

Written evidence submitted by NASUWT - The Teachers' Union

Executive Summary

- International evidence finds a negative relationship between frequent internet use out of school and performance in science in the UK.
- An examination of the relationship between evidence about the use of technology in the classroom and student outcomes suggests that some devices are associated with positive student outcomes, but the association depends on contextual factors. Also, technology 'in the hands of the teacher' is critical to the relationship between the use of technology in the classroom and positive learning outcomes.
- However, there is a lack of robust evidence about technology's contribution to education, with much of the existing evidence about the benefits of technology being funded by technology companies that gain commercial benefit from the use of that technology.
- High levels of screen time are associated with higher levels of depression and anxiety.
- If children are to benefit from distance learning, there needs to be a focus on developing their metacognition and self-regulation skills which has implications for what is included in the curriculum.
- The relationships, sex and health education (RSHE) curriculum is the main means for addressing digital safety through the curriculum. Very few RSHE teachers have a recognised RSHE qualification.
- The effective use of technology in classrooms requires significant investment in teachers' training and professional development. However, teachers struggle to access high quality continuing professional (CPD), with workload, lack of cover and the cost to the school being the main barriers to them undertaking CPD.
- While technology offers opportunities for personalisation and inclusion, initiatives that target disadvantaged groups are often not sustained. There is a significant risk that AI and digital technologies will widen the divide between the advantaged and disadvantaged.
- Smartphones and computers can disrupt pupils' learning at home and in the classroom. It can take up to 20 minutes for pupils to refocus on what they were learning after engaging in a non-academic activity.

- Many schools do not implement behaviour policies consistently.

How screen time can support and impact on children’s development, wellbeing and educational outcomes:

1. NASUWT interprets screen time broadly to include children’s use of digital devices in school and at home, and for social and leisure use, as well as for educational purposes. This covers the use of a wide range of devices from smartphones, tablets and personal computers to digital platforms, social media apps, and the use of AI-enabled tools.
2. International evidence finds a significant rise in internet use among 15-year-olds both at school and outside school. An analysis of PISA results found that internet use per week increased from 21 hours to 29 hours across OECD countries over the period 2012 to 2015, with most of this increase concentrated on school days.¹ The analysis also finds that there is a negative relationship between internet use outside of school and performance in science education in most countries, with students from the UK who are frequent users of the internet doing least well.² PISA cannot explain the reasons for these relationships as this would require more detailed research. This means, for instance, that it is not clear whether the cause of low performance in science is frequent use of the internet or other factors.
3. An analysis of PISA 2018 data, which examines the relationship between the use of technology in the classroom and student outcomes, identifies five themes: the type of device matters (some devices are associated with better outcomes); geography matters (for example, there are positive impacts regarding interactive whiteboard use and outcomes in the EU and Europe, but negative elsewhere); who is using the technology matters (student scores are notably higher when the technology is in the hands of teachers); intensity of technology use matters (students who use technology intensely or not at all perform better than those with moderate use); and a school system’s current performance level matters (technology is associated with poorer results in lower performing systems).³ However, the article also stresses the need to handle PISA data with care and to interpret it alongside other studies.⁴

¹ Echazarra, A. (2018), "How has Internet use changed between 2012 and 2015?", *PISA in Focus*, No. 83, OECD Publishing, Paris, <https://doi.org/10.1787/1e912a10-en>.

² Ibid.

³ Bryant, J.; Child, F.; Dorn, E.; and Hall, S (June 2020) *New global data reveal education technology’s impact on learning*. McKinsey and Company. Available at: <https://www.mckinsey.com/industries/education/our-insights/new-global-data-reveal-education-technologys-impact-on-learning>

4. While it is important to examine contextual factors when considering whether digital technologies and screen time have a positive or adverse impact on development, wellbeing and learning outcomes, the analysis suggests that factors such as teachers' and students' familiarity with the technology and how well the technology is integrated into the classroom and teaching influences outcomes. This raises important issues about teacher training and professional development, teachers' time for planning and preparation and the nature of the school curriculum.
5. The Chartered College of Teaching (CCT) published a review of literature about effective approaches to distance learning in response to the Covid-19 pandemic.⁵ The report summarises existing research literature on effective approaches to distance learning. It finds that lack of access to digital learning is an issue – that attainment gaps between advantaged and disadvantaged pupils are widening and, whilst online learning provides opportunities for personalisation, there are numerous challenges, including ensuring that the technological infrastructure is in place. The review highlights the importance of developing a student's metacognition and self-regulation skills at an early age so that they can benefit from remote education, while stressing that this is a long-term process. Further, the review stresses the importance of focusing first on pedagogy before making decisions about the use of technology.
6. The review findings have implications for what is included in the curriculum. However, they also raise wider questions about how schools are resourced and supported to develop and utilise technology in education in ways that are inclusive and accessible to all children.
7. The CCT's review of literature identifies challenges relating to children's social interaction and distance learning.⁶ Some groups of children are identified as being at particular risk, including younger children and those with autistic spectrum conditions (ASC). Factors such as disrupted routines, non-educational screen time and limited social contact are identified as impacting negatively on children's social and emotional

⁴Ibid.

