Understanding ‘How’ Pupils Learn is Key to Tackling Wandering Focus in a Digital Age

In an increasingly digital age pupils are struggling to concentrate and learn, an education expert has warned - but there are ways to help.

OXFORD, UNITED KINGDOM, April 23, 2024 /EINPresswire.com/ -- School attendance figures are dwindling, there are more pupils than ever before needing additional support, and a demanding legion of exams – all of which mean pupils are struggling to learn, an education expert has warned.

But, he suggests, with a renewed focus on the techniques of learning, pupils can be guided to success.

In a difficult environment for teachers, it is clear they need support. Failure might be inevitable in a classroom, former teacher Alex Quigley argues, but if teachers can understand why learning has failed, they can address it and adapt their teaching with more success.

In his new book, Why Learning Fails, he uses the latest research to offer practical tips for maximizing working memory, managing pupil attention, and creating a good practical foundation to learning.

A recent focus in schools has been developing the curriculum, but Quigley asks if this enough for success: “In focusing so hard on curriculum – and considering what teachers teach – have we given sufficient attention to how pupils learn? Have we considered pupils’ motivations and emotions as much as their prior knowledge and memory capacity?”

Quigley explains that the current focus in UK schools is on high quality curricula, homing in on what knowledge should be taught in the curriculum and for whom.

But, he argues, while a focus on curriculum may offer a necessary foundation for learning, in considering what teachers teach not enough attention is consistently given to how pupils learn.

“When we focus on creating the conditions for how pupils learn best, we recognize that pupils attend school with different levels of prior knowledge (and misconceptions), different motivations and interests, different beliefs about themselves and what they can learn.

“Given this brilliant complexity, we recognize that adaptive teaching is necessary and that every teacher requires a strong shared understanding of learning – how it routinely fails – and what to do about it,” he explains.

There are many complex ways in which learning can fail, Quigley explains, but he suggests teachers can learn these reasons and mitigate against them.

Some of the reasons learning can fail are the limits of working memory; patchy prior knowledge or pre-existing misconceptions; pupils implementing faulty planning strategies; wandering attention and falling motivation in the face of failure.

Quigley points to scientific studies showing the limits of working memory – the rapid processing and recalling of information, as opposed to the higher capacity ‘long-term memory’.

For instance, depending on the nature of what is being learned, our working memory can handle between something like four and seven bits of information before it is forgotten or stored, depending upon factors such as whether the material is familiar.

Struggling with working memory is related to pupils’ ability to plan, to problem solve, and to sustain their attention. Quigley points to studies that show around 41% of pupils who struggled in national tests in Key Stage 1 for English had poor working memory, with 52% of pupils who achieved the same low levels in maths at the same age.

“A problem for many teachers is that they don’t have a strong understanding of working memory – its limits, factors that inhibit its functioning, along with practical supports,” he explains.

In a survey of 1,425 educational professionals, there was a good deal of familiarity with working memory; however, crucially, there was ‘considerable variability’ in the factors that identify poor working memory as well as the strategies that could assist pupils.

“Put simply, teachers need to know more about working memory failures and what to do about them,” Quigley explains.

Quigley suggests teachers should develop a curriculum with memory in mind, which communicates with pupils the natural limits of their memory and offers subject specific tasks and guidance.

Some strategies teachers can use to try to tackle the limits of working memory, according to Quigley’s extensive research, include utilizing the power of emotive memory. Teachers can wed a complex topic to powerful storytelling that consolidates understanding. For instance, the striking personal stories of Mary Seacole and Florence Nightingale can both illuminate the history of medicine and build emotive connections.

Teachers should also focus on chunking down stepped tasks to bypass working memory limits and can integrate worked examples to support working memory through complex tasks.

Research also suggests repeating new content three times (at least) is more likely to be integrated into pupils' understanding, push out nagging misconceptions.

There is a persistent challenge of sustaining attention and overcoming pupils' natural tendency to conserve their mental effort, Quigley suggests. Mind wandering is a potential challenge to learning for all pupils, and there are even more specific needs for those with ADHD.

In a world where technology is liable to steal children's focus and attention, what can teachers do about it?

"Pupils can struggle for focus and concentration in a world of mass distraction. Successful teaching becomes a complex matter of making the curriculum 'clever and vivid' for pupils," Quigley explains. "Pragmatically, it is likely an exercise in carefully negotiating small windows of focused attention and high mental effort during the school day."

To tackle this Quigley suggests explicit modeling in selecting, switching, and sustaining attention. First, teachers can offer pupils the understanding that their attention is finite and that focusing is effortful. Second, teachers can be explicit about how to focus more effectively on as many learning scenarios as possible.

Some strategies include stimulating a pupil's personal interest, engaging in short, manageable tasks known as 'learning sprints', or having moments of targeted hyperfocus by spotlighting specific parts of a task.

Pupils of all skill levels and ages can also underestimate how much planning they need to undertake to succeed, or worse, they don't think that they need to plan at all. But Quigley believes teachers can also teach children how to plan to execute difficult tasks.

"A pupil's brain is still undergoing maturation. Specifically, the prefrontal cortex, responsible for functions such as planning and impulse control, is still developing, so planning can be a struggle, and lots of repeated practice is needed," Quigley explains.

He suggests teachers must be explicit about planning, helping pupils to allocate appropriate effort for planning strategies like checklists, time planning, mind maps and annotations. Planning is not something that just comes 'naturally', he argues, it needs lots of teaching and sustained support.

But he says none of this is possible without a school culture that allow teachers to be adaptive.

"Crucially, teachers need ample support – time, training, and tools – to move from experienced

teachers to adaptive experts. Teachers exhausted by excess paperwork, poor systems, or endless marking practices, are unlikely to be able to properly invest in their expertise.

“Adaptability, versatility, and resilience are the qualities that can make out the expert teacher who doesn’t just survive the job but thrives, routinely turning learning failures into success. But adaptability, versatility and resilience are not character traits – they are quality that can be trained, supported, and rewarded,” he says.

Further information

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