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How and why parents support their child's learning online

Parenting for a Digital Future: Survey Report 5

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Parenting for a Digital Future

Executive summary

With children studying and interacting in ever changing ways in the digital age, parents face new challenges.[1] The predominant focus – of parents, the public, policy-makers and researchers – has long been on minimising the risk of harm. In this regard, research has distinguished two broad strategies for parental mediation of children's internet use: enabling and restrictive.[2] Much less is known of the role that parents play in maximising their children's digital opportunities – including supporting their learning through digital or online means (hereafter called "e-learning").

Which parents are more likely to take steps to support their child's e-learning?

This short report analyses *Parenting for a Digital Future*'s nationally representative survey of UK parents. It was conducted in late 2017, before the current pandemic which has greatly increased both children's reliance on the internet for their education and the challenges faced by parents to support them.

Key findings and implications

- Support for e-learning is distributed unevenly among children, depending on their family background. Educated parents and those of higher social economic status make more efforts to support the e-learning of their child. Closing the digital divide may therefore be readdressed by targeting guidance and resources to less educated parents and those from lower SES households.

- However, parental digital skills and attitudes also matter. Parents with better digital skills, and more positive views about technology and the benefits it can bring their child also do more to support their child's e-learning. Given these findings, it could also be effective in reducing the digital divide to develop interventions that seek to build digital skills, especially among less privileged parents. There's also scope for social campaigns and policy interventions to shape parental attitudes towards technology, encouraging parents to offer more digital support for their child.

- The research found an interesting link between online opportunities and risks. Prior research has shown that as children benefit from more online opportunities they tend to be simultaneously exposed to more risks.[3] It seems understandable, therefore, that the findings show that parents who do more to support their child's e-learning worry more about the risks, especially as they themselves have the digital skills to understand how risks arise. Surprisingly, despite their concerns, parents who support their child's e-

[1] Livingstone S. & Blum-Ross, A. (2020). *Parenting for a Digital Future: How Hopes and Fears about Technology Shape Children's Lives*. Oxford University Press. See https://blogs.lse.ac.uk/parenting4digitalfuture/2020/08/19/book/
[2] Livingstone, S., Ólafsson, K., Helsper, E. J., Lupiáñez-Villanueva, F., Veltri, G. A., & Folkvord, F. (2017). Maximizing opportunities and minimizing risks for children online. *Journal of Communication*, 67(1), 82-105. Available at http://eprints.lse.ac.uk/68612/
[3] Livingstone, S., et al. (2017). Op cit.

learning tend to do less mediation of online risks. Parents may decide to engage in e-learning support as they deem the benefits outweigh the risks. Mediation of online risks may also be a burden, or disincentive for some, as one may imagine that parents would like to support e-learning without having to take on more risk management: this is where regulation of the digital environment is important.

Introduction

Digitization is transforming all areas of our lives, from online shopping to new ways of social interaction and working. Despite such opportunities, the impact of automation on jobs invoked considerable fears for the digital future. An Oxford study estimates that 47% of US jobs are at high risk of automation in the next few decades.[4] On the other hand, we are seeing a changing labour market characterised by long run trends in job polarization – between highly skilled and unskilled workers. Digital skills become increasingly valued in the modern workplace, and disparities in digital competence are likely to compound existing social inequalities. A House of Lords report calls for a "radical rethink" of education and proposes that children should be taught "digital literacy" as a core skill alongside maths and English.[5]

Uncertainties about the digital future add to parents' anxieties. Should they encourage their child's internet use to gain necessary digital skills, or restrict their online exposure to mitigate potential risks? How should parents approach e-learning, as it becomes an integral part of education? There are no easy answers to such questions. Sonck et al. (2013) suggest that children's internet use and parents' views on the benefits of their involvement shape how parents mediate their child's internet use.[6] Mishra et al. (2020) argue that household wealth is a major determinate of home-based parental involvement in a child's education.[7]

This report, the fifth in a series, investigates how parents are approaching their child's e-learning, and what factors may influence their behaviours, building on our prior analyses. In Parenting for a Digital Future: Survey Report 1, we reported on parental activities, attitudes and worries about their child's internet use, finding that parents engage in a range of enabling (active talking) and restrictive (setting rules, using filters) strategies. We found a digital divide among parents in Parenting for a Digital Future: Survey Report 4: parents with higher socio-economic status and level of education provide more forms of online support to their children.

However, much still remains unknown on how parents support their child's e-learning – an inherently innovative, potentially disruptive and increasingly popular way of learning. We ask

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[4] Frey, C., & Osborne, M. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting & Social Change*, 114(C), 254-280.

[5] House of Lords (2015). *Make or Break: the UK's digital future*. https://publications.parliament.uk/pa/ld201415/ldselect/lddigital/111/111.pdf.

[6] Sonck, N., Nikken, P., & de Haan, J. (2013). Determinants of internet mediation: A comparison of the reports by Dutch parents and children. *Journal of Children and Media*, 7(1), 96-113.

[7] Mishra, S., Brossard, M., Reuge, N., & Mizunoya, S. (2020). *How involved are parents in their children's learning? MICS6 data reveal critical insights*. Retrieved from https://blogs.unicef.org/evidence-for-action/parental-involvement-childrens-learning/

here, which parents are more likely to take steps to support their child's e-learning? What factors make a difference? How does parental mediation of e-learning compare with parental mediation of online risk?