⁵ Muller, Lisa-Marie; and Goldenberg, Gemma (November 2021) *Education in times of crisis: effective approaches to distance learning - a review of the evidence on supporting all students' learning, wellbeing and engagement*. London: Chartered College of Teaching. Available at: <https://chartered.college/2021/11/05/chartered-college-of-teaching-publishes-final-education-in-times-of-crisis-report/>.

⁶ Ibid.

development – with this leading to changes in behaviour and emotions, such as emotional outbursts, depression and new behaviours.⁷

8. These findings are supported by a BMC Psychology paper on screen time use and the mental health of children.⁸ The research finds a positive association between high screen-time use during the Covid-19 pandemic and depressive symptoms and levels of anxiety.
9. The Global Education Monitoring (GEM) report 2023 focuses on technology in education.⁹ The report urges caution when seeking to evaluate technology's contribution to education, pointing to the lack of robust evidence about its impact on learning. It also highlights concerns about the independence of evaluations, finding that commercial providers often commission their own positive evaluations about the impact of their technologies. For instance, the company Pearson is cited as adopting such practice.¹⁰
10. The GEM report looks at the use of technology and its impact on equity and inclusion, noting that interventions are often small scale and are not state-led, which has implications for sustainability. This reflects NASUWT's concern about initiatives to address inequalities and disadvantage in relation to digital technologies and access to quality education more generally. For instance, the Electronic Learning and Mobility Project (ELAMP), which ran over the period 2003 to 2010, provided laptops and mobile connections to enable highly mobile Traveller children to engage in education while travelling. The project demonstrated a range of positive outcomes.¹¹ However, cuts to local authority funding, and other government policy decisions, resulted in the closure of the network of Traveller Education Services that played a critical role in supporting and delivering education through the project.
11. Research and evaluations about the impacts of technology in classrooms often overlook the impacts on pupils' behaviour. However, smartphones and computers are identified as disrupting classroom and home learning activity leading to a decline in performance.¹²

⁷ Ibid.

⁸ Hmidan, A., Seguin, D. & Duerden, E.G. *Media screen time use and mental health in school aged children during the pandemic*. *BMC Psychology* 11, 202 (2023).

<https://doi.org/10.1186/s40359-023-01240-0>

⁹ UNESCO (2023). *Global Education Monitoring Report 2023 – Technology in education – A tool on whose terms?* Paris, UNESCO.

¹⁰ UNESCO (2023). Ibid, Chapter 4: Teaching and learning.

¹¹ D'Arcy K. (2012). *Research in Learning Technology*, 20. 'Learning and digital inclusion: the ELAMP project'. Available at: <https://journal.alt.ac.uk/index.php/rlt/article/view/1311>

¹² UNESCO (2023) Op. cit. Chapter 4: Teaching and Learning.

The decline is associated with increased distraction and time spent on non-academic activities during learning hours. It can take up to 20 minutes for pupils to refocus on what they were learning after engaging in a non-academic activity such as using a phone or browsing the internet.¹³

12. NASUWT has identified 12 principles for the ethical design, development, procurement and implementation of AI and digital technologies in education. The principles, which can be found at <https://www.nasuwt.org.uk/advice/in-the-classroom/artificial-intelligence-and-digital-technologies.html>, provide a framework for judging whether digital technologies are being developed and used appropriately and effectively. The principles address the roles, needs and rights of teachers and leaders, as well as rights and needs of learners. They address issues that are critical when forming a holistic judgement about the impact of screen time on children's development, wellbeing and educational outcomes. We pick up some of these issues in our response to the questions about the effectiveness of digital safety education and the support that schools and parents need to better manage children's screen use, and how screen usage for academic purposes in being managed in schools.

The effectiveness of digital safety education in schools and the ways that schools and parents can be better supported to manage children's screen usage.

13. Digital safety education should be addressed through the formal curriculum but also through the wider school culture, including its policies, procedures and practices. Therefore, there is a need to consider whether digital safety education is addressed effectively through the curriculum, through policies and procedures and the implementation of those policies and procedures.
14. The RSHE curriculum is the main means for schools to address digital safety through the curriculum. The statutory guidance on RSHE¹⁴ requires schools to teach about online safety and outlines the factors that should be addressed as part of this. However, the focus of the guidance is on safety and on responsible and respectful relationships. It

¹³ UNESCO (2023) Ibid.

