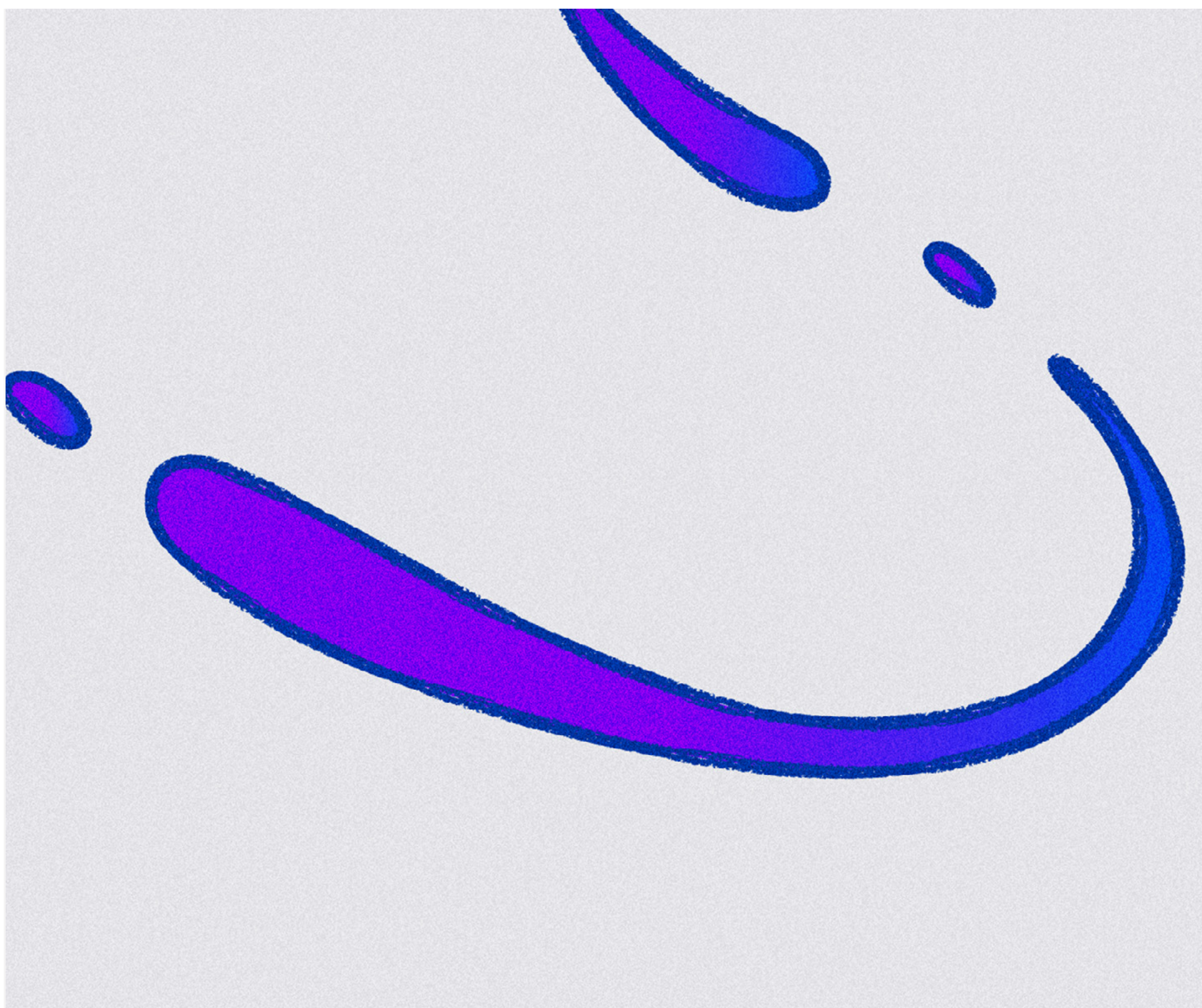


How *gradients* helped this student get *better grades*

Case study



Abstract

It should surprise no one that students who spend more time studying do better than students who spend less time studying. But what might come as a surprise is that simple colour gradients in text can lead to substantially more studying—and ultimately result in more learning and even better grades.

This white paper explores what triggered Perlego to try this novel and colourful approach, the quantitative impact this new option has had on student reading behaviours, and the qualitative feedback that illuminates how these simple colour gradients can lead to better understanding and better grades for students.

