BYOD at Wynberg Girls Junior School: A Parent-Led Research Review

Addressed to: Mrs Sharland and the WGJS School Governing Body **Prepared by:** The WGJS Parent Research Group, 2026
Presented in the spirit of the SFC School Organiser Playbook — respectful, evidence-based, and collaborative.

Dear Mrs Sharland and the WGJS School Governing Body,

We want to start by saying something we mean wholeheartedly: we are proud of Wynberg Girls Junior School. We are proud of the teachers who show up every day with dedication and heart. We are proud of the leadership that has steered this school with care and vision. And we are genuinely excited that WGJS wants to be forward-thinking — to prepare our daughters not just for the world as it is, but for the world as it will be.

That spirit of progress is exactly why we are here. Because we believe that moving forward wisely is more important than moving forward quickly.

When we first heard about the proposal to introduce personally-owned laptops — a Bring Your Own Device (BYOD) model — for use in class and at home, many of us had an immediate, instinctive concern. Not because we are resistant to technology. Not because we don't trust the school. But because, as parents, we have a responsibility to ask: *has this been done before, and how did it go?*

So we did what parents do. We started reading. We found studies from Sweden, Norway, South Korea, Peru, Ghana, India, Thailand, and more than twenty other countries. We found research from neuroscientists, educationalists, and child development experts. And what we found gave us pause.

Country after country — many of them far better resourced than South Africa, with faster internet, better-trained teachers, and years of preparation — have introduced laptops into primary school classrooms and then quietly, or sometimes very publicly, walked it back. Sweden reversed its policy. South Korea spent $2.1 billion over 14 years and then banned devices entirely in 2025. Norway's study of 15,708 students found "rather limited" learning benefits. Peru's programme showed no measurable improvement in literacy or maths after years of implementation.

We are not saying technology has no place in education. We are not saying WGJS is wrong to think about the future. We are saying: **let's look at what the evidence actually tells us before we ask our 10 to 12-year-olds to bring a laptop to school every day.**

This report is our attempt to bring that evidence together in one place — clearly, honestly, and without drama. We have tried to be fair. We have included the cases where technology has shown promise. We have also included alternatives that we believe could achieve the school's goals without the risks that a BYOD model carries.

We present this to you, Mrs Sharland and the SGB, not as a protest, but as a contribution. We are parents who want to be part of the conversation — and we hope you will see it that way too.

With respect, gratitude, and genuine hope for a great outcome for all our girls, *The WGJS Parent Research Group, 2026*

Headline Findings: What the Global Evidence Shows

Statistic	Detail
$30 Billion spent on school tech in the US over 20 years	With no consistent improvement in academic outcomes
114 countries now restrict phones in schools nationally	Up from just 24% in 2023 — now 58% of all countries worldwide (UNESCO, 2026)
14 Years — South Korea's digital classroom experiment	Ended with a complete nationwide classroom device ban in 2025, including personal laptops
15,708 students in Norway's tablet study	Found "rather limited effect on learning outcomes"
£50 Million — Sweden invested in physical textbooks	After reversing its world-leading digital education policy
80%+ of New Zealand students distracted by devices in class	Despite filters — most classes report significant digital distraction

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The Central Question

> ***"Why do we feel this is the right decision for Wynberg Girls Junior School?"***

Not a single country in this review demonstrated clear, sustained academic improvement from introducing personal BYOD laptops at primary school level. Countries with vastly greater resources, infrastructure, and teacher training than South Africa have tried, struggled, and reversed course. We owe it to our daughters to ask this question carefully — and to answer it honestly.

International Research: Country-by-Country Analysis

Listed in alphabetical order. All studies focus on personal laptop or BYOD programs at primary school level (ages approximately 6–13).

🇦🇺 Australia — Mixed / Cautious (2018–2026)

Australia's BYOD rollout produced mixed results. Distraction remained a persistent concern, and equity gaps emerged between students with newer versus older devices. South Australia has since mandated a 1:3 school-managed device ratio for primary schools by end of 2026, signalling a move away from unstructured BYOD.

Key Findings:

- Student distraction was a significant concern in BYOD classrooms (2024 study)
- Equity gaps emerged due to differences in device quality between families
- South Australia mandated a 1:3 school-managed device ratio for primary schools by 2026
- The Australian Association for Research in Education warned of links between screen use and poorer mental health

Source: Springer (2024); SA Dept. of Education (Feb 2026); AARE Blog (Nov 2025)

🇨🇦 Canada — Restricting / Mixed (2015–2026)

Every Canadian province now restricts smartphones in K-12 schools to varying degrees, though the Fraser Institute (2026) notes most policies "lack strength and efficacy." Ontario research found BYOD increased engagement but not academic outcomes. The gap between device access and learning improvement mirrors findings from other countries.

