Reading eggs

The Science of Reading:
Igniting Reading Joy in the Digital Age

White Paper

April 28, 2025

3P Learning

The Science of Reading: Igniting Reading Joy in the Digital Age

Encouraging a genuine love of reading can transform students into not only proficient readers but also passionate and engaged learners. This paper illustrates how the Science of Reading, with its rigorous, evidence-based practices, can be effectively implemented through digital technologies that teach students how to read while fostering a genuine and joyful interest in reading.

We'll also discuss how digital tools like Reading Eggs are helping to cultivate reading skills and enthusiasm in young learners. Through personalised learning and interactive digital resources, the goal is to ignite a lifelong passion for reading in every child.

What the Science of Reading Is – and Isn't

The Science of Reading refers to a broad and interdisciplinary body of research that includes insights from psychology, cognitive science, linguistics and education. It focuses on how the brain processes written language and the best instructional practices for teaching reading.

The Science of Reading is not simply about phonics or decoding; while these are essential components, the Science of Reading encompasses all aspects of reading—including comprehension, vocabulary and fluency. It's about using evidence-informed teaching practices to foster better ways to learn.

Key Principles of the Science of Reading

The Science of Reading is grounded in five key concepts that are at the core of every effective reading instruction program:

- **Phonemic Awareness**: Being able to hear, say and manipulate the sounds in spoken words.
- **Phonics**: Mapping the relationship between written and spoken letters and sounds.
- **Fluency**: Reading with speed, accuracy and proper expression.
- **Vocabulary**: Understanding words, their meaning and their context.
- **Comprehension**: Understanding the meaning of text at the whole text, paragraph and sentence level.

Learners integrate their knowledge and skills across these areas to read successfully.

Evidence-Based Practice: Systematic Explicit Instruction

The Science of Reading emphasises the importance of explicit systematic instruction in these key areas, particularly for young readers.

Explicit instruction involves clearly and directly teaching and explaining new concepts, skills, or knowledge to students. This approach breaks down complex tasks or concepts into smaller, more manageable steps, and provides detailed explanations of each step in a carefully sequenced set of lessons.

This research is enormously important in reading instruction. Explicit instruction provides clarity, which is essential for students facing the challenging task of learning to read.

Evidence-Based Practice: Managing Cognitive Load

The role of memory is crucial in the learning process. Students use their working memory to focus on and process new information and to effectively link it to their existing knowledge.

Cognitive load is the amount of information your working memory can process at one time. When you're learning new tasks, like learning to read, only small amounts of information can be stored in working memory at any one time.

In designing programs that work, cognitive load theory highlights the need to break learning tasks into manageable chunks moving from simple to more complex skills. This helps avoid cognitive overload but also enables children to retain new information and link it to their existing body of knowledge.

Evidence-Based Practice:
Digital Technologies in Classrooms

The research base on digital technologies is broad and continuous, with approximately 200 new research articles appearing each week (Gunes et al., 2023). This extensive body of work highlights the importance of grounding digital learning tools in research to ensure they effectively support educational outcomes and align with proven teaching methods. There are key advantages of digital technologies that can help develop strong conceptual understanding.

Work at Individual Pace

Research shows that when students work in their Zone of Proximal Development (ZPD), they are more likely to experience success. The ZPD is the right spot for each individual student, not too easy and not too hard. Digital technologies can offer learning that is within each individual student's ZPD so that children experience ongoing success.

Repetition

Digital technologies offer the unique ability to personalise and provide the essential repetition students need. The ability to repeat a key skill multiple times ensures that students are more likely to move learnings into long-term memory and achieve mastery learning of essential skills.

Student Engagement and Motivation

Researchers have looked at the role of intrinsic and extrinsic motivation in reading instruction. Extrinsic motivation involves external incentives and can include praise and rewards. Intrinsic motivation is the internal drive to read for pure enjoyment and it is associated with a deep engagement in reading. In reading instruction, it needs to be a careful balance of both intrinsic and extrinsic motivation.

In digital technologies, individual students work at their own pace and receive positive feedback through various visual, audio, and virtual rewards. This praise engages and encourages students to invest the time and effort needed to practise essential reading skills. With more practice, students consolidate their skills, which leads to more success. This is known as the bootstrapping effect, and it is a self-reinforcing cycle. Over time, students develop self-efficacy, and this belief in their ability to succeed helps intrinsically motivate their learning.