The Challenge

University students have a tremendous reading load. Students take three or four courses per semester and can be assigned hundreds of pages of weekly readings, ranging from technical textbooks to philosophical texts to arcane literature.

Researchers estimate that university students spend **over 14 hours reading every week *** – on top of the time they spend on problem sets, labwork, and attending classes.

One student we interviewed, a theology student at the Centre for Biblical Studies Institute in the Philippines, is tasked with reading up to ten books at any given time.

This student, John, described himself as “not a book lover” and as someone who can grow frustrated by long reading assignments. But for John, and the thousands of other students who use Perlego, reading is not optional; it is a critical task required for learning, advancement, and graduation.

And of course, the reading load is even more burdensome for millions of students with dyslexia, ADHD, ASD, or other reading challenges.

To put it in perspective: **366 million adults worldwide have ADHD*, and 780 million are dyslexic.*** That’s the size of the entire US and EU population combined.

For these students, the inability to read quickly may force them to avoid courses with heavy reading loads, or even abandon their desired major if the reading requirements are too intense.

*Exploring the Reading Practices of Undergraduate Students, St Clair-Thompson, Helen; Graham, Alison; Marsham, Sara Education Inquiry, v9 n3 p284-298 2018.

*ADHD data: Song P, Zha M, Yang Q, et al. [The prevalence of adult attention-deficit hyperactivity disorder: A global systematic review and meta-analysis](#). Journal of Global Health. 2021;11:04009.

*Dyslexia data: Dyslexia FAQ, [Yale Center for Dyslexia & Creativity](#).

The Solution

In early 2021, Perlego's product design team uncovered a new reading innovation that they believed could be useful for Perlego's readers who have dyslexia. Guided by Perlego's accessibility-first ethos, the team reached out to BeeLine Reader, the startup that had developed the novel reading technology, and suggested a partnership.

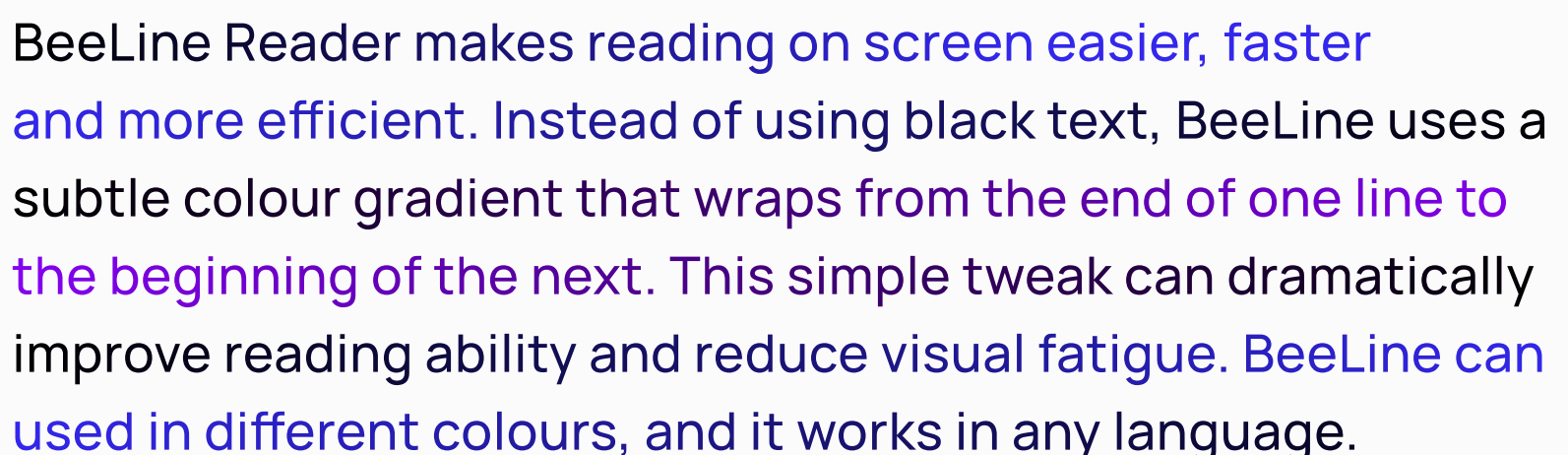
BeeLine Reader, a social-impact startup whose mission is to make reading easier, faster, and more accessible, was excited to work with Perlego and its catalogue of over a million ebooks.