Key Findings:

- Every Canadian province now restricts smartphones in K-12 schools
- Fraser Institute (2026): most provincial phone policies “lack strength and efficacy”
- Ontario research: BYOD increased engagement but not academic outcomes
- Equity concerns persist as device quality varies significantly between families

Source: Fraser Institute (Apr 2026); People for Education — Ontario School Survey (2023)

🇨🇱 Chile — Structured Labs Only (2000–2026)

Chile’s experience illustrates a critical distinction: structured, school-managed computer lab sessions produced measurable learning gains, but distributing personal laptops to students without this structure yielded no academic improvement. The success was entirely dependent on intensive pedagogical structure — external coordinators, curriculum-aligned software, and fixed lab sessions.

Key Findings:

- Structured lab approach (2 × 90-min sessions/week) accelerated learning by ~50%
- Success required external coordinators and curriculum-aligned software
- Unstructured personal BYOD laptop distribution showed no academic gains (2026 study)
- Confirms that the laptop itself is not the determining variable — the pedagogy is

Source: Inter-American Development Bank (2018); Pavez & Farías (2026), Technology, Pedagogy and Education

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🇨🇳 China — Mixed / Limited Gains (2011–2020)

A randomised field experiment in Beijing’s migrant schools distributed OLPC laptops to 300 third-grade students. While computer skills improved significantly, there was no measurable improvement in academic subjects. The study concluded that a single training session and device distribution, without sustained pedagogical support, is insufficient to improve learning outcomes. China’s broader digital education push has since focused on teacher-led EdTech in structured settings rather than personal device ownership.

Key Findings:

- Randomised study: computer skills improved but no academic subject gains
- Single training session insufficient — sustained pedagogical support is essential
- China’s national policy shifted to teacher-led EdTech, not personal BYOD
- Digital divide between urban and rural students widened with device programs

Source: Mo, D. et al. (2013). Can One-to-One Computing Narrow the Digital Divide and the Educational Gap in China? World Development.

🇨🇿 Czech Republic — Mixed / Cautious (2015–2024)

Czech Republic’s digital education initiatives showed inconsistent results. Benefits were observed only in schools with strong teacher digital competence and structured integration plans. Without these conditions, devices added administrative burden without measurable academic benefit. The Czech Republic is also among countries now considering social media restrictions for under-16s.

Key Findings:

- Benefits only observed where teacher digital competence was high
- Devices added administrative burden in schools without structured integration
- No consistent improvement in core literacy or numeracy outcomes
- Now considering social media restrictions for under-16s (UNESCO, 2026)

Source: European Commission Digital Education Report (2023); UNESCO GEM Report (Mar 2026)

🇩🇰 Denmark — Reversing Course (2010–2025)

Denmark, one of the world's highest users of digital technologies in education, is now actively reversing course. Following Sweden's lead, Denmark is shifting back to analogue tools for core subjects at primary school age. Research cited by New Zealand's Paediatric Society notes that in both Sweden and Denmark, there is now a deliberate move to encourage handwriting and print reading at primary level.

Key Findings:

- One of the world's highest users of digital technologies in education
- Now actively shifting back to analogue tools for core subjects at primary level
- Research shows students remember and understand more from printed text than screens
- Joining Sweden in a "back to basics" movement driven by declining literacy scores

Source: The Education Hub NZ / Paediatric Society NZ (Mar 2025); UNESCO GEM Report (2023)

🇫🇮 Finland — Restricting Devices (2015–2025)

Finland, long celebrated as an education leader and early adopter of digital tools, restricted mobile phone use in classrooms from August 2025. Under the new rules, students may only use mobiles during class "for learning purposes or to take care of their own health." A PISA-based study using Finnish data found a causal link between intense device use and reduced learning outcomes.

Key Findings:

- Mobile phone use in classrooms restricted from August 1, 2025
- PISA-based study (Finland, Estonia, Spain): causal link between intense device use and reduced learning
- Effect persisted even with advanced teacher training and effective pedagogy
- Joining a growing European consensus that device time must be strictly limited

Source: The Guardian (Apr 30, 2025); The Education Hub NZ citing PISA data (2025)

🇫🇷 France — Banned / Restricted (2018–present)

France was among the first European nations to ban mobile phones in schools for students up to age 15, implementing the policy in 2018. In 2023, the government extended these restrictions, citing distraction, cyberbullying, and the need to protect the learning environment. UNESCO cited France's approach as a model for prioritising focus over indiscriminate technology use.