¹⁴ DfE. *Relationships Education, Relationships and Sex Education, and Health Education: Statutory guidance for governing bodies, proprietors, headteachers, principals, senior leadership teams, teachers* available at: <https://www.gov.uk/government/publications/relationships-education-relationships-and-sex-education-rse-and-health-education>

does not address the issue of the amount of time that pupils might spend online and potential impacts arising from that time.

15. The statutory guidance for the RSHE curriculum makes reference to sources of information to support teaching about digital safety. These sources focus on online safety rather than on addressing broader issues related to time spent online. It is possible that teachers of subjects such as Citizenship education or PSHE will address this issue through their teaching, but that will be down to the individual teacher or school.
16. NASUWT has significant concerns about the teaching of RSHE arising from its status within the school curriculum, the time allocated to RSHE teaching or to PSHE or Citizenship education which align most closely with RSHE education. Feedback from teachers indicates that RSHE is most likely to be taught by class teachers, typically as a part of a tutorial rather than as a subject taught by a subject specialist, for instance, a PSHE or Citizenship specialist.
17. Data from the School Workforce Census does not cover RSHE specialists, but it does cover Citizenship specialists. This finds that just 8.5% of those teaching Citizenship have at least a relevant A-level in the subject.¹⁵ Therefore, most RSHE teaching is being undertaken by non-specialists.
18. NASUWT has concerns about teachers' lack of entitlement and access to high-quality CPD. Ninety-one percent of respondents to our annual Big Question Survey think that teachers should have a contractual entitlement to CPD.¹⁶ However, the average amount of time spent on CPD within contracted hours was 14 hours in the previous year, with teachers reporting that they spent an average of 12 hours undertaking CPD in their own time.¹⁷
19. Schools are likely to cover online safety as part of safeguarding training. This is likely to be a training priority, given the high-stakes nature of the issue. However, it is not clear whether non-specialist teachers of RSHE are undertaking meaningful training in teaching RSHE or broader matters such as screen time.

¹⁵ School Workforce Census data for 2022. Available at: <https://explore-education-statistics.service.gov.uk/find-statistics/school-workforce-in-england> (accessed 3 October 2023).

¹⁶ NASUWT Big Question Survey 2022. Available at: <https://www.nasuwt.org.uk/news/campaigns/big-question-survey.html>.

¹⁷ Ibid.

20. Workload is a significant barrier to teachers undertaking CPD and training. Eighty-one percent of teachers identify workload as one of their biggest concerns about their job.¹⁸ The DfE-commissioned independent review of teachers' professional development undertaken by Ofsted finds that workload is the biggest barrier to teachers undertaking professional development – 87% of respondents cited workload as a barrier to them undertaking CPD.¹⁹ The other major barriers to teachers undertaking CPD were the school not having staff to cover the lessons (73% of respondents), the cost of CPD to the school (68%), and timetable conflicts (67%). It is notable that the review reports that some experienced teachers said that their school had set time aside for them to undertake CPD, but other school responsibilities and workload prevented them from undertaking the CPD.
21. The Ofsted review of CPD finds that many teachers are concerned about the quality of the CPD they receive. Only two-fifths of respondents said that recent training was relevant, sufficient and of high quality. A high proportion of teachers felt that they rarely received training that allowed them to reflect on their practice and embed what they had learned – things that the Education Endowment Foundation (EEF) identifies as key characteristics of high-quality CPD.²⁰ It is vital that teacher workload is addressed and that schools are resourced to enable teachers to undertake high-quality CPD. We believe that there is also a need to review the status afforded to the RSHE curriculum, as well as the curricula for citizenship and PSHE, including how they are delivered in schools and the specialist training provided to teachers of those subjects.
22. School policies, including the behaviour policy, play an important role in supporting digital safety education. A recent NASUWT survey of behaviour finds that online abuse or threats form a small but significant portion of incidents that teachers have experienced in the past year (6.3% reported experiencing online abuse and 1.5% experienced online threats).
23. How the school manages behaviour incidents generally is a significant concern.²¹ Just 55% of teachers said that they reported all incidents to their manager, and 18% of

¹⁸ Ibid.

¹⁹ Ofsted (May 2023), *Independent review of teachers' professional development in schools: phase 1 findings*. Available at: <https://www.gov.uk/government/publications/teachers-professional-development-in-schools-phase-1-findings/independent-review-of-teachers-professional-development-in-schools-phase-1-findings#fn:8> (accessed 3 October 2023).