BeeLine Reader's team noted that one of the most consistent requests from their customers was to be able to use BeeLine Reader's technology with textbooks.

The only warning BeeLine Reader's team offered:

this feature will probably be popular well beyond your dyslexic users.

The companies worked together to collect quantitative and qualitative data regarding BeeLine Reader's impact, and what they found was so positive that BeeLine Reader is now enabled by default for all new users on the Perlego platform.

A screenshot of a text editor window showing a paragraph of text. The text is formatted with a blue-to-purple gradient that flows from the end of one line to the beginning of the next. The text reads: "BeeLine Reader makes reading on screen easier, faster and more efficient. Instead of using black text, BeeLine uses a subtle colour gradient that wraps from the end of one line to the beginning of the next. This simple tweak can dramatically improve reading ability and reduce visual fatigue. BeeLine can be used in different colours, and it works in any language." The window has three small grey circles in the top-left corner, representing a standard OS window header.

BeeLine Reader makes reading on screen easier, faster and more efficient. Instead of using black text, BeeLine uses a subtle colour gradient that wraps from the end of one line to the beginning of the next. This simple tweak can dramatically improve reading ability and reduce visual fatigue. BeeLine can be used in different colours, and it works in any language.

Image of BeeLine Reader formatted text, using the Blues colour scheme.

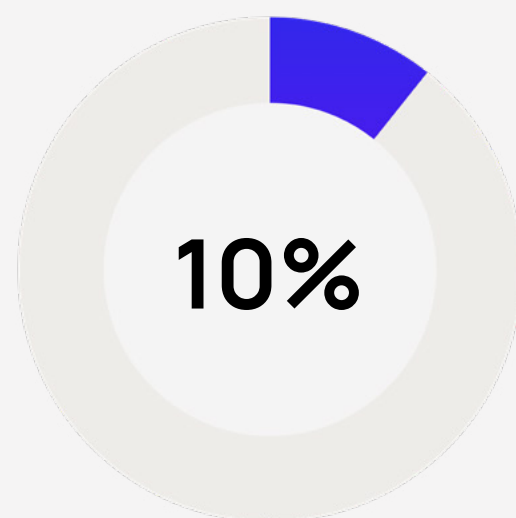
The Impact

Although Perlego had originally envisioned BeeLine Reader as a tool that would be helpful for readers with dyslexia, and perhaps other reading challenges, they were open to the possibility that it might be useful to other readers as well. In order to test this hypothesis, Perlego ran an A/B test with a cohort of users, showing a brief message about the new feature, along with buttons to turn it on or leave it off.

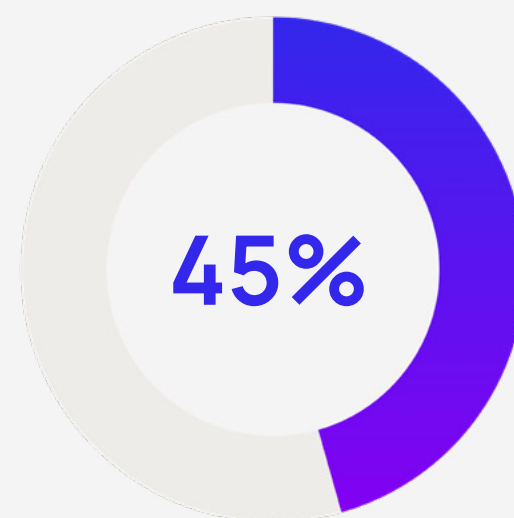
Instead of the 10 percent uptake that Perlego had expected, they saw that **45% of students chose to activate BeeLine.**



STUDENTS OPTING IN
FOR BEELINE READER
IN PERLEGO.*



EXPECTED USAGE

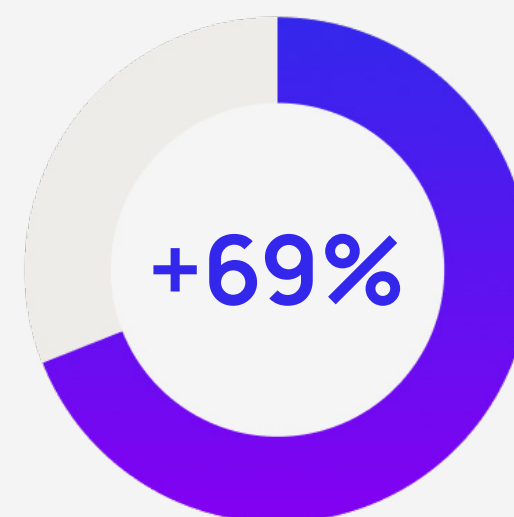


ACTUAL USAGE

Tracking the BeeLine-enabled cohort and the BeeLine-disabled cohort, Perlego observed that the former spent **substantially more time reading on the platform (69%)** than the latter.