Key Findings:

- Mobile phone ban for students up to age 15 implemented in 2018
- Restrictions extended in 2023 citing distraction and cyberbullying
- UNESCO cited France as a model for protecting the learning environment
- Further legislation under consideration to tighten digital restrictions for young people

Source: UNESCO Global Education Monitoring Report (2023); French Ministry of National Education (2023)

🇩🇪 Germany — Banning in Multiple States (2018–2026)

Germany's decentralised education system has seen multiple federal states ban smartphones in primary schools. Bavaria, Saarland, and Thuringia have outright bans. Brandenburg, Bremen, Hesse, and Schleswig-Holstein have tightened regulations. The stated aim is to "eliminate cell phone use from schools in order to promote concentration and strengthen the social skills of children and young people."

Key Findings:

- Bavaria, Saarland, and Thuringia have outright smartphone bans in primary schools
- Brandenburg, Bremen, Hesse, and Schleswig-Holstein have tightened regulations
- Stated aim: promote concentration and strengthen social skills
- Trend is accelerating across German states as evidence of harm mounts

Source: UNESCO GEM Report (Mar 2026); German State Education Ministries (2024–2026)

🇬🇭 Ghana — Failed / Terminated (2007–2015)

Ghana piloted a One Laptop Per Child Policy (OLPCP) to foster student interest in ICT in basic schools. The programme was terminated in the early 2010s due to political reasons and failure to demonstrate educational impact. A 2015 University of Ghana study found that while user-friendly laptops and qualified instructors improved ICT knowledge, the programme was severely hampered by lack of infrastructure, unreliable power supply, and a shortage of qualified tutors — challenges that are directly relevant to the South African context.

Key Findings:

- OLPC programme terminated due to political reasons and lack of demonstrated educational impact
- Lack of infrastructure and unreliable power supply were cited as major barriers
- Shortage of qualified ICT tutors undermined programme goals
- Findings directly mirror challenges faced across sub-Saharan Africa, including South Africa

Source: Owusu-Ansah, S. & Asante, E. (2015). One Laptop Per Child Policy in Ghana: Any Impact on Teaching and Learning? Library Philosophy and Practice.

🇮🇳 India — Failed / Stalled (2010–2022)

India's Aakash tablet program (2011–2014), designed to provide low-cost tablets to 220 million students, was plagued by procurement failures, poor device quality, and lack of teacher training. The program was effectively abandoned. Multiple state-level BYOD and EdTech initiatives have similarly stalled due to infrastructure gaps — only 24% of rural Indian schools had reliable electricity as of 2021.

Key Findings:

- Aakash tablet program (220 million students targeted) effectively abandoned by 2014
- Only 24% of rural Indian schools had reliable electricity as of 2021
- Multiple state-level BYOD initiatives stalled due to infrastructure gaps
- UNESCO: connectivity, power, and teacher readiness are the binding constraints

Source: UNESCO (2023); World Bank EdTech India Review (2022); Aakash Program Assessment, IIT Delhi (2014)

🇰🇪 Kenya — Failed / Stalled (2013–2021)

Kenya's Digital Literacy Programme (DLP), launched in 2013, aimed to provide every Standard 1 pupil with a laptop. The programme was plagued by infrastructure failures, teacher training gaps, and device maintenance problems. A 2021 EdTech Hub / World Bank review found the programme had not achieved its learning objectives. Many devices remained unused in school storerooms due to lack of electricity, broken screens, and absent technical support.

Key Findings:

- Devices frequently unused due to lack of electricity and broken screens
- Teacher training was inadequate and inconsistently delivered
- EdTech Hub / World Bank (2021): programme did not achieve its learning objectives

- Infrastructure and maintenance costs far exceeded initial projections

Source: Myers, C., Kaye, T., Bapna, A., Williams, A. & Mitchell, J. (2021). Country-Level Research Review: EdTech in Kenya. EdTech Hub / World Bank.

🇲🇾 Malaysia — Mixed / Cautious (2012–2023)

Malaysia's 1BestariNet project (2012–2019) aimed to connect all 10,000 government schools with 4G internet and provide virtual learning environments. The project was plagued by connectivity failures, with many rural schools receiving no usable connection. A 2019 Auditor-General's report found the project had not achieved its educational objectives and represented poor value for money.

