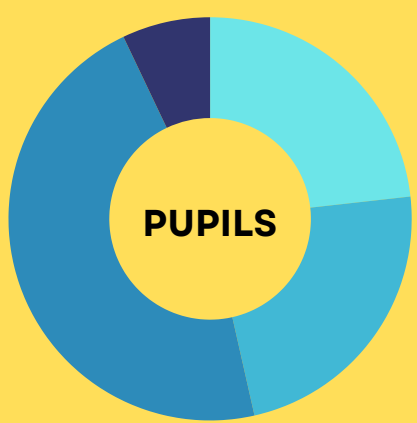


# THE USE OF DIGITAL DEVICES IN EDUCATION AND THE EFFECTS THIS HAS ON CHILDREN'S LEARNING



While technology can provide children with access to information, foster technological literacy and skills, and improve communication and socialisation, it can also carry risks such as addiction and overuse, exposure to harmful content, and negative impacts on mental and emotional health. The Curriculum for Excellence states that 'the technologies framework provides a range of different contexts for learning, including the themes across learning; learning for sustainability, global citizenship, and enterprise that draw on important aspects of everyday life and work'. The impact of technology on children and young people's brains is a growing area in scientific research. With this in mind, surveys were undertaken with staff and pupils at Erskine Waterfront Campus on the effects that digital devices have on children's learning to inform their digital strategy.



7%  
1 HOUR A DAY  
23%  
1-5 HOURS A DAY  
23%  
5-8 HOURS A DAY  
46%  
8+ HOURS A DAY

WHEN IT COMES TO HAVING ACCESS TO DIGITAL DEVICES 100% OF STAFF AND 92% OF PUPILS REVEALED THAT THEY HAD AT LEAST A MOBILE PHONE, IPAD, TABLET, COMPUTER OR LAPTOP.

DIGITAL DEVICES ARE BECOMING AN INCREASINGLY IMPORTANT PART OF TODAY'S CLASSROOMS AND ACCORDING TO ANALYSTS GARTNER UK SCHOOLS SPEND £900M ANNUALLY.

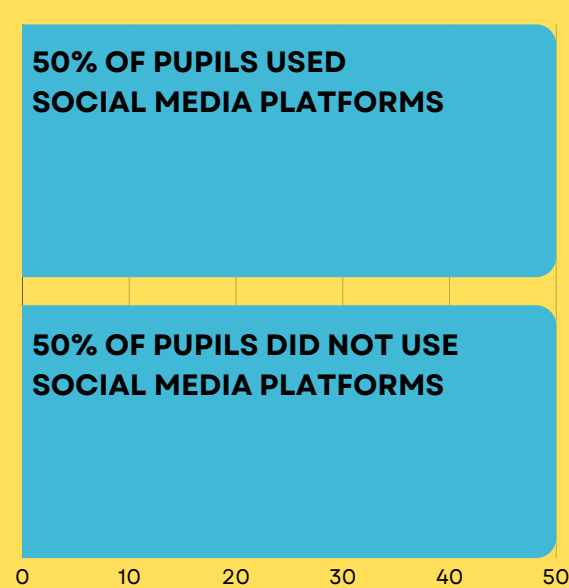
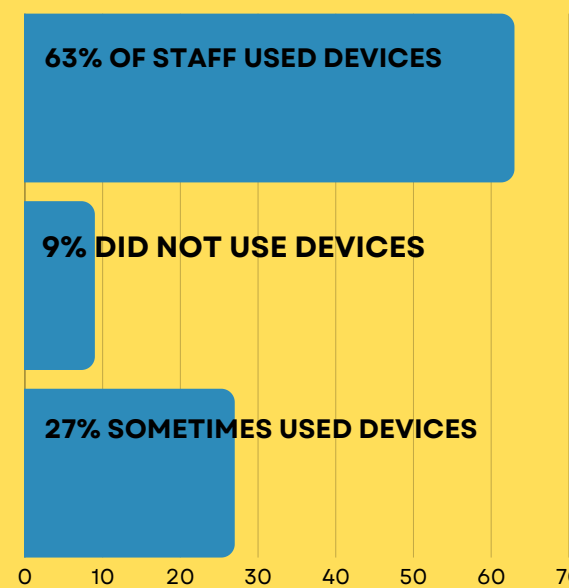
WHEN SUPPORTING THE LEARNING OF THEIR PUPILS, 63% OF STAFF STATED THAT THEY USED DIGITAL DEVICES, 9% DID NOT, AND 27% ONLY USED DIGITAL DEVICES TO HELP THEIR PUPILS SOMETIMES.

91% OF PUPILS SAID THEY FOUND IT EASIER TEXTING RATHER THAN WRITING AND EXACTLY HALF ADMITTED THEY USED SOCIAL MEDIA PLATFORMS LIKE TIKTOK TO HELP THEIR LEARNING.

"WRITING ON SCREEN KEYBOARDS IS MUCH HARDER AND DOES NOT IN GENERAL SUPPORT THE PRODUCTION OF EXTENDED WRITING." - CHRIS DAVIES, VICE PRESIDENT OF KELLOGG COLLEGE, OXFORD.



63%  
BETWEEN 1-5 HOURS A DAY  
18%  
BETWEEN 5-8 HOURS A DAY  
18%  
8+ HOURS A DAY



92% OF PUPILS VOICED THAT THEIR TEACHERS USED DIGITAL DEVICES WHEN TEACHING BUT ONLY 7% DID NOT. WHEN ASKED ABOUT THIS STAFF STATED THE SORT OF RESOURCES THEY ACCESSED ON THEIR DIGITAL DEVICES TO BETTER LEARNING OPPORTUNITIES FOR PUPILS.

