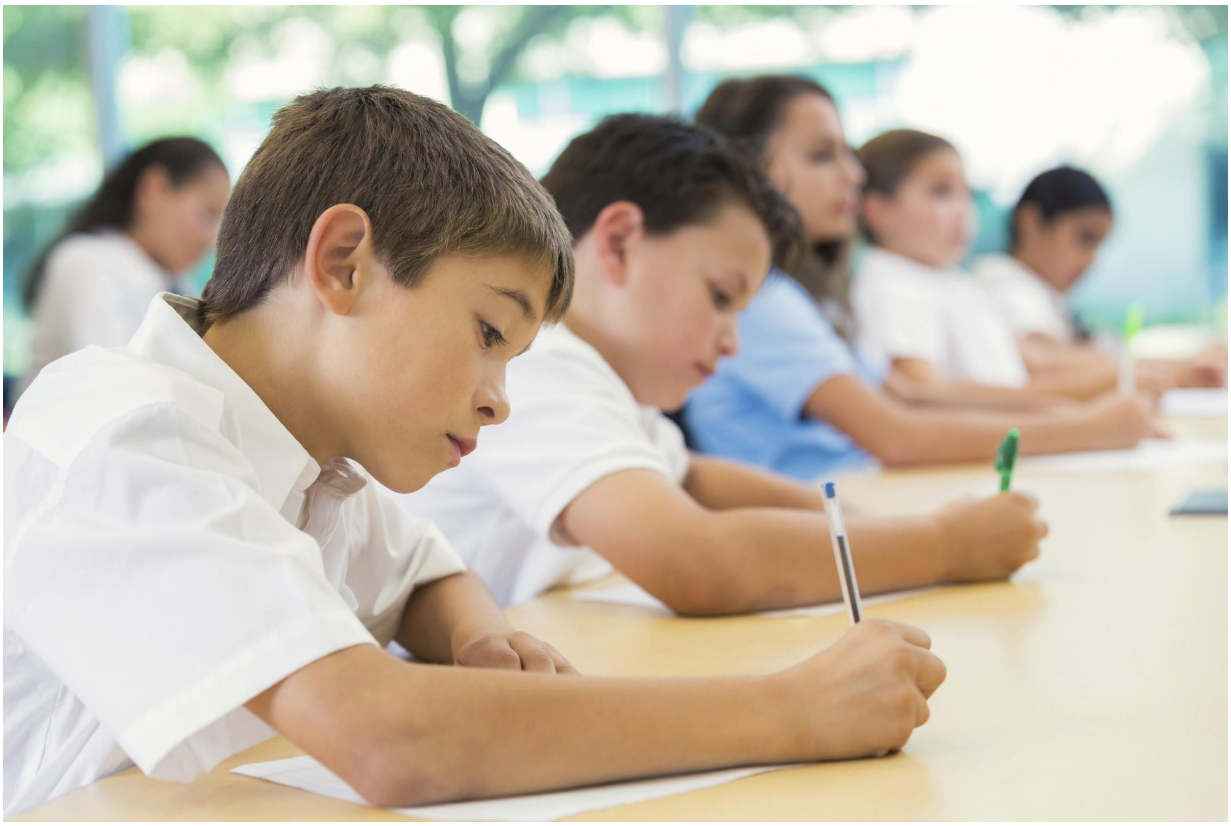
LearnFast Australia

Learning How to Learn



LEARNFAST

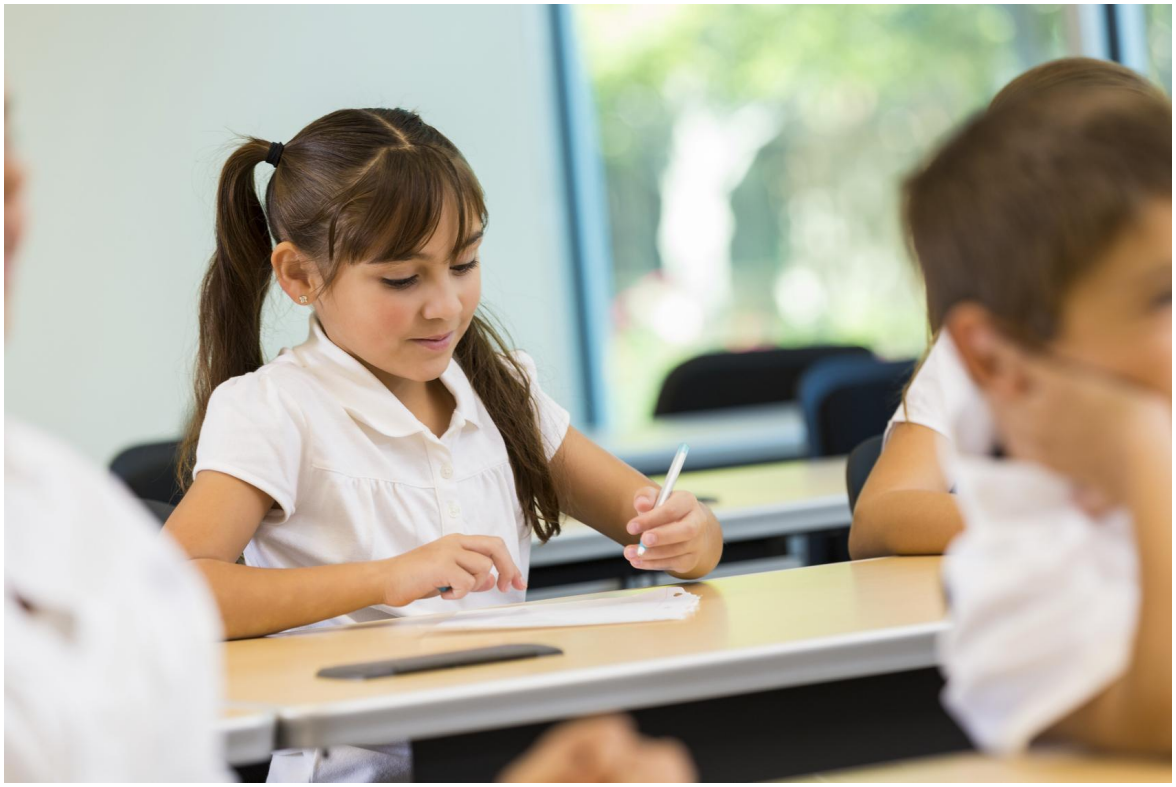
Dr Martha Burns

In early primary school, Louise was described as a sweet but somewhat passive child. She was an average student who never made trouble so her teachers did not worry about her, but at the same time she was rarely chosen for special duties or called on in class.

When Louise's parents asked about her somewhat mediocre progress in school (given that her siblings were all excellent students), the school principal, Mr. Henry tried to reassure them that she was a bright little girl but would never get an ulcer worrying about school achievement; she just was not an "active learner". Often children like Louise are described as underachievers.

But for Louise, that description of her began to change in the third grade under Mr. Stevens. He was a teacher that some parents hoped their children could avoid because he was a stickler for neatness, organisation, planning, paying attention and punctuality. He referred to himself as "Hurricane Stevens" for his proclivity, without warning, to check students' desks randomly for disarray or to confiscate items that might distract a student from getting work done.