²⁰ Ibid.

²¹ NASUWT (September 2023) *Behaviour in Schools*. Available at: <https://www.nasuwt.org.uk/static/357990da-90f7-4ca4-b63fc3f781c4d851/Behaviour-in-Schools-Full-Report-September-2023.pdf> (accessed 3 October 2023).

respondents said they did not report most or any of the incidents to their manager. The main reason for not reporting incidents was 'nothing would be done about it' (73%), the teacher believing that they would be blamed (21%), the reporting process being too bureaucratic or time consuming (44%), and concern that their capability would be questioned (36%). It is notable that just 15% of respondents said that appropriate action was always taken and that they felt supported by their school or college.

24. In the case of teachers who had experienced online abuse or threats, 46% said that they had reported the incident to their employer, 7% had reported it to their social network, and 5% had reported it to the police, and 52% did not report the incident. Forty-nine percent of those who reported an incident to their employer said that action had been taken against the pupil. However, 77% of respondents said that no action was taken when they had reported the incident to their social network, and 68% of incidents reported to the police resulted in no action being taken against the pupil.²²

How screen usage for academic purposes is being managed in schools.

25. Remote or hybrid education is still taking place in schools. The recent concerns about reinforced autoclaved aerated concrete (RAAC) demonstrate that schools will now move rapidly to provide remote education when issues arise. However, responses to NASUWT's Big Question Survey also indicate that schools are providing remote education for some pupils: 54% of respondents said that their school continues to provide remote education to some pupils.²³ Thirty-five percent of those respondents said it was provided to pupils who had been suspended, 31% said it was used to teach pupils in seclusion or isolation, 26% said that it was being used for pupils who are school phobic; and 19% said that it was used for pupils with special educational needs and disabilities (SEND) who struggle with the social aspects of school.²⁴ Decisions about the extent to which remote or hybrid education is used will be made at Trust or individual school level, and it is not clear whether there are protocols in place for ensuring that remote education is used appropriately in such instances. For example, it will be important to ensure that decisions to provide remote education are balanced against the broader educational needs of the pupils and do not result in unlawful discrimination.

²² Ibid.

²³ NASUWT Big Question Survey 2022. op. cit.

²⁴ NASUWT Big Question Survey 2022. Ibid.

26. Concerns raised earlier in this response about the workload associated with teachers preparing to teach pupils face to face and prepare for remote teaching are still pertinent.
27. The main issues raised by teachers and leaders in respect of screen time associated with remote or hybrid education, apart from workload, relate to privacy and data protection, and behaviour. These concern situations such as pupils participating in live lessons where other family members may be present in the room and those family members interrupt or join in the lesson. These raise issues of data protection and privacy of pupils, where parents raise concerns about other pupils and other people observing the child in their home environment, as well as disruptive behaviour among pupils participating in online lessons. For instance, it is difficult for the teacher to manage what is going on around the pupil, meaning that they may engage in other activities that distract them from learning. In this instance, the issue is not necessarily about the amount of screen time, but about the nature of screen time when it is undertaken remotely. There can be particular challenges for teachers teaching and managing the behaviour of a class where some pupils are being taught face to face and other pupils are learning remotely. NASUWT produced advice and guidance for teachers and leaders on remote education and live streaming during the Covid-19 pandemic. This advice and guidance is still relevant.²⁵
28. Recent developments such as those relating to AI, including the use of generative AI, have the potential to increase pupils' screen time. These include online tutoring programmes, teaching tools and resources that use augmented reality or gamify learning. NASUWT addresses these issues through our principles for the ethical use of AI and digital technologies. We wish to stress that the developments offer both opportunities and risks. For instance, they can provide greater scope for personalisation and inclusion of pupils such as those who have SEND or English as an Additional Language (EAL). However, we are concerned that AI and digital technologies will widen the divide between advantaged and disadvantaged pupils, with schools having greater access to AI and digital technologies, while others will struggle with issues such as connectivity and the cost of up-to-date technology.

²⁵ NASUWT Arrangements for Remote Teaching and Learning:
<https://www.nasuwt.org.uk/advice/health-safety/coronavirus-guidance/arrangements-for-remote-teaching-learning-support.html>.

29. NASUWT reiterates a concern that was raised in the GEM report – that commercial providers are playing an active role in debates and decisions around the use of technologies in classrooms.²⁶ It is vital that digital technologies serve educational objectives and purposes. The Committee’s review of children’s screen time needs to address the role that commercial providers of educational resources play in influencing the pupils’ screen time.

October 2023

²⁶ UNESCO (2023). *Global Education Monitoring Report 2023 – Technology in education: A tool on whose terms?* Paris, UNESCO