

Dear

I am urging you to review the way our school is implementing the Ministry of Education's (MOE) digital curriculum, to one where students use screens to learn at school and at home in a more considered and purposeful manner. The students of our school will have a greater chance of doing better academically and emotionally if our policy changes.

The digital curriculum has been designed to ensure students learn computer science principles, and about using digital technology to create digital content, including learning about electronic components and techniques to design digital devices.

The MOE were very clear that the curriculum means learning about devices, not on devices, and that meeting the curriculum does not mean more device time, particularly in primary schools.

The new (digital curriculum) content covers two key areas, computational thinking and designing and developing digital outcomes. It has been designed to be flexible, so it can respond to new developments and technologies as they emerge.

"Computational thinking is about understanding the computer science principles that underlie all digital technologies, and learning how to develop instructions, such as programming, to control these technologies."

"Designing and developing digital outcomes is about understanding that digital systems and applications are created for humans by humans, and developing knowledge and skills in using different digital technologies to create digital content across a range of digital media. This part of the curriculum also includes learning about the electronic components and techniques used to design digital devices."

Nikki Kaye, June 2017 <<https://www.beehive.govt.nz/release/digital-curriculum-changes-connect-young-people-future>>

Below is a video link to the workshops the MOE ran in 2017 about implementing the digital curriculum for schools:

<https://education.govt.nz/ministry-of-education/consultations-and-reviews/recent-consultations-and-reviews/digital-technology-consultation/#watchvideo>

Digital technology can offer new ways of learning, and opportunities above and beyond what can be achieved with pen and paper.

However, both the total time spent on screens as well as certain content are causing concern, as research is showing negative associations with children's physical and mental well-being. The suitability of reward-based teaching apps is one area under question.

'Reward-based teaching apps' refers to gamified learning programs that use visual and auditory graphics to reward children for the correct answer, and may include earning money or 'tokens' for the work the child has done to buy gaming time or even virtual online shopping.

With reward-based gaming, whether educational or not, a reward or near reward triggers our brains to release dopamine, which compels or motivates us to repeat the experience. This sounds great when it comes to learning – except that there is concern that repeatedly activating these complex neural reward circuits could cause structural changes to the reward centres of the brain.

Reward-based learning apps also rely on extrinsic motivation to reinforce learning, rather than intrinsic motivation, such as pride in learning a new skill. In what is known as the 'over-justification effect', extrinsic rewards can reduce children's desire to do the same task without a reward.

Using reward-based apps to support or replace print reading or handwriting also needs careful consideration. Print reading and handwriting have been highlighted as being important in developing literacy and critical thinking skills, particularly in the early years of education - and these will contribute to developing digital literacy. Experts have advised teaching print reading and handwriting in print form only, until fluency is achieved. Please find more information at www.sensibleuse.org.

Taking these points into consideration, I ask that our school carefully considers whether the gains of the reward-based teaching apps that we currently use outweigh the risks, for all students. I ask that going forward, our school requires parental permission, or provides an opt out form for parents who believe that reward-based educational gaming is not in their child's best interest.

Thank you