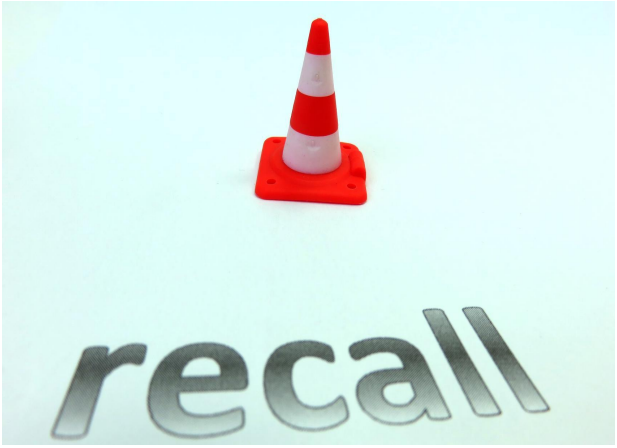
One day Louise succumbed to his watchful eye during class when she was admiring a yo-yo she had won during lunch recess. With one fell swoop the yo-yo became part of Mr. Stevens' "cyclone stash" of toys and comic books - all to be returned each Friday with a wry smile and gentle warning that sometimes objects get lost in cyclones. “Class time is your job," Mr. Stevens extolled her, "you can think about recess during recess, during class you need to focus on learning."



Memory Game

Mr. Stevens also had a memory game he called "fun facts", starting each day with a list of new history or science facts, vocabulary words, or current events details. They were always relevant to one of the class lessons, and during the day more information about the facts would be part of the daily lessons. Students were told to pay close attention to the list and knew they would need to apply the facts in a later lesson, but were not permitted to write anything down.