TIME SPENT READING
ON THE PLATFORM
WITH BEELINE READER.*

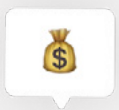


READING TIME

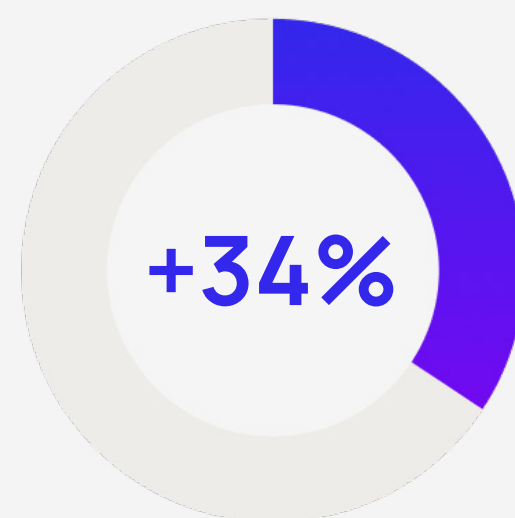
* From initial AB test with 28,000 users.

Even when comparing students who were equally engaged (i.e., spent the same amount of time reading), the BeeLine-enabled cohort was significantly more likely to convert from free trial into paid customers.

Overall, **students in the BeeLine-cohort were 34% more likely to become paid Perlego customers.**



LIKELIHOOD TO
SUBSCRIBE TO
PERLEGO*.



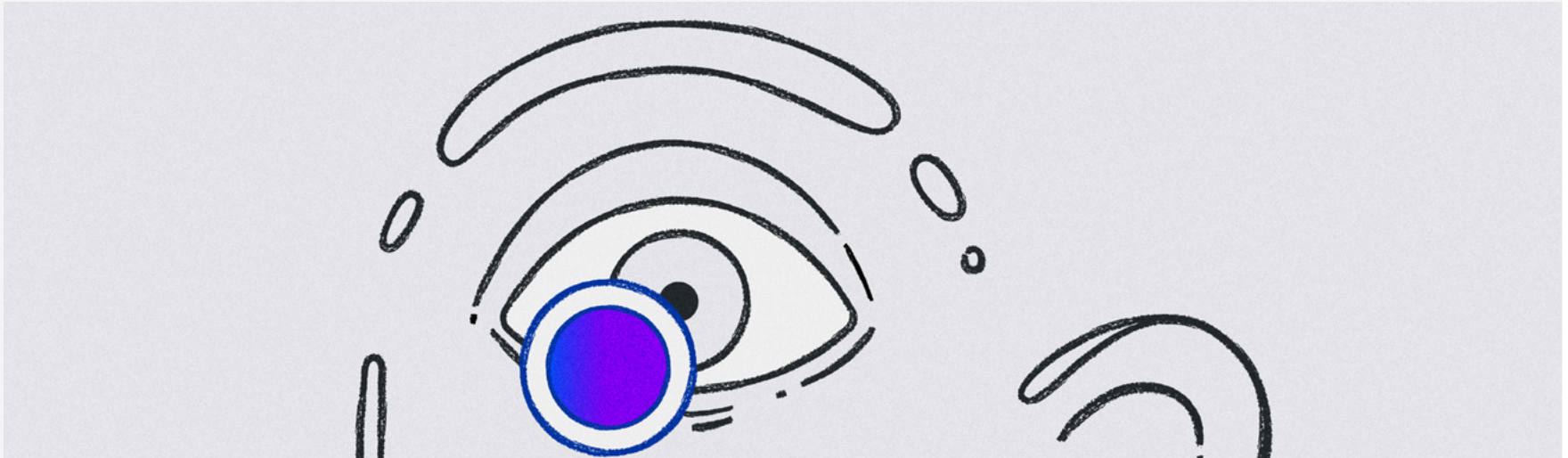
MORE LIKELY
TO SUBSCRIBE

After seeing these tremendous impacts, and hearing praise from students themselves, Perlego's product team decided to turn on BeeLine by default for all new users, who are now alerted to the feature during the onboarding process.