Key Findings:

- 1BestariNet (2012–2019): 10,000 schools targeted, widespread connectivity failures
- 2019 Auditor-General's report: project did not achieve educational objectives
- Rural schools received no usable connection despite government investment
- Shifted to teacher-led EdTech integration after programme failures

Source: Malaysian Auditor-General's Report (2019); UNESCO GEM Report (2023)

🇳🇱 Netherlands — National Ban from 2024 (2019–2024)

The Netherlands introduced a national ban on smartphones in primary schools from Easter 2025, covering all children up to age 11. The Dutch education ministry cited distraction and the need to protect learning time. The ban extends to tablets and smartwatches in primary classrooms, making it one of the most comprehensive device restrictions in Europe.

Key Findings:

- National smartphone ban in primary schools for children up to age 11 from Easter 2025
- Ban extends to tablets and smartwatches in primary classrooms
- Education ministry cited distraction and protection of learning time
- One of the most comprehensive primary school device restrictions in Europe

Source: Euronews (Dec 2024); Dutch Ministry of Education (2024)

🇳🇿 New Zealand — Reversing / Restricting (2012–2025)

New Zealand has among the highest screen time rates for children globally. Over 80% of students report feeling distracted by digital devices in some, most, or every class. The Paediatric Society of New Zealand issued comprehensive research-based guidelines in 2025 recommending strict limits on device use in primary schools, citing risks to eye health, cognition, and learning outcomes.

Key Findings:

- Over 80% of NZ students report feeling distracted by personal laptops and devices in class
- NZ teenagers average 42 hours of screen time per week — above the international average of 35
- Paediatric Society NZ (2025): frequent personal laptop and device use associated with poorer learning outcomes
- Learning apps and online homework associated with reduced outcomes in NZ research

Source: The Education Hub NZ / Paediatric Society NZ (Mar 2025)

🇳🇴 Norway — Limited Benefit (2015–2021)

A large-scale 2021 study involving 15,708 Norwegian primary school students found “rather limited effect on pupils learning outcome” from tablet implementation. Any positive effects were highly dependent on exceptional teacher digital competence. Researchers suggested some benefits were “spillover effects” from informal learning outside school, not classroom instruction.

Key Findings:

- 15,708-student study found “rather limited effect on learning outcomes”
- Positive effects only appeared when teachers had exceptional digital competence
- Some benefits may be “spillover effects” from gaming and YouTube, not classroom use
- English gains for boys likely attributable to informal screen time outside school

Source: Krumsvik, Berrum & Jones (2021), Frontiers in Education

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🇵🇪 Peru — Failed (2007–2025)

Peru’s One Laptop Per Child (OLPC) program is one of the most extensively studied educational technology initiatives globally. Over seven years across 531 rural schools, the program resulted in no improvement in mathematics or reading scores. A 2025 long-term follow-up confirmed these findings. The Inter-American Development Bank concluded that simply distributing personal laptops for EdTech use is ineffective without profound pedagogical transformation.

Key Findings:

- 7-year study across 531 rural schools: no improvement in maths or reading
- 2025 long-term follow-up confirmed no positive impact on educational outcomes
- IADB concluded: “Handing out laptops is not enough to improve student learning”
- Laptops were used primarily for entertainment, not learning

Source: Inter-American Development Bank (2018); VoxDev (Apr 2025)

🇵🇹 Portugal — Failed / Suspended (2008–2011)

Portugal’s e-Escolinha programme (2008–2011) distributed “Magalhães” laptops to nearly 500,000 primary school children (Grade 1–4). The programme was suspended in 2011. Research from the University of Minho found a significant gap between the political rhetoric of “revolutionising” education and the reality: children primarily used devices for entertainment, and teachers lacked the training to integrate them meaningfully.

Key Findings:

- Nearly 500,000 Magalhães laptops distributed to Grade 1–4 students (2008–2011)
- Programme suspended in 2011 after failing to demonstrate academic benefits
- University of Minho research: children used devices primarily for entertainment
- Significant gap between political rhetoric and educational reality

Source: Pereira, S., Pereira, L. & Melro, A. — University of Minho (2012); European Schoolnet Briefing Paper

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🇷🇴 Romania — Failed (2008–2010)

A landmark randomised study in Romania examined children whose families won government vouchers to purchase computers. After one year, children in voucher-winning families had lower school grades in Mathematics, English, and Romanian compared to the control group. This is one of the few truly randomised studies of home computer access for school-age children, and its findings are stark: unsupervised home computer access actively harmed academic performance.