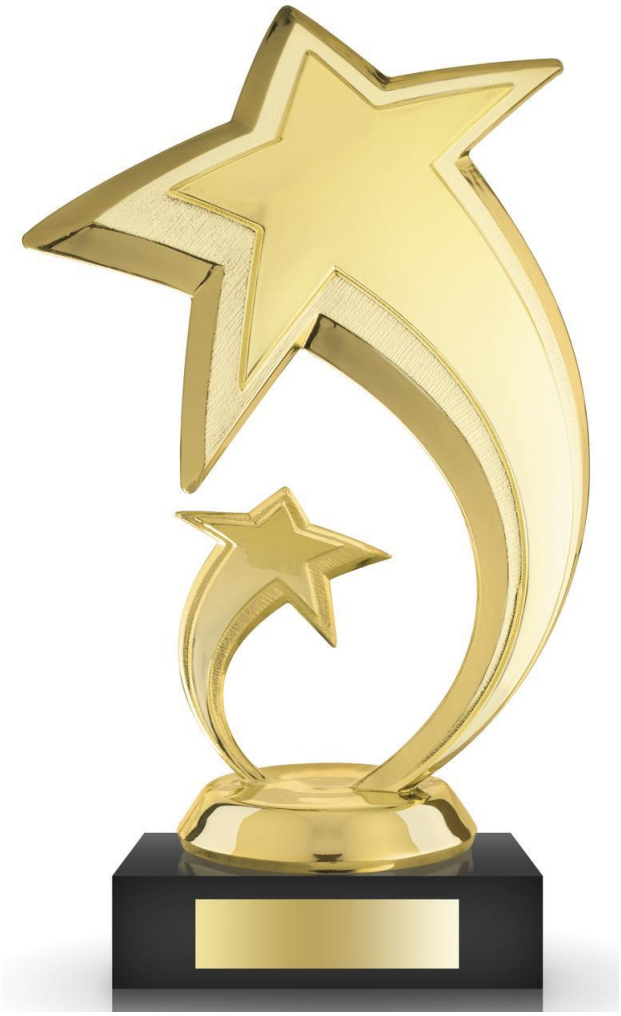
Sometime during each day, never predictably, Mr. Stevens would quiz the class on a few of the morning's facts and how they applied to that day's lesson. At random and without warning (in case a student surreptitiously jotted a few notes somewhere) students were asked a question about one or more of the facts. The first student called on who answered correctly got to wear a prized star pin the entire day.



In March, Mr. Stevens began with five facts each morning. By April, none of the students missed any of the questions when called on so Mr. Stevens increased the list by one each month and the application of the facts became less predictable. When the list became longer and the application more subtle, Mr. Stevens would ask students how they were able to remember.

Students told of using different strategies. One student said that since she was not allowed to write the facts down, she just pictured what they looked like if she did write them! Then she could recognise them if she saw them later or could read them back to herself in her mind. Another boy said when there were names, he tried to imagine how they looked. When he learned later about what they did in history he could see them doing it.

Like most of the children, Louise figured out her own strategies to help remember the facts and tried to predict how they might apply to class or what kind of questions he might ask. She found herself listening carefully throughout the day for more information. And like most of the students in the class, she couldn't wait to be called on -- later in the year, she too won the star pin every time she was selected to answer one of Mr. Stevens' questions.



Students' active role in learning how to learn

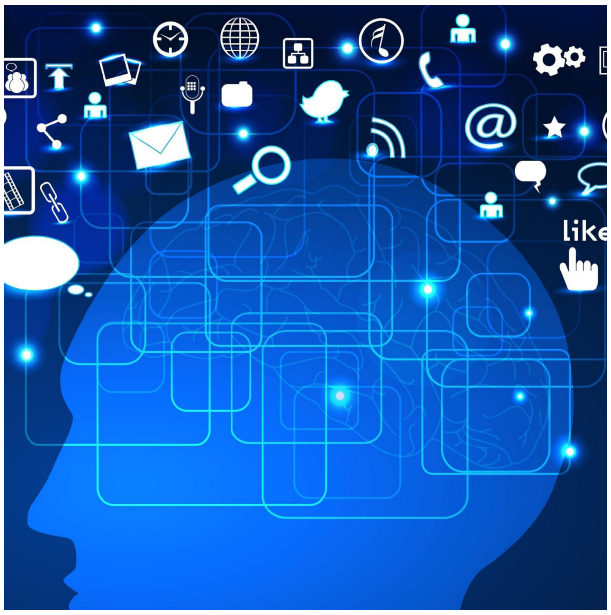
Mr. Stevens understood that children need to take an active role in the learning process. Some children are natural students; they focus easily on content, can stick to one task, and retain information without effort. Those students achieve easily so they are a joy to teach.

