the progress in reading for their pupils, despite having not been in the classroom with them for 10 weeks. In our survey*, 70% of teachers felt that technology has improved the way that they track progress.

Has technology improved how you track progress in reading?



Ongoing support for those not in the classroom environment

The application of software combined with live lessons has the potential to radically improve the academic outcomes of those who do not, or cannot, attend school on a regular basis. This could include pupils with health, social or emotional issues, those who are excluded from school, and for those who have extended periods of non-attendance for whom the gap widens at an accelerated rate.

By the very nature of cloud-based or internet delivered programmes, learning opportunities can be extended beyond the confines of the school day, at a time that is suitable to the individual child and their personal circumstances.



Supporting teachers with continuous assessment data

The Educational Endowment Foundation (EEF) has provided some guidance to planning for the return to school.

In their 'Tiered Approach' report, they suggest that 'High-quality assessment is essential to great teaching, helping us understand what pupils have (or have not) learned. Targeted diagnostic assessments can support teachers to monitor pupils' progress, particularly as they maintain classroom routines and recover any learning loss.'

They also advocate that Teaching and Targeted Academic Support are two-thirds of the formula necessary to address lost-learning. Assessment, of course, informs both of these, and if the schools have invested in suitable educational technologies, they have a wealth of continuous assessment data at their disposal, rather than simply a return-to-school test.

The EEF stress the importance of approaches to interventions, which could be traditional one-to-one and small group tuition (a costly venture with varying results), or the use of appropriate technology.

Identifying the best educational technology

The best educational technology follows the same format as the best teaching: explicit instruction, scaffolding, cognitive and metacognitive strategies, and adaptability to the pupils' needs.

Well-researched technology is ahead of the curve, and had anticipated the needs of our changing world – well before the pandemic.

Digital teaching solutions do not replace high-quality teaching, but by employing the same pedagogical strategies, can complement it, support it, and offer children further opportunities to practice and develop outside of the classroom.

Reflecting on the **impact** of the pandemic

Rather than a blight on the future of a generation of children, the pandemic has led teachers and leaders to adapt and find alternative ways to inspire, engage and accurately assess the progress of their pupils.



The vulnerable and the most disadvantaged now have more opportunities, thanks to teaching ingenuity and technology.

In addition, some children have perhaps read more during home-schooling than the traditional route. And, while many children may not have a physical book in their house, being given hardware and software by their school has given them access to hundreds of online texts that are age-appropriate, readable at their level, and that provide direct and explicit instruction to improve their vocabulary, comprehension and fluency.

Again, technology does not replace a book, the same way it does not replace teaching, but it can unlock the skills that children need to read with metacognition.

Studies show that when children are engaged in silent reading activities (often a 30 minute timetabled slot in the curriculum) between one to two-thirds of the children are not actively participating, and a teacher can only get around so many children in session.

Technology can reduce the passive habits of some and sharply enhance cognitive engagement.

Pupils read with a purpose and know that they will be held accountable for what they accomplish during their silent reading time. Active monitoring, record keeping, and comprehension checks can all serve to motivate cognitive engagement with text, as opposed to just going through the motions (Reutzel, Fawson, & Smith, 2008).

Cognitive engagement can also be enhanced through systematic questioning designed to highlight key ideas and concepts and lead students to infer connections both within the text and more broadly (e.g. McMaster, et al., 2015). The digital text in a learning programme does not replace the paperback. Still, it can do things that the paperback cannot – providing teachers and leaders with valuable knowledge to challenge and support each child.

A child who begins to overcome the fluency hurdle becomes a curious reader, curious about the world and their place in it.

References

DfE (2021): Restricting attendance during the national lockdown: schools Guidance for all schools in England.

Available at: <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak>

DfE (2021): Review your remote education provision.

Available at: <https://www.gov.uk/government/publications/review-your-remote-education-provision>

EEF (2020): Best evidence on supporting students to learn remotely.

Available at: <https://educationendowmentfoundation.org.uk/covid-19-resources/best-evidence-on-supporting-students-to-learn-remotely/>

EEF (2021): THE EEF GUIDE TO SUPPORTING SCHOOL PLANNING: A TIERED APPROACH TO 2021.

Available at: <https://educationendowmentfoundation.org.uk/covid-19-resources/guide-to-supporting-schools-planning/>

McGrane, J. Jamie Stiff, Jo-Anne Baird, Jenny Lenkeit & Therese Hopfenbeck (2017) Oxford University Centre for Educational Assessment (OUCEA).

Progress in International Reading Literacy Study (PIRLS): National Report for England.

Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664562/PIRLS_2016_National_Report_for_England- BRANDED.pdf

McMaster, K. L., van den Broek, P., Espin, C. A., Pinto, V., Janda, B., Lam, E., ... & van Boekel, M. (2015).

Developing a reading comprehension intervention: Translating cognitive theory to educational practice. Contemporary Educational Psychology, 40, 28-40.

Mullis, I.V.S., Martin, M.O., Foy, P., & Drucker, K.T. (2013).

PIRLS 2011 assessment results: Student background data almanac by reading achievement

(weighted) [Data file]. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Lynch School of Reading Plus LLC Education, Boston College.

Available at: <https://timssandpirls.bc.edu/pirls2011/international-database.html>

National Literacy Trust (2020): Children and young people's reading in 2019.

Available at: <https://literacytrust.org.uk/research-services/research-reports/children-and-young-peoples-reading-in-2019/>

National Reading Panel, National Institute of Child Health, & Human Development (2000).

Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction.

Washington, DC: National Institute of Child Health and Human Development, National Institutes of Health.

Ofsted (2021): What's working well in remote education.

Available at: <https://www.gov.uk/government/publications/whats-working-well-in-remote-education/whats-working-well-in-remote-education>

Paul Finnis (2020): The Impact of Covid-19 on Education. The Edge Foundation.

Available at: <https://www.birmingham.ac.uk/dubai/documents/covid-19-report-final-web.pdf>

Reutzel, D. R., Fawson, P. C., & Smith, J. A. (2008).

Reconsidering silent sustained reading: An exploratory study of scaffolded silent reading.

The Journal of Educational Research, 102(1), 37-50.

TeacherTapp (2020).

Available at: <https://teachertapp.co.uk/2020/05/>

TES (2021): Sats 2021: Tests cancelled this year says Williamson.

Available at: <https://www.tes.com/news/sats-2021-tests-cancelled-year-says-williamson>

The Sutton Trust, Chris Pascal, Tony Bertram, Carl Cullinane and Erica Holt-White (2020)

COVID-19 and Social Mobility Impact Brief #4: Early Years.

Available at: <https://www.suttontrust.com/wp-content/uploads/2020/06/Early-Years-Impact-Brief.pdf>



✉ **Unit 1 Enterprise House, Kingsway North,
Team Valley, Gateshead, NE11 0SR**

☎ **0191 389 6078**

✉ **info@readingsolutionsuk.com**

🌐 **www.readingsolutionsuk.co.uk**