Key Findings:

- Randomised study: children with computer vouchers scored lower in Maths, English, and Romanian
- One of the only truly randomised studies of home computer access for school children
- Unsupervised home computer access actively harmed academic performance
- Children used computers primarily for games and entertainment, not schoolwork

Source: Malamud, O. & Pop-Eleches, C. (2011). Home Computer Use and the Development of Human Capital. Quarterly Journal of Economics.

🇷🇺 Russia — Mixed / Diminishing Returns (2018–2021)

A large-scale randomised evaluation by J-PAL Europe studied 6,000 third-grade students across 343 Russian primary schools. Computer-assisted learning (CAL) at low intensity (20–25 minutes/week) improved maths and language test scores modestly. However, doubling the time spent on CAL produced no additional gains — and for language scores, the effect dropped to near zero. Researchers concluded that substituting traditional learning with EdTech too heavily is a "misguided policy due to diminishing gains."

Key Findings:

- 6,000 students, 343 schools: low-intensity CAL improved scores modestly
- Doubling CAL time produced no additional academic gains
- Language score improvement dropped to near zero at high intensity
- J-PAL conclusion: "substituting traditional learning with CAL too much may be misguided"

Source: Bettinger, E., Fairlie, R. & Loyalka, P. (2021). Diminishing Marginal Returns to Computer-Assisted Learning. J-PAL Europe / NBER.

🇿🇦 South Africa — Significant Barriers (2013–2026)

South Africa's digital education landscape is characterised by profound inequality. While fee-paying independent schools in urban areas have successfully integrated technology, the vast majority of South African schools face severe infrastructure challenges. Only 22% of public schools had reliable internet access as of 2023 (DBE). A 2022 study on BYOD in South African secondary schools found significant digital divide issues across three levels: digital access, digital capability, and digital outcome. Researchers consistently warn that BYOD policies in South Africa risk entrenching existing socioeconomic inequalities rather than reducing them.

Key Findings:

- Only 22% of South African public schools had reliable internet access (DBE, 2023)
- BYOD research (2022): significant digital divide across access, capability, and outcome
- COVID-19 exposed profound e-learning inequality — many learners unable to participate
- Researchers warn BYOD risks entrenching socioeconomic inequalities, not reducing them

Source: Adhikari, J. et al. (2022). BYOD Classrooms: Issues of Digital Divide. Emerald Publishing; DBE Annual Report (2023); The Conversation (2020).

🇰🇷 South Korea — Reversed After 14 Years (2011–2026)

South Korea, a global leader in digital infrastructure, invested $2.1 billion in 2011 to build an all-digital scholastic network. After a 14-year experiment, the country passed a nationwide ban on mobile phones and digital devices in classrooms in August 2025, effective March 2026. An ambitious AI textbook program was abandoned after just four months. If the world's most digitally advanced nation reversed course, this is a powerful signal for all countries considering similar programs.

Key Findings:

- $2.1 billion invested in 2011 for all-digital scholastic network

- Nationwide classroom personal device ban passed August 2025, effective March 2026
- AI textbook program abandoned after just 4 months
- 70% of teachers reported personal student devices caused significant classroom disruptions

Source: Reuters (Aug 2025); EdWeek (2011)

🇸🇪 Sweden — Reversed (2012–2023)

Once considered the world's most digitalized education system, Sweden has fundamentally reversed its approach. A 2024 study using national standardized test data found that 1:1 computer programs had no significant effects on student performance in primary schools. In 2023, Schools Minister Lotta Edholm initiated a "back-to-basics" policy, investing £50 million in physical textbooks. The Karolinska Institute stated there is "clear scientific evidence that digital tools impair rather than enhance student learning."

Key Findings:

- National study (2024): 1:1 computer programs had no significant effect on performance
- Schools Minister initiated "back-to-basics" policy in 2023
- £50 million invested in physical textbooks to replace digital tools
- Karolinska Institute: "clear scientific evidence that digital tools impair learning"

Source: Hall & Lundin (2024), Economics of Education Review; The Guardian (Sep 2023)

🇹🇭 Thailand — Failed / Terminated (2012–2014)

Thailand's One Tablet Per Child (OTPC) program distributed tablets to all Prathom 1 (Grade 1) students nationwide — approximately 800,000 tablets in total. The program was terminated by the incoming government in 2014 after just two years. Research identified four major challenges: poor usability design for young children, inadequate teacher support, absence of curriculum-aligned content, and no mechanism for assessing learning outcomes.

