

TEACHING & LEARNING JOURNAL - EDITION 2

An opportunity to reflect, to develop and to grow

Jonathan Burrows - Teacher of Computing

I am now coming towards the end of my second Year 6 transition video; this has been a long process, but a strangely therapeutic and enlightening one. I knew that Winston Churchill was both erudite and literary, he wrote more than both Charles Dickens and William Shakespeare, but I was not expecting to find Florence Nightingale quite so erudite, “are we the product of the culture in which we are raised?”

Florence Nightingale once said,
“Nursing is a progressive art such that to stand still is to go backwards.”

This could also be applied to teaching; indeed, what might have been accepted twenty or perhaps even ten years ago as good, would barely be seen as a standard that requires improvement today.

If, as educators, we are to move forward, then we must learn, reflect and adapt, otherwise, we will stand still, and as Nurse Nightingale said, that is to go backwards.

Florence Nightingale also said,
“Never lose an opportunity of urging a practical beginning, however small, for it is wonderful how often in such matters the mustard-seed germinates and roots itself.”

This academic year has been exceptional, and, at this stage, unique in my life time. Yet despite this, the six months without normal, “whatever that now means”, class room teaching have provided such an “unprecedented” opportunity for learning, research and progress that I for one, am keen to see the application for this to come into the classroom in the year ahead. The year started with attendance at the Research Ed Conference at One, then there was an opportunity to explore how learning pedagogy could be adapted to allow time to explore ways to help boys progress, and more recently since lock down, there have been opportunities to develop still further, through a range of learning journals and educational books, webinars and finally the ATT Learning Leaders Conference. I am going to focus on the Research Ed Conference for now.

The Research Ed Conference was a breath of fresh air. Starting with a refreshing look at Dual Coding introduced by Oliver Caviglioli, stopping off with reminder of the power of low stakes testing to move things from short term memory to long term permanent memory (both terms frequently used in Computer Science) and finally being introduced to the genius of Bradley Busch. At it’s simplest, dual coding is about combining words and images in two ways to allow for different ways of remembering. Each method can provide stimuli to the other, this making it easier to remember and store learning for the long term. This is underpinned by the regular revisiting of learning, both from recent lessons and from longer ago in order to allow things to stick! In Computer Science we did this in 2019-2020 using a range of online quizzing including Kahoot, Quizlet, SMHW quizzes and Dynamic Learning tasks. Going forward, we will look to develop this further using a range of starter tasks that go beyond the completion of multiple choice answers.

The highlight, for me though, was Bradley Busch. He is a psychologist and director of Inner Drive, who has worked with a range of students and sports men and women. We will be privileged to have him in school in January 2021. There were too many nuggets from his session for me to unpack here, but he used science and research to measure impact on learning. Two of his pearls of wisdom are outlined below: -

1. Your learning environment has a huge impact on the effectiveness of revision. Proof should it be needed that music may not be a great idea for Year 10 and Year 11 revisers. He explained that the research shows: -

- Students who revised in quiet environments performed more than 60% better in an exam than their peers who revised while listening to music that had lyrics.
- Students who revised while listening to music without lyrics did better than those who had revised to music with lyrics.
- It made no difference if students revised listening to songs they liked or disliked. Both led to a reduction in their test performance. Students who revised in silence rated their environment as less distracting and accurately predicted that this would lead to better performances in subsequent tests.
- There are some benefits to listening to music while performing certain tasks. It can be quite motivating and it can improve mood (listening to your favourite song tends to make people smile, for example). But it does not help people learn new or complex material. This is a message that I have tried to enforce with my students this year. There may be a place for instrumental music during completion of course work, for example, but certainly not when engaging with complex areas of theory and more challenging tasks.

2. Bradley Busch talked about the marshmallow effect. He described a test in which students were offered an instant marshmallow now or offered a two marshmallows if they could refrain from eating the first one for 15 minutes. In the early 1970s, Stanford researcher Walter Mischel and colleagues put the challenge to 92 children aged three to five, and the follow-up studies and results 20 years later have had a significant impact on how we view self-control.

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Self-control is a fundamental part of learning in the classroom. If students can maintain focus and block out potentially exciting but handicapping short-term distractions, they can benefit from sustained improvement in their knowledge. The research showed that the longer students were able to busy themselves in their work and the more they could employ distracting tactics to avoid the temptation of the marshmallow, the more likely they would be as adults to be: -

- Attentive.
- Verbally fluent.
- Academically successful.
- Socially competent.
- Better able to deal with frustration and stress.

Modern studies have linked this to student use of mobile devices. A recent study which found that students who can see their phone, even if they're not using it, perform 20% worse in cognitive tests, could be a useful starting point.

I want to leave the final words to Winston Churchill; I am in Churchill House and the first induction video I created this year was for Churchill. Winston Churchill said,

"A pessimist sees the difficulty in every opportunity, an optimist sees the opportunity in every difficulty"

Many people have likened the difficulties we have faced over the last six months, as similar to those faced in World War II, rightly or wrongly. There is no doubt, however, that this has been an opportunity to reflect, to develop and to grow. If you have not had the chance to do that yet, then I invite you to take some time over the rest of the summer to reflect and I hope that you can look back and seen areas where you have developed and grown.