While these numbers are indeed impressive, the qualitative feedback paints an even more compelling picture. John, the theology student mentioned above, walked us through how **BeeLine improves his focus, cuts down on his study time, deepens his understanding, and even boosts his grades.**

* From initial AB test with 28,000 users.

So, how did this affect John?



Improved Focus

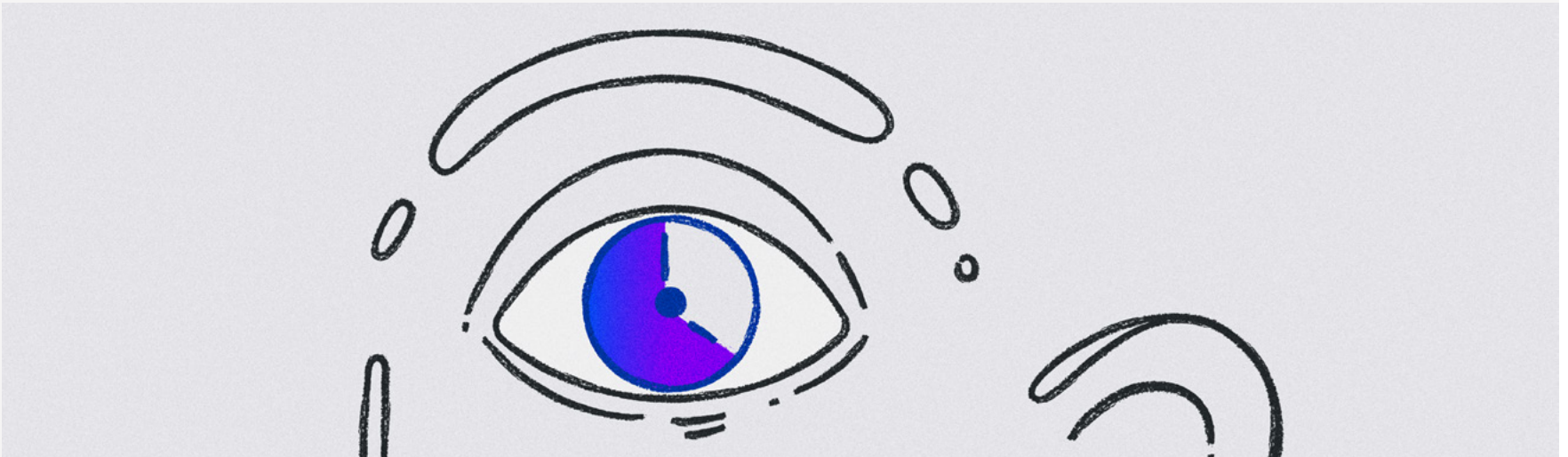
John's experience with BeeLine has transformed his ability to focus while reading. Previously, he could only concentrate for short periods, but with BeeLine his ability to focus has increased by orders of magnitude.

“With BeeLine, I can focus for hours at a time, instead of just a few minutes”

In our internet-enabled, always-connected world, focus is in short supply. A student's reading assignments contend with many distractions: email notifications, SMS reactions, news alerts, and so on. Research shows that after an interruption, it can take as much as **23 minutes to regain focus.***

*The Cost of Interrupted Work: More Speed and Stress

John is now able to read for multiple hours at a time—even when reading on his phone—thanks to the integration of BeeLine Reader into the Perlego platform.