Key Findings:

- 800,000 tablets distributed to Grade 1 students nationwide
- Program terminated after just 2 years by incoming government
- Four critical failures: usability, teacher support, curriculum alignment, assessment
- Widely cited as a cautionary example of top-down EdTech without pedagogical grounding

Source: Viriyapong, R. & Harfield, A. (2013). Facing the challenges of the One-Tablet-Per-Child policy in Thai primary schoo education. IJACSA.

🇺🇸 United States — Failed / Cautionary (2002–2026)

Despite a $30 billion investment over two decades, the US experience serves as a major cautionary tale. Generation Z is the first modern generation to score lower on standardized tests than the previous generation. Maine's 2002 laptop program was labeled a "massive failure" after 15 years of stagnant test scores. A behavioral study found nearly two-thirds of laptop time was spent on unrelated activities. 39 US states now have statewide bans or regulations restricting phone use in schools.

Key Findings:

- $30 billion invested over 20 years with no consistent academic improvement
- Gen Z: first modern generation to score lower on standardised tests than predecessors
- Maine's 2002 laptop program labeled a "massive failure" after 15 years
- 39 US states now have statewide bans or regulations restricting phone use in schools

Source: TechSpot (Feb 2026); US Senate testimony, Jared Cooney Horvath (2026); UNESCO GEM Report (Mar 2026)

🇺🇾 Uruguay — Mixed Results (2007–2022)

Uruguay's Plan Ceibal was one of the world's first nationwide 1:1 laptop programs for primary school students. While it achieved near-universal device access, studies showed no significant improvement in reading or mathematics scores. Some positive effects were observed in digital literacy, but these did not translate into broader academic gains.

Key Findings:

- One of the world's first nationwide 1:1 laptop programs for primary schools
- Near-universal personal laptop access achieved, but no significant improvement in core scores
- Some digital literacy gains observed, but no broader academic improvement
- Highlighted the gap between personal laptop access and meaningful learning outcomes

Source: Inter-American Development Bank (2018); Cristia et al. (2017), American Economic Journal

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Child Development & the Laptop Question: What the Science Tells Us

Before we ask whether introducing personal laptops for EdTech at primary school level will improve learning outcomes, we need to ask a more fundamental question: what does the developmental science tell us about what children aged 10–12 actually need? The research is extensive, consistent, and — in many ways — deeply cautionary.

🧠 Brain Development & The Critical Window

Children aged 10–12 are in one of the most sensitive periods of brain development. The prefrontal cortex — responsible for planning, decision-making, and impulse control — is still actively forming. Neuroscientists at the Norwegian University of Science and Technology found that handwriting produces far greater brain connectivity than typing, activating visual, motor, and cognitive networks simultaneously. Introducing personal laptops for EdTech at this stage risks displacing the very activities that build the neural architecture children will rely on for the rest of their lives.

> *"If young children are not receiving any handwriting training, which is very good brain stimulation, then their brains simply won't reach their full potential." — Audrey van der Meer, Professor of Neuropsychology, NTNU Norway*

Sources: van der Meer & van der Weel, Frontiers in Psychology (2023); Bounds, NPR Health Shots (May 2024)

✍️ Handwriting vs. Laptop Note-Taking: What the Science Says

The landmark 2014 Princeton/UCLA study by Mueller & Oppenheimer (cited 2,378 times) found that students who took notes on laptops performed significantly worse on conceptual questions than those who wrote by hand — even when laptop users wrote more words. The reason is cognitive: typing encourages verbatim transcription, while handwriting forces the brain to process, summarise, and encode information more deeply. A 2019 replication by Morehead et al. confirmed the encoding advantage of longhand. For primary school children aged 10–12, this is not a minor distinction — it is the difference between surface learning and genuine understanding.

> *"Laptop note takers' tendency to transcribe lectures verbatim rather than processing information and reframing it in their own words is detrimental to learning." — Mueller & Oppenheimer, Psychological Science (2014)*

Sources: Mueller & Oppenheimer, Psychological Science (2014); Morehead et al., Educational Psychology Review (2019); Frangou et al., Research in Learning Technology (2019)

🎯 Attention, Distraction & the Laptop Effect

Multiple classroom studies have documented that personal laptops are a significant source of distraction, even when used for intended educational purposes. A 2014 study by Sana et al. found that students seated near laptop users — not just those using them — performed worse on tests, demonstrating a distraction spillover effect. Research published in the Journal of Education &

Human Development (Goundar, 2014) found that 72% of students admitted to using laptops for non-academic purposes during class. For children aged 10–12, whose prefrontal cortex is still developing the capacity for self-regulation, the temptation of an internet-connected personal laptop at home and school is not a matter of willpower — it is a neurological reality.