#### THESE INCLUDE:

SUMDOG  
TES  
EDUCATION CITY  
MICROSOFT TEAMS  
BBC MICROBIT  
IXL  
MYWORLD OF WORK  
DIGITAL LINKS  
GEOCACHING APPS

YOUTUBE  
NUTRITION WEBSITES  
SCRATCH  
GLOW  
STEM  
KAHOOT  
RHSP  
OPENLEARN  
MINECRAFT

TWINKL  
BBC  
COOL MATHS GAMES  
GL ASSESSMENT  
HEALTHY SCHOOLS  
QUIZLET  
QR CODES  
GOOGLE  
DIGITAL YOUTH SCOTLAND

WHEN THINKING OF THE EFFECTS DIGITAL DEVICES HAD ON CHILDREN'S LEARNING 53% ADMITTED THAT THESE DEVICES CHANGED THEIR MOOD. U.S. Dr. ANGELA MATTHEW STATES THAT "IF CHILDREN ARE SPENDING A LOT OF TIME ON THEIR CELLPHONES OR SCREENS, IT CAN AFFECT THE HORMONES IN THEIR BRAIN VIA THE BLUE LIGHT THAT COMES OFF THESE SCREENS"



THERE WAS A MIXED RESPONSE TO WHETHER PUPILS LIKED LEARNING FROM DIGITAL DEVICES, WITH 38% SAYING THEY DID LIKE, 15% SAYING THEY DID NOT AND 46% SAYING THEY SOMETIMES LIKED LEARNING FROM A DIGITAL DEVICE.

STAFF ON THE OTHER HAND AFFIRMED THAT 81% OF PUPILS DID NOT PROCESS LEARNING ON DIGITAL DEVICES OVER PAPER AND PEN. THIS IS REPRESENTATIVE OF THE 46% OF PUPIL WHO ONLY SOMETIMES LIKE LEARNING FROM DEVICES AS THIS TYPE OF LEARNING CAN LACK THE STRUCTURE, ENGAGEMENT, AND PARTICIPATION THAT TRADITIONAL PAPER AND PEN PROVIDES. ADDITIONALLY, PUPILS WHO HAVE ANXIETY, ATTENTION, OR LEARNING CHALLENGES MAY STRUGGLE TO ADAPT TO THE DIFFERENT EXPECTATIONS AND FORMAT OF DIGITAL LEARNING.

HOWEVER, STAFF DID MENTION THAT LEARNING FROM DIGITAL DEVICES STILL ENABLED POSITIVE LEARNING OUTCOMES, TEACHING TECHNIQUES, AND METHODS.

"CFE EXPERIENCES AND OUTCOMES, BENCHMARKS, PROGRESSION PATHWAYS, SKILLS FOR LEARNING LIFE AND WORK, 4 CAPACITIES"

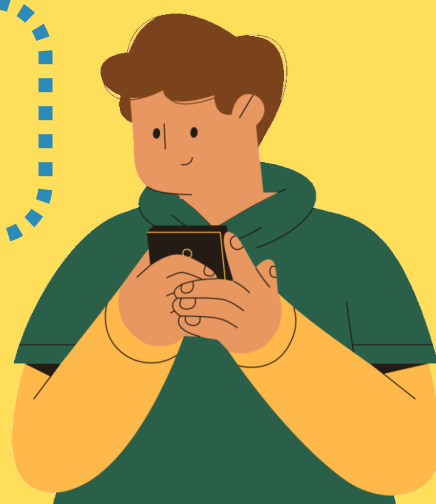
"BGE OUTCOMES ALTHOUGH WHEN USING COMPUTERS PUPILS DON'T ALWAYS HAVE THE NECESSARY SKILLS OR PATIENCE TO FULLY ENGAGE IN MICROSOFT OFFICE APPLICATIONS SUCH AS WORD, EXCEL OR POWERPOINT"

"ESSENTIALS CHECKLIST FROM THE DIGITAL SKILLS TOOLKIT, CFE TECHNOLOGIES, AND NATIONAL QUALIFICATIONS IN SEVERAL SUBJECTS"



90% OF STAFF AGREED THAT DIGITAL LEARNING PROMOTED INDEPENDENT LEARNING SKILLS, WHICH WAS IN LINE WITH 76% OF PUPILS RESPONDING TO RECEIVING MORE HELP AT THEIR DESK OVER THEIR COMPUTER. THIS SHOWS THAT DIGITAL LEARNING CAN INCREASE INNOVATION, INDEPENDANCE AND CONFIDENCE, ALL OF WHICH ENABLES PUPILS TO GAIN POSITIVE AND TRANSFERABLE SKILLS THAT THEY CAN UTILISE IN LIFE AND THE WORLD OF WORK.

HOWEVER, WITH THIS INDEPENDENCE THERE CAN ALSO COME DRAWBACKS, AS 90% OF STAFF IDENTIFIED THAT DIGITAL DEVICES CAN ALSO HAVE NEGATIVE IMPACTS ON PUPIL ENGAGEMENT AND BEHAVIOUR.



WHEN ASKED ABOUT THE RISKS THAT ARE ASSOCIATED WHEN USING DIGITAL DEVICES AND ACCESSING SOCIAL MEDIA THE PUPILS EXPRESSED THEIR UNDERSTANDING.

- 100% IDENTIFIED SEXUAL EXPLOITATION AND STANGER DANGER
- 87% IDENTIFIED ONLINE BULLYING AND VIOLENCE
- 75% IDENTIFIED FINANCIAL EXPLOITATION, DECREASED MENTAL WELLBEING AND OTHER INAPPROPRIATE MATERIAL