But to other children like Louise the "how" of learning does not come naturally. Their mind wanders or they are easily distracted in class. They don't realize that they may need to "try to remember" information. They might seem lazy because they have trouble sticking with a task when it is repetitive or boring.

Mr. Stevens understood that in addition to teaching information, he could also teach students *how* to learn. Louise and the other students learned to focus on relevant details in class, plan for how they were going to hold on to information during the day, and predict how they might apply to the lessons. After a year with Mr. Stevens, his students were not just better at reading, maths, and writing, they were active learners.

Teaching approaches like those of Mr. Stevens may be thought of as emphasising the process of learning as much as the content. His goal was not just that students acquire information but also apply it. In that regard he was years ahead of his time. Teaching standards like USA's Common Core State Standards, emphasise application of knowledge. Key points of the Common Core State Standards for reading, for example, mandate that through reading students not only "build knowledge" but also "gain insights, explore possibilities, and broaden their perspective."

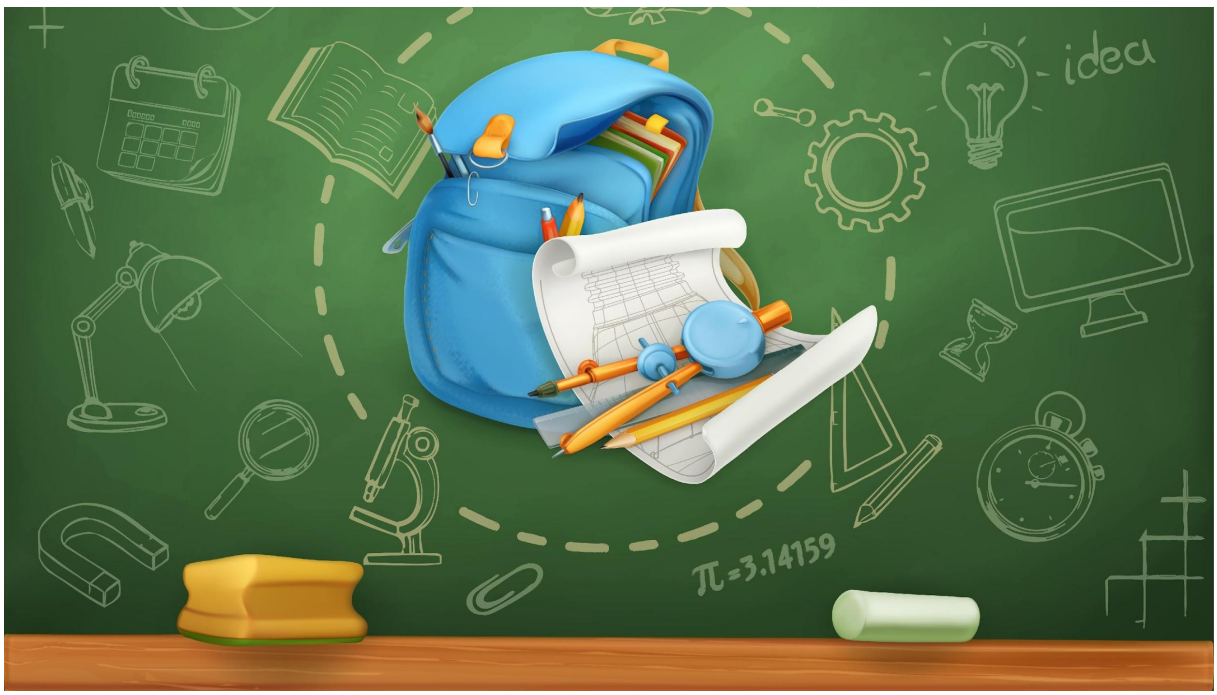
To that end, Roger Schank at Northwestern University, author of "Teaching Minds" argues persuasively that there are twelve cognitive processes which underlie learning, including prediction and analytic processes like planning or judgment.



Curriculum – the “what” of teaching

The problem of course is that today's teachers have been increasingly evaluated on their students' mastery of the curriculum, which might be considered the "what of teaching". With USA’s Common Core State Standards and educational research now emphasising the learning process as well as mastery of content, teachers find gaps in the curriculum. Many USA state standards do include critical thinking skills like application of knowledge and drawing inferences.