> *"The presence of a laptop — even a neighbour's — significantly impairs a student's ability to focus and retain information." — Sana, Weston & Cepeda, Computers & Education (2013)*

Sources: Sana et al., Computers & Education (2013); Goundar, Journal of Education & Human Development (2014); Santos et al., Developmental Neuropsychology (2022)

😴 Sleep Disruption & Blue Light Exposure

If children are expected to use personal laptops for homework, screen use will inevitably extend into the evening hours. This has serious physiological consequences. Research published in ScienceDaily (2012) demonstrated that just two hours of exposure to backlit screens suppresses melatonin production — the hormone that regulates sleep onset. A 2023 study in Chronobiology International confirmed that blue light exposure delays sleep and reduces total sleep duration in school-aged children. The WHO recommends 9–11 hours of sleep per night for children aged 10–12. Sleep deprivation at this age is directly linked to impaired memory consolidation, reduced attention, lower academic performance, and increased anxiety.

> *"Two hours of exposure to backlit displays causes melatonin suppression, which might lead to delayed bedtimes and disrupted sleep cycles in children." — Harvard Medical School / ScienceDaily (August 2012)*

Sources: Harvard Medical School / ScienceDaily (2012); Randjelovic´et al., Chronobiology International (2023); WHO Sleep Guidelines for School-Age Children (2020)

🦴 Physical Health: Posture, Eyestrain & Musculoskeletal Risk

Children's bodies are still growing, and sustained laptop use carries documented physical risks. A literature review published in the Journal of Science Education and Technology (Binboğa & Korhan, 2014) found that children using laptops for educational purposes frequently adopt sustained, awkward postures associated with musculoskeletal disorders. The "tech neck" phenomenon — where children bend their heads forward to view screens — places up to 27kg of force on the cervical spine, compared to 4–5kg in neutral posture. Digital eyestrain — characterised by headaches, blurred vision, and dry eyes — is now recognised by the American Optometric Association as a condition affecting children who use screens for extended periods.

> *"School children spend nearly 30% of their day at school. Use of mobile technologies for educational purposes may have negative impacts on musculoskeletal health if not carefully managed." — Binboğa & Korhan, Journal of Science Education and Technology (2014)*

Sources: Binboğa & Korhan, Journal of Science Education and Technology (2014); Warda et al., Healthcare (2023); American Optometric Association, Digital Eye Strain Report (2022)

👥 Social Development & the Risk of Screen-Mediated Childhood

Ages 10–12 are a critical period for the development of social skills, empathy, and peer relationships — skills built primarily through face-to-face interaction, collaborative play, and unmediated conversation. Jonathan Haidt, social psychologist and author of *The Anxious Generation*, has documented extensively how screen-based interaction displaces the real-world social experiences children need during this developmental window. A BYOD laptop programme that extends screen time into both school hours and homework time further erodes the time available for these interactions.

> *"We are running an uncontrolled experiment on an entire generation. The costs are not hypothetical — they are showing up in anxiety, depression, and social disconnection." — Jonathan Haidt, Social Psychologist, New York University*

Sources: Haidt, The Anxious Generation (2024); Fairlie & Kalil, Economics of Education Review (2017); Children and Screens Institute Research Summary (2024)

The Bottom Line for Ages 10–12

The developmental science does not say that technology is the enemy of education. It says that the timing, context, and type of technology use matters enormously. For children aged 10–12, the evidence points clearly toward protecting handwriting, limiting passive screen time, preserving face-to-face social interaction, and ensuring adequate sleep — all of which are placed under pressure by the introduction of personal laptops for EdTech at primary school level.

This is not a Luddite position. It is a position grounded in neuroscience, developmental psychology, and the hard lessons learned by countries that moved fast and are now moving back. We believe our children deserve decisions made on the basis of this evidence — and we believe WGJS leadership, whom we trust deeply, would want to weigh it carefully too.