Fostering a Love of Reading in the Digital Age

Fostering a love of reading among children and adolescents is critical. Reading is more than a tactical skill; it's a gateway to lifelong learning, critical thinking and personal growth. Cultivating a genuine love of reading goes beyond proficiency. It is about creating excited and engaged learners by moving to reading to learn and for entertainment. Additionally, research shows that students who read for pleasure are more likely to achieve greater academic success.

Digital platforms present opportunities to foster a love of reading. Reading for pleasure is 'the opportunity to read freely, voluntarily, and with delight'. And the research supports that alongside the mechanics of reading, giving students the time and space to read for pleasure offers rich rewards.

Reading for pleasure does not encompass written responses or related tests. It's purely to follow one's interests and passion, finding texts that engage and expand knowledge. A *Growing Up in New Zealand study* found that 84% of children and tamariki at eight years of age enjoy reading for pleasure (Morton et. al, 2020).

However, as children transition into adolescence the rates of reading for pleasure declines. But this doesn't need to be the case. Digital reading environments offer personalisation, interactivity and immediate access to a wide range of texts tailored to individual interests and reading levels. These platforms allow students to explore genres, authors and topics that reflect their identities and expand their worldviews. Features such as audio narration can improve accessibility, ensuring more students can experience the joy of reading independently.

Online library platforms that offer a broad range of books and celebrate reading for pleasure offer an opportunity to be part of a community of readers helping connect readers to their peers both in school and beyond. When combined with classroom practices that prioritise student choice and shared discussion, digital tools can transform reading from a task into a meaningful, social and rewarding experience.

The Reading Eggs Library exemplifies this approach with over 4,000 diverse titles, searchable by title, topic, author, reading age and Lexile level. This collection includes phonics readers and features the innovative Reading Journal – an interactive tool that facilitates deeper literary engagement. The Reading Journal tracks reading progress while personalising the experience, allowing learners to select content matching their interests and customise features that encourage ownership of their literacy journey.

Reading Eggs Helps Kids Learn to Read – and to Love Reading

Reading Eggs: Built on Solid Research and the Science of Reading

Reading Eggs, an interactive reading solution designed to help schools improve literacy outcomes for students in Years 1–6, incorporates effective, research-based learning activities within a highly motivational framework that keeps students on task for longer periods of time. Through its online program, Reading Eggs integrates evidence-based elements into its design, including—and beyond—the 5 Big Ideas.

Reading Eggs seamlessly integrates these research-backed elements from the Science of Reading into an engaging, child-friendly environment. The program is designed to align with young children's natural learning styles, using playful elements and interactive activities that encourage even the most reluctant readers to actively engage. The lesson structure, featuring a variety of short, motivating activities where students continually earn rewards, fosters active participation and sustained interest.

Reading Eggs Gets Results

Students who use Reading Eggs demonstrate higher reading achievement in independently developed reading assessments. A study of nearly 2000 students (aged 5–7 years) analysed the efficacy of the program. The study showed that those with higher Reading Eggs usage outperformed their peers with low or moderate usage rates in independent scaled reading scores.

The study found that students who used Reading Eggs showed higher reading achievement and that those with higher Reading Eggs usage outperformed their peers who had low or moderate use.

The Reading Eggs Suite

The Reading Eggs suite includes the programs Reading Eggs, Reading Eggspress and Fast Phonics. Designed by literacy experts, the suite of programs make learning essential literacy skills easy and fun. The programs use a highly motivating sequence of digital reading lessons, activities and eBooks that keep students engaged and on task with each program offering different reading skills practice.

Reading Eggs understands the importance of teaching reading skills alongside developing a love and joy of reading. Readers need to be both competent and motivated for lifelong reading success. In the programs, children learn and practise key skills and are motivated to persevere with age-appropriate characters, targeted actionable feedback and in-built rewards. Reading Eggs wants children to value and enjoy reading for many years to come.

Included in the Reading Eggs suite, Fast Phonics is a systematic **synthetic phonics program** that clearly, systematically and explicitly teaches phonics through instructional videos and guided practice activities.

With an online selection of more than 4,000 levelled fiction and nonfiction books, the Reading Eggs Library offers a wide range of options for young readers.

