

Facing COVID learning loss head-on

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Lectorsa is a social impact business in education working to improve outcomes for students in their chosen career choices while helping them lead more productive and responsible lives. The outcomes of our systems are measurable and impact directly on the way individuals see, work with and remember visual information. Eyebraingym, launched at the beginning of the lockdowns, is positioned to become one of the solutions needed to redress gaps and challenges in the future education and training sectors.

Eyebraingym aims to develop a coherent mind to achieve improved interaction with visual information through better visual and cognitive skills.ⁱ



The COVID-19 crisis has caused an unprecedented disruption of education when schools worldwide were closed as part of broader efforts to curb the spread of the pandemic. Efforts to ensure learning continuity were made almost immediately, using the internet, television, radio, or other means. Yet, millions of students worldwide have not benefited from these alternative learning platforms due to a lack of connectivity, equipment or other factors. Even for those that were able to connect, learning was compromised.ⁱⁱ The education disruption caused by COVID-19 has caused new or exacerbated existing learning gaps and inequalities.

South Africa: school drop-out tripled

The data is shocking. We've always had a challenge with high drop-out numbers in South African schools. However, current research has shown

that an extra 500,000 children have dropped out of school during the pandemic. The latest National Income Dynamics Coronavirus Rapid Mobile Survey (NIDS-CRAM) shows that school drop-outs have tripled from 230,000 pre-pandemic to approximately 750,000 in May 2021. This marks a threefold increase in learner drop-out.ⁱⁱⁱ And even though this matter is cause for great concern, it is not the end of the challenging situation education finds itself in at this moment in time.

The learning loss challenge

Projections indicate that between March 2020 and June 2021, most primary school learners in South Africa have lost 70%-100% (i.e. a full year) of learning relative to the 2019 cohort. To put this in perspective, this is the same as saying that the average Grade 3 child in June 2021 would have the same learning outcomes as the average Grade 2 child in June 2019.

Facing these academic realities, schools may rely on a default approach to remediate students' learning gaps by re-teaching what had been missed. However, a Global Education Coalition paper argues that such remediation strategies are misconceived and that other strategies available are more effective.^{iv}

Three remediation strategies that are usually used and don't work:

1. Grade repetition: Students that have fallen far behind their peers are retained and required to repeat an academic year of school.
2. Automatic promotion to the next grade: Students continue with their age peers regardless of academic performance.
3. Remediation: At a basic level, this means teaching again content that students previously failed to learn.^v

In lower grades, there has been some success following these ways of dealing with students who have fallen behind. However, the short of these interventions not working is that students behind stay behind. In addition, the older students are, the less impact these types of interventions have.

What can we then do?

According to the paper 'Don't remediate accelerate^{vi},' the following three interventions has seen much greater success.

1. Acceleration: Only teaching **what must be learned at a given level**. Focussing on the most critical skills and knowledge.

2. Micro-teaching: Teaching small groups on-site or online. Small chunks in a short span of time.
3. Tutoring: One-to-one or one-to-small-group instruction.



What should we teach?

- Identify a smaller number of **crucial skills** and **core knowledge** for the new academic year.
- Identify the students' needs and **pinpoint what they do not know**. From here, the teacher can plan how to teach what is needed.
 - leverage sources of information on student outcomes and use this to inform connection with high-quality instructional materials
 - employ targeted checks on students understanding for subject-specific and grade-level instructional purposes

To be effective, we need **high-quality diagnostic assessments** that can be used with **ease of implementation**.

Conclusion of Global Education Coalition report outcomes

Picking up from where we left off before the pandemic is not a workable solution. If we choose to continue with 'business as normal', we will only further burden education budgets, students and teachers. We will also play a role in cementing in place historically significant achievement gaps and inequalities. We need to find new and creative ways to address challenges in place now and in the future. Learners should be enabled to continue with their learning, closing learning gaps and inequalities. Using proven and technologically advanced methods and strategies to assist learning will ultimately help mitigate the global learning crisis. These strategies can be used individually or in combination through classroom-based or remote teaching.

If we want to rise above the learning loss of the COVID lockdowns, we have to provide equitable access to instruction that can address learning loss among all students. Writing about accelerating learning is easy – but it is extremely challenging to accomplish this in the day to day routine of classwork.

How can we help you?

One of the basic skills needed for learning is visual intelligence. Being visually intelligent means finding, processing, understanding, and expressing visual information particular

to the purpose at hand. To be visually intelligent, you have to be visually literate, implying you have to interpret, make meaning, understand and efficiently use what you see. The conclusion is clear if we want to leapfrog learners beyond learning losses experienced during the lockdowns, we **need to advance literacy levels for all our learners**. If students have better skills and can use advanced strategies to interact with the information they need to study, we can multiply and accelerate student learning.



