HighLight Key – Technology and the classroom

The wise teacher aims to chart a course between naïve optimism and fear about technology and the possibilities and potential of technology in the classroom. This key explores this approach recognising the value of technology for learning but also the challenges it brings. Guidance is provided for the teacher and head about how to innovate in the use of technology whilst still valuing the 'tried and tested'. A set of resources is provided for further reading.

Approaches to technology

Have you noticed how little children are interested in technology from an early age? If they have access to it they are happily fascinated by mobile phones, tablets or computers. Parents have different views about this – some are positive because they see engagement with technology as the new literacy of our time and are full of hope about the possibility of technology to make our world better and solve social problems. Others are more cautious, uncertain about the effects of technology on the brain and our abilities to relate and be creative; they may be worried about children staying safe online. Both have important points. In thinking as teachers and educators about the role of technology in the classroom, we will want to avoid passing on a fear of technology that stops a pupil from learning about its benefits. However, we will also want to avoid an approach that is so enthusiastic about innovations that we don't think carefully about its limitations and problems.

> **Avoid rejecting technology without appreciating its benefits or welcoming innovation without learning about its limitations and problems.**

You might think about technology as new, and possibly unfamiliar – things which help us do various tasks more easily. It is also the case that today's innovation can quite quickly become obsolete or just part of life in a way that we then take for granted – think about the electric light or the telephone, for example. There are also differences in what is available, and at what cost, around the world. In parts of rural India, 'technology in the classroom' maybe the introduction of artificial light through a solar-powered lantern that allows pupils to study in the evening. A school in the UK may take that lighting for granted, not thinking of it as technology – being more mindful of the use of a smartboard or computers. Either way, technology has long been involved in education from the innovation of wax tablets and stylus in Roman times. In addition, projectors have been used in classrooms to display images, videos and text, the so-called 'magic lanterns', since the 17th century. Teachers have been at the forefront of adopting new technologies and of also helping pupils make sense of the changes to society these innovations bring – both good and bad.

> **Taking a longer view means we are not dazzled by the new and do not forget 'old technologies' which may be equally important for learning.**

Possibilities

Technologies can offer opportunities for learning, collaboration and creative production that enhance education. Whether through Google Classroom, Minecraft, Padlet, Prezi, Video-making and editing devices or digital textbooks, teachers are developing meaningful ways of integrating technologies into classroom practice with demonstrable effects on learning. One group of teachers

have been using an ipad and video app to allow children to make 'stop-motion' animations to think about story-telling and as a creative way to teach literacy. Using technologies in the classroom need not be expensive (and often the most effective technologies are not). See some of the links at the end of the paper for more examples. Technologies, in these examples, enhance and enable the learning activities rather than dominate.

As teachers, we need to reflect on our practice to ensure that learning remains at the heart of our use of technology. It is easy to do something because it is fun and, while engagement in learning is crucial, we should ask if there is a more effective teaching method and strive to avoid gimmicks. In one primary school lesson a teacher asked a child to order objects by size on an electronic white board from largest to smallest. However, it might have been equally valid, better even, to do the same thing with physical objects in the classroom. Tactile engagement with physical objects is an important approach to retain even when it might be easier, or sometimes cheaper, to do everything on an electronic white-board.

> **We can ask: *whether* the technology is enhancing learning, and, if technology helps, *which* technology is most appropriate? We can use these questions to help avoid gimmicks.**

Perils

Three key issues that teachers will want to address as part of using computing technology are: privacy, e-safety and social skills.

In privacy we think about how information concerning a pupil might be shared and 'travel'. This could be information about a pupil's learning that might be shared with parents or guardians. It might also be personal information about the pupil themselves, such as their age, address, interests or, as they get older, it might include a phone number or social media profile. It could also include whether photos about the pupil's involvement in school activities, or the digital products of their work, be published online. In teaching about privacy we need to help pupils think about what they publish online and how it may be viewed. This is related to e-safety.