Structured Learning Approach

- Fast Phonics lessons start with a clear, step-by-step demonstration of a key reading skill, followed by guided practice activities to reinforce these skills.
- The program follows a research-based teaching sequence centred strong phonological awareness and phonics skills.
- Effective phonics instruction means teaching grapheme-phoneme correspondences (GPCs) in a clear, structured sequence. To ensure lasting literacy gains, the teaching needs is regular and consistent and follows a researched sequence with structured lessons that include explicit instruction.

Lesson Structure

- Lessons begin with interactive videos that explicitly teach a progressive sequence of phonics skills.
- Short, explicit letter-sound videos to teach letter-sound correspondences.
- Followed by multisensory phonological awareness and phonics activities that build decoding and spelling skills.
- Students progress through 20 structured peaks, covering letter-sounds, blending, segmenting, spelling, tricky words and read a range of phonically decodable books.
- Every decodable book is followed by a range of comprehension questions to assess phonics knowledge but also literal comprehension.
- Lessons have corresponding weekly teaching guides to support in-class teaching with slide decks to enable quality explicit phonics teaching.
- Lessons have worksheets for phonics and handwriting to reinforce letter-sound correspondence and skills as well as improve visual-motor skills.

Supporting Reading for Pleasure

- Reading Eggs suite includes the Reading Eggs Library. The Reading Eggs Library includes more than 4,000 levelled fiction and nonfiction books offering children a place to listen, share and read stories.
- Books are available through the interactive library. The library gives children the thrill of choosing book titles that appeal to them.
- With easy-to-use features, children quickly learn how to search for books independently.
- Lower level books include read-aloud audio.
- Reading books in the Reading Eggs library earns rewards that children can show to their family and friends helping build confidence and motivation for reading.

Meeting the Needs of Learners

- The program is highly interactive, featuring easy-to-follow instructions, activities, games and songs.
- Hundreds of varied and engaging activities keep students motivated while they're being challenged.
- Personalised learning ensures that each student progresses at their own pace and level of understanding.

Tracking Growth and Progress

- A map design allows students to track and celebrate their progress.
- End-of-Peak quizzes assess a set of learned skills (summative) and provide immediate feedback.
- Comprehensive reports offer insights into individual and class-wide progress across key literacy skills.
- Teachers can determine the skills students are mastering or struggling with using detailed reports and tracking.

Educators Say

> It's a very well thought out program. The children enjoy using it and they don't even realise how much they are learning!
>
> **– Cheryl G, Team Leader,**
> **Taupaki School, Taupaki**

> Reading Eggspress supports differentiation in our reading program by giving children texts that are at the correct level for them and their learning needs. There is instant feedback that they receive when working independently in the classroom, ensuring that our in-class learning is being correctly reviewed.
>
> **– Paige Wilson,**
> **Teacher, Pinehurst School, Auckland**

> This is an amazing program that introduces and supports the essential foundations of reading.
>
> **– Sarah Liddicoat,**
> **John XXIII Primary School, Mount Claremont**

> My students love the program. It helps to keep them engaged and enjoying their learning...It also helps me with being able to log in as a demo student and show a handful of students or the whole class a particular concept. Reading should be enjoyable and it is through this program.
>
> **– Merryn Whitfield,**
> **Bald Face Public School, Blakehurst**

Empowering Educators

The Science of Reading provides a framework to understand how children learn to read and the most effective ways to teach reading. Phonemic awareness, phonics, fluency, vocabulary and comprehension must be explicitly taught and regularly practised in every classroom. However, when we teach these foundational components of reading without fostering motivation and a love of learning, we risk limiting the impact. It's essential that we pair systematic instruction with opportunities that spark curiosity, build confidence and nurture a genuine love of reading. Reading Eggs empowers teachers to provide children with a strong foundation in literacy promoting a lifelong love of reading.

Spark a love of reading in your students!

Learn how to bring Reading Eggs to your school.

Gunes, U., Tonbuloğlu, B., Tonbuloğlu, İ., Yildirim, K., & Karataş, İ. H. (2023). Educational technology: A bibliometric approach. Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi, 57(57), Article 57. https://doi.org/10.15285/maruaebd.1148289

Reading eggs | Powered by 3P Learning

Readingeggs.co.nz/schools