But, most state curriculum standards do not include underlying learning processes like teaching students how to attend better to relevant information, stick with a task to completion, or develop retention strategies.



Neuroscience programs can help build the “how” of learning

Fortunately, neuroscience has been grappling with the learning process issues like focused attention, perseverance and memory enhancement for over a decade. As a result of neuroscience research, breakthrough technologies like the Fast ForWord brain fitness and reading programs are now available to supplement classroom instruction through curriculum-based attentional and memory training. By supplementing classroom tasks with these types of technologies, teachers don't have to devote as much planning and instructional time to the kinds of activities "Hurricane Stevens" employed.

Breakthrough technologies are also available to free up classroom time so that teachers can focus instruction on the Common Core Standards like those for speaking and listening which "expect students [to] grow their vocabularies through a mix of conversations, direct instruction, and reading."

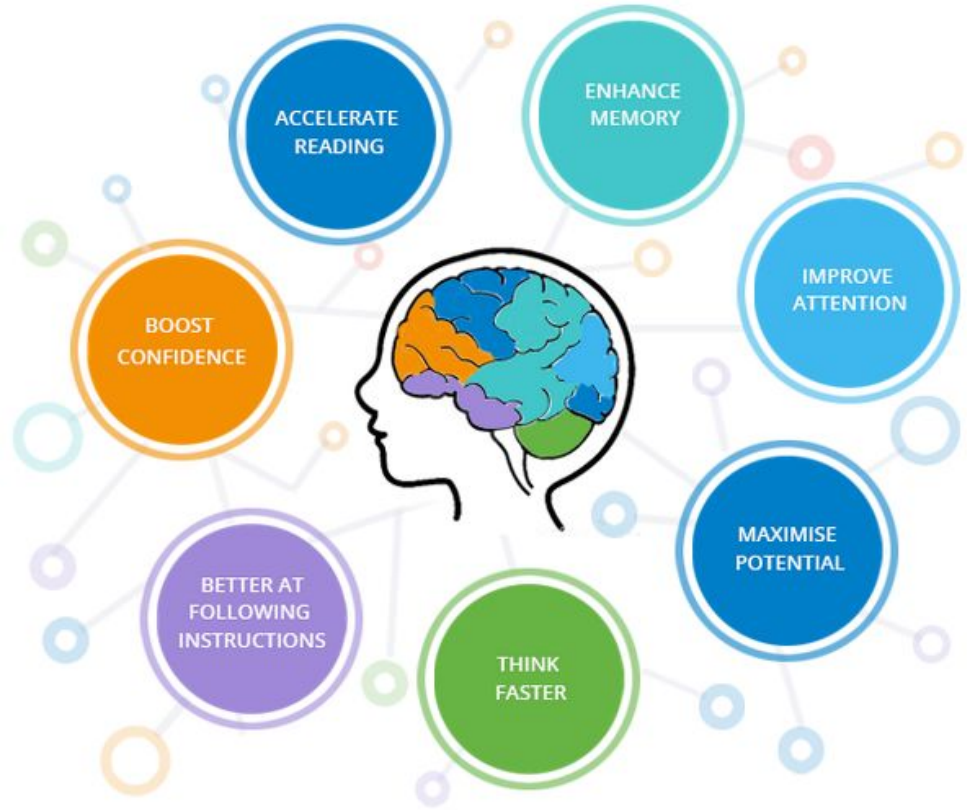
With technologies like Clear Fluency, for example, students independently read aloud to a computer which corrects their errors through speech recognition software, provides vocabulary definitions on request, and quizzes for application of information at the same time as measuring reading fluency.

These kinds of technologies in the classroom enable teachers to do what they love, impart content as well as encourage their students to think about how the content applies to other information they have learned and their daily lives. These are breakthrough technologies that enhance students' capacity to learn.

And by the way, with Mr. Stevens' help you might have expected that Louise eventually became a prodigious student and teacher herself. Perhaps you can guess who she was. (HINT: My full name is Martha Louise Stoner Burns - the teacher and principal's names were changed though.)

* Dr Burns is a neuroscientist, author of over 100 journal articles and multiple books, and a leading expert on how children learn.

LearnFast was established to bring neuroscience programs for everyone at home, at school, in professional clinics and at work. We are driven by the desire to help as many people as possible overcome learning and reading difficulties. We are passionate about helping everyone achieve their potential. This is reflected in everything we do, from the people we hire, to the way the programs are implemented.



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