> **A school policy about data protection and curriculum which addresses issues of privacy is important.**

Other areas of concern, such as bullying, find new expression in cyberbullying. Issues around young people producing and circulating sexually explicit material, as one of a wider set of concerns around e-safety, require careful thought and teaching. Young people face significant risks in these areas and there are many resources being produced to help counsel appropriate use, rather than the misuse, of technology (see links below).

> **Ensuring safeguarding policies are up-to-date and reflect e-safety issues is key.**

One area of concern that is receiving greater attention is helping pupils to think through how technologies, like smartphones and the spread of social media, are changing the ways people relate. Such technologies allow us to be highly connected to people around the world but, for the most part, they do not help us develop the social skills that will allow us to confidently relate to those immediately around us. For some older pupils the possibility of losing or having a smartphone

removed is to experience a loss of connection that is profoundly destabilising. This should not be mocked or minimized; rather, teachers may need to help pupils gain confidence in making conversation with those around them. They also need help in prioritising and valuing those physically present when they may 'default' to technology because it allows them to feel less challenged.

> **Where pupil (and some teachers and parents!) use technology to feel safe or comfortable in social settings, learning how to relate to others confidently is an important learning goal.**

Can, and will, teachers lead the way?

Some of the fears associated with technology relate to a lack of knowledge or, for some teachers, a loss of control to pupils who may seem 'instinctively' to grasp how such new technologies work. Other teachers have developed practice over time that they find to be effective and meaningful to them. To be asked to add technologies is met with scepticism or resistance because of the investment in time and effort it might take to learn and implement such change. There may also be doubt about its value. School leaders need to work carefully to create a culture of teachers-as-learners where all staff, starting perhaps with the most confident, can trial new technologies, work out some of the issues and demonstrate good practice and its value for enabling and enhancing learning. Some teachers will need more support as, like many of our students, learning new things can be hard, feel overwhelming and require more time.

In addition to enhancing learning, one motivation to go on learning as teachers in this area is our responsibilities to help young people navigate their everyday experiences of life shaped by technologies. We can play our part in young people's role now, and in the future, as contributors to society: creatively, socially, politically, economically and spiritually. This future will require not only familiarity with technology but deep thought about how to use it ethically and in a way which promotes human flourishing.

> **The rise of digital technologies presents new challenges and opportunities for learning and learners.**

Our ongoing engagement and reflection in these areas can help us listen to young people and learn about their experience of childhood, which may differ significantly from our own. We can also recognise the wisdom and experience we can offer in helping them navigate these times.

Resources

Raising children in a digital age: enjoying the best and avoiding the worst (2014) Dr Bex Lewis. Oxford: Lion Hudson.

Although the focus of this book is digital parenting there will be much of use here for teachers.

Classroom resources

Google Classroom - https://classroom.google.com/

Minecraft Education Edition – http://education.minecraft.net/

Padlet – https://padlet.com/

Prezi – https://prezi.com/prezi-for-education/

Video technology (e.g. for making stop motion animations) - http://blog.ed.ted.com/2014/03/27/how-you-or-your-students-can-use-stop-motion-animation-in-your-classroom/

Code Academy - https://www.codecademy.com/

If you do a websearch for any of these with the word classroom there are also many sites in which give advice and ideas for how you could use these in the classroom.

Cyberbullying

Bullying UK - http://www.bullying.co.uk/cyberbullying/

ChildLine - https://www.childline.org.uk/Explore/Bullying/Pages/online-bullying.aspx

E-Safety

Safe Network - http://www.safenetwork.org.uk/help_and_advice/pages/safety_online.aspx

NSPCC - https://www.nspcc.org.uk/preventing-abuse/keeping-children-safe/online-safety/

ChildLine - http://www.childline.org.uk/Explore/OnlineSafety/Pages/OnlineSafety.aspx

CEOP - https://ceop.police.uk/Knowledge-Sharing/ and https://www.thinkuknow.co.uk/Teachers/