Expert Voices

From a panel discussion featuring Jonathan Haidt, Sophie Winkleman, and Hugh Grant. Watch the full discussion: https://youtu.be/x_MATOD7Axs

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> *"With education clearly, it's overwhelmingly evidentially clear now that children learn less well on screens than they do with pencil and paper and textbooks." — **Hugh Grant**, Actor & Parent (30:01)*

> *"The people who made this technology, they send their kids, a lot of them send their kids to the Waldorf school or other schools precisely because they do not allow technology in the classroom. The tech CEOs don't want their kids using Edtech." — **Jonathan Haidt**, Social Psychologist, Author of 'The Anxious Generation' (07:42)*

> *"A UCL study by John Jerram involving 3,000 pupils taking PISA tests — half worked on paper, half on computers for six months. The computer-based group did 20 scaled score points lower than the paper-based group. The paper-based group had six months' additional learning." — **Sophie Winkleman**, Author & Education Advocate (28:27)*

> *"If something cognitive snaps, it needs a period of reflection and absorption. If you're learning on the screen you don't get that time, you don't get that downtime. So the learning stays incredibly superficial." — **Sophie Winkleman**, Author & Education Advocate (25:27)*

> *"AI removes effort. It removes friction — which is critical for learning. It takes time. Some of it's boring, some of it's frustrating. Some of it's just hard. And that's really vital." — **Jonathan Haidt**, Social Psychologist (Timestamp approx. 25:00)*

> *"Imagine if we had spent all that money on teachers… Our kids would know so much more. All those lines of dropping test scores around the world would have gone up instead." — **Jonathan Haidt**, Social Psychologist (37:34)*

> *"IT lessons are fine, but every other subject should be handwritten, with books and teacher-led." — **Sophie Winkleman**, Author & Education Advocate (11:41)*

> *"Teachers are so overworked with behavioural problems, probably caused by social media… And they're saying: 'Children aren't learning this way. All my job is now is to be a centurion, walking around the screen saying, Get back on task.'" — **Sophie Winkleman**, Author & Education Advocate (35:42)*

Evidence-Based Alternatives: We Come With Solutions

We are not simply raising objections. We propose the following alternatives, each supported by international research, for the SGB's consideration.

✅ Keep and Strengthen the Existing Device Trolley — What WGJS Already Has

WGJS already has a shared laptop trolley that teachers can book for structured, curriculum-aligned lessons. This is exactly the model that international research supports. Rather than replacing it with a BYOD personal laptop programme, we propose investing in maintaining, upgrading, and expanding this resource — keeping the school in control of the digital environment.

The Evidence: Research from Chile, Norway, and Australia consistently shows that school-managed, teacher-directed laptop use in structured sessions outperforms unstructured personal BYOD laptop access. The trolley model eliminates equity gaps, security risks, and the distraction of personally-owned devices.

Source: Inter-American Development Bank (2018); Krumsvik et al. (2021); SA Dept. of Education (Feb 2026)

🖥️ Invest in and Upgrade the Computer Lab — The Chile Model

Maintain and upgrade dedicated computer labs where digital skills are taught systematically in structured, teacher-led sessions. This ensures equitable access to identical equipment, keeps the primary classroom focused on foundational learning and handwriting, and allows the school to control software, content, and screen time.

The Evidence: Chile's structured lab approach (2 × 90-min sessions/week with curriculum-aligned software) accelerated learning by approximately 50% compared to control groups — far outperforming any BYOD program studied.

Source: Inter-American Development Bank (2018)

👩‍🏫 Invest in Teacher Technology Training First — The Norway Finding

Focus investment on equipping and training all WGJS teachers with the best available technology and pedagogical support before introducing personal BYOD laptops to students. Every study reviewed confirms that teacher digital competence — not student laptop ownership — is the critical variable in determining whether EdTech improves learning.

The Evidence: Norway's 15,708-student study found that positive outcomes only appeared in classrooms where teachers had exceptional digital competence. The device itself was not the determining factor — the teacher's skill was.

Source: Krumsvik et al. (2021), Frontiers in Education

⏳ Delay Personal Devices Until High School — The Sweden, South Korea & Denmark Conclusion

Focus primary education (ages 10–12) on robust foundational skills, handwriting, and face-to-face collaboration. Delay the introduction of personal 1:1 BYOD laptops for EdTech use until Grade 8 or high school, when students have the cognitive maturity to use them productively and responsibly.

The Evidence: Neuroscience research shows handwriting activates brain areas critical for reading and memory formation in ways typing does not. Children aged 10–12 are in a critical developmental window for these foundational skills that cannot be recovered later.

Source: van der Meer (2024), NPR; Hall & Lundin (2024), Economics of Education Review

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This report was compiled by the WGJS Parent Research Group, 2026. It is presented in the spirit of the SFC School Organiser Playbook — respectful, evidence-based, and collaborative. We trust and support Mrs Sharland and the WGJS SGB in making the best possible decisions for our children.