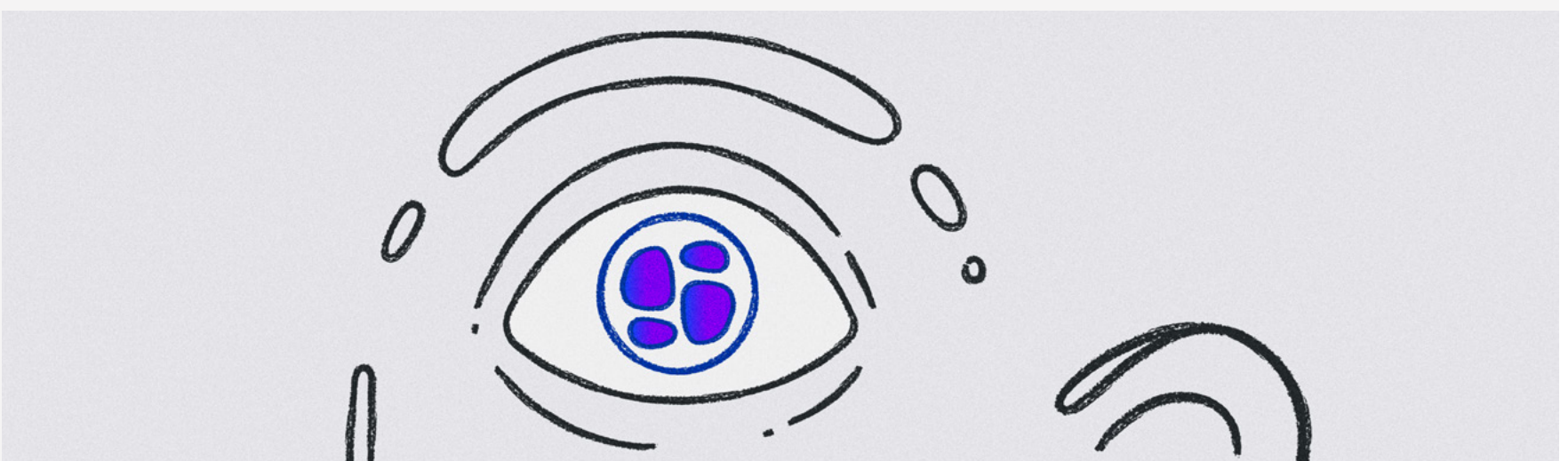
Improved Efficiency

Thanks to John's newfound focus, he's able to finish assignments in much less time.

“My time spent on reading improves as well”

Instead of becoming distracted or taking breaks every few minutes, John is now able to make his way through reading assignments much more quickly than before. This is a benefit that any student would love—but especially ones like John, who have to read many books at a time.

And for students with dyslexia, ADHD, or other reading challenges, the speed improvements that the BeeLine Reader delivers are even more impactful.



Deepened Understanding

Best of all, John is now able to understand his texts more deeply than before.

“Through clear and focused reading, I can understand well what the author meant to say... Without BeeLine, I would struggle with writing, doing different book reviews, or understanding the topic that we have to discuss each day on campus.”

John’s experience exemplifies Perlego’s core mission: to make learning accessible to all. Comprehension is key to student learning, and with this partnership Perlego is pushing the boundary forward on learning.



Grade Boost

John’s perception of greater understanding isn’t all in his head—it’s backed up by higher grades.

“I saw a clear improvement in my grades since using BeeLine.”

Textbooks provide the foundation on which John’s assignments (writing, book reviews, and in-class discussions) rely. By improving his understanding of the text, he’s able to perform better on all of these projects. Not surprisingly, this has led to higher grades for John, which substantiates his internal sense of deeper understanding.

John’s only complaint?

He wishes that he could use BeeLine with all of his reading materials, not just the Perlego platform.

Next steps

Perlego plans to bring the BeeLine Reader feature to the Perlego mobile app. This will enable mobile users to read with BeeLine offline, which is especially helpful for students who live in low-connectivity geographies, or spend lots of time commuting, either via rail or underground.

We are also looking forward to testing out new BeeLine Reader colour schemes, and bringing the latest innovations to help students read, learn, and thrive.



What's our community of learners saying about us?



HELPING WITH ADHD

"I love this app [Perlego], the beeline feature was absolutely revolutionary to me with Adhd that LOVES reading but just ends up frustrated everytime because I can't keep focus and end up reading the same sentence 50 times before actually giving up because of the frustration. **This app changed it for me!**"

– Ivana Monsanto Saraiva
November 13th 2023



BETTER FOCUS

"**The beeline reader really helps with focusing** and now with the read aloud function I can put it on and follow along or step away from my desk.."

– Benjamin JH
September 5th 2023



LESS STRESS

"**It's a great app, very useful, handy and reliable.** I also like to commend the "beeline" feature that you have added because it helped me a lot in reading line by line... I am not so much into reading books, one reason is that i think my eyes have problem following certain arrangements (words sometimes shaffled) but **because of beeline I can read more effectively, normally and less stress.**"

– Paul M
April 18th 2023

Perlego



BeeLine Reader