To read well, a reader must acquire particular skills and strategies at a certain level to successfully navigate visual information. There is currently a great emphasis on foundational skills, and rightly so. The five foundational areas of reading are an integrated structure greater than the sum of their parts. Print concepts, phonological awareness, phonics, word recognition, and fluency each play an integral role in developing adequate literacy skills.

It integrates the various skills and strategies in basic literacy. This provides an entry point to multiple and advanced literacies. For instance, as students increase their ability to recognise words automatically, they also increase the amount of mental energy they can devote to understanding complex ideas and vocabulary.

Neuroscience confirms that your brain is a self-organising creative system. Every skill and ability you have was constructed in a specific region or regions of your brain as a result of practice and application over long periods of time. Learning is connecting neurons: developing neural pathways and enhancing neural networks. Neuroplasticity is described as the brain's ability to reorganise itself by forming new neural connections throughout life. Connections within the brain are continually becoming stronger or weaker, depending on what is being used. This is the 'muscle-building part of the brain, the physical basis why repetition strengthens the power of choices and actions. Over time it becomes automatic: a part of who we are. ^{vii}

Eyebraingym – the future of literacy development

Eyebraingym (and its range of activities) is designed to develop foundational and advanced learning skills by augmenting the science of neural wiring. We aim to bridge the gap between information and knowledge by training and optimising neural pathways in each user's brain. Eyebraingym use actions within the reading process to re-wire the brain to produce healthier and stronger minds. The system focuses on improving three

factors: the visual processing factor (VPF) and cognitive development factors (CDF). Each of these two factors incorporates measurable sub-elements. VPF is measured as words per minute (wpm) read within the parameters of the readability of the material. CDF is calculated as a percentage of comprehension against the complexity of content. Finally, the combined VPF and CDF give us an AIU-factor (action-interpret-understand factor).^{viii}



Eyebraingym is a customised Eye-Brain training course with an individualised specific game plan to suit every teacher and student's personal schedule and or needs. This web app offers a selection of dynamic games and reading actions culminating in cognitive skills development sessions. Eyebraingym is compiled in course format and is designed to enhance the executive function and the interaction of the brain with visual information. It is designed to assist the student in moving information faster to the pre-frontal cortex of the brain. Our exercises are designed to improve comprehension and bring each user to a new level of competence when dealing with visual information. The best part of the solution is that training your brain with the Eyebraingym is fun. It is good for the brain^{ix}. We need 10 weeks to re-shape the brain and re-wire how a person interacts with visual

information through targeted training sessions. This is true from beginner readers to tertiary students and working adults.

With the help of M3line, we are giving schools in South Africa the opportunity to access a profile on Eyebraingym and evaluate their students with the included PlaceMe-module. Schools can determine current gaps and identify target areas for development using real-time data within 20 minutes of evaluation. Groups of 10 – 1000+ students can be evaluated at once.

Once registered, the system takes each user through an online assessment module. Placeme combines a complete visual-processing, language, reading and cognitive assessment to measure processing speed, language proficiency and silent reading fluency

outcomes against international norms and standards. In-depth results are available with the push of a button.

Once evaluated, Eyebraingym will provide each user with a targeted set of personalised visual processing and cognitive exercises. These target individual outcomes to improve their visual intelligence based on their individual results. The system is available in English and Afrikaans Grade R – Grade 12 for schools. Sepedi and Tshivenda for junior phases are targeted to launch in early 2022.

Join us for an online briefing on how you can use Eyebraingym. The time for action is now. So don't miss out on this unique opportunity. Don't wait. Send an e-mail today to info@lectorsa.com to get linked into this unique opportunity. Find out more at www.eyebraingym.com

ⁱ https://www.eyebraingym.com/wp-content/uploads/2021/03/WHITEPAPER-The-right-to-decency-and-a-better-life-2.0_compressed.pdf

ⁱⁱ <https://unesdoc.unesco.org/ark:/48223/pf0000374029>

ⁱⁱⁱ <https://businesstech.co.za/news/government/504091/shock-lockdown-numbers-for-schools-in-south-africa/>

^{iv} <https://unesdoc.unesco.org/ark:/48223/pf0000374029>

^v <https://unesdoc.unesco.org/ark:/48223/pf0000374029>

^{vi} <https://unesdoc.unesco.org/ark:/48223/pf0000374029>

^{vii} https://www.naptosagp.org.za/index.php/news/bulletin-bored/1445-naptosa-insight-vol-14-issue-1-april-2020/file_Page_6

^{viii} https://www.eyebraingym.com/wp-content/uploads/2021/03/WHITEPAPER-The-right-to-decency-and-a-better-life-2.0_compressed.pdf