1. How do parents support their child's e-learning?

To discover how parents support their child's learning online, we asked parents to say which of six activities they had done in the past year to support e-learning, allowing for multiple answers:

1. Used the internet to support your child's learning or schoolwork
2. Watched a video (e.g. on YouTube) to help you or your child learn something new
3. Visited an educational website (e.g. BBC Bitesize, Scratch/Scratch Junior) to support your child's learning
4. Downloaded an educational app or game (e.g. to learn numbers or letters) to support your child's learning
5. Used a digital homework/learning platform suggested by your child's school (e.g. Purple Mash, Education Cities)
6. Visited a website or downloaded an app, device or kit to help your child learn about technology or coding (e.g. Scratch, MakeyMakey, Raspberry Pi, BBC Micro Bit)

As the first 'Parenting for a Digital Future' report found, nearly half of all parents used the internet to support their child's learning, four in ten watched an educational video, around one third of parents said they visited an educational website, a quarter downloaded an educational app or game, a fifth used a digital learning platform, and just a sixth visited a website or downloaded resources to help their child learn about technology.

To examine which parents support their child's e-learning overall, we summed the answers from each parent to these six questions to create a measure of e-learning support that is used in the analyses that follow.

2. Which parents support their child's e-learning?

A linear regression model was used to analyse the relation between parental e-learning support and parental demographics. See Table I (Appendix).

Parents who do more to support their child's e-learning tend to:

- Be older
- Have a graduate degree
- Come from mid or high socio-economic status (SES) households[8]
- Use (and presumably have access to) more digital devices
- Be more digitally skilled
- Do more parental mediation (enabling and restrictive activities).

No differences in amount of e-learning support were observed for:

- Parents who use the internet more or less frequently
- Mothers and fathers.

3. What other factors may explain parental support for e-learning?

To understand what other factors may contribute to parental support for e-learning, we used a linear regression model to examine the possible role of:

- Parental overall attitudes to technology
- Parental attitudes to the benefits or harms that technology use may bring their child
- Parental worries about their child's internet use
- Parental reports of a negative online experience affecting their child
- Parental mediation (restrictive) of their child's online risks.[9]

Parental attitudes matter. Parents who do more to support their child's e-learning tend to:

- Hold more positive views about technology
- Hold more positive views about benefits or harms that their child's internet use may bring
- Worry more about online risks
- Do less parental mediation of online risks.

Our analysis shows that parents who support their child more in e-learning activities tend to have more positive overall attitudes to technology, and to the benefits that technology may bring their child. Interestingly, they also worry more about online risks. This result seems puzzling: one

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[8] Note: Respondents were grouped according to the SES of their household into categories A, B, C1, C2, D, and E based on responses about the household's chief income earner. We refer to categories A and B as high SES parents, C1 and C2 as middle SES parents and D and E as low SES parents. We divided the SES into four categories and coded 1=AB, 2=C1, 3=C2, 4=DE.
[9] Note that parental mediation of online risks is measured using two indicators only, focused on restrictive mediation. Further research is needed to examine the relation between parental mediation of online risks (restrictive and enabling) on the one hand, and of opportunities, on the other.

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possible explanation may that with more parental support, children become more digitally skilled. This in turn brings more opportunities, as well as more online risks.[10] See Table I (Appendix).

Parents who support their child's e-learning more also tend to do less parental mediation of online risks. Parents may decide to engage in e-learning support as they deem the benefits outweigh the risks. Or it could be that efforts to mediate online risks by restricting children's internet use undermines supporting their e-learning. It could also be possible that, whether for reasons of principle or practice, some parents focus more on risks and others on opportunities.

To sum up, it appears that among parents who are more likely to embrace the opportunities brought by the internet for their child, they also become increasingly concerned about the risks as their child becomes more digitally advanced. But then they face something of a choice between supporting the opportunities or managing the risks. Whether there can be better advice offered to them, or whether the way forward lies more in internet regulation and design, remains a live matter for debate.

4. Which children receive parental support for e-learning?

To understand which children receive more parental support for e-learning, we again used linear regression model to analyse the relation between parental support for e-learning and child demographics.

Support for e-learning also depends on characteristics of the child. Parents tend to do more:

- The younger the child
- The more devices the child uses to go online.

No differences in parental support were observed for:

- Girls and boys
- Child's frequency of internet use.

The characteristics of the children who receive more support – younger, using more devices– suggests that parents are targeting their support where they think it may be most needed. It is possible, however, that older children and those who use fewer devices may also benefit from greater parental support.

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[10] Rodríguez-de-Dios, I., van Oosten, J. M., & Igartua, J. J. (2018). A study of the *relationship between parental mediation and adolescents' digital skills, online risks and online opportunities. Computers in Human Behavior,* 82, 186-198.

Appendix

Parental worries about their child's internet use were measured by asking parents:

> Thinking still about your child's internet use, do you worry **a lot** that they may be …? [*choose all that apply*]
> 1. Treated in hurtful or nasty way by other children
> 2. Exposed to violent content
> 3. Drawn into rude or bad behaviour
> 4. Addicted to technology/devices
> 5. Harming their physical health (eyesight, brain development, fitness, etc.)
> 6. Vulnerable to their data being hacked or used for fraud
> 7. The target of online advertising and marketing
> 8. Not getting enough sleep because of time spent on technology/devices
> 9. None of these [EXCLUSIVE]

We summed options 1-8 to measure the extent to which parents worry about online risks.

Parents' overall attitude to technology was measured by asking parents:

> There are a lot of different views about technology. How much do you agree or disagree with these statements? Strongly agree / agree / neither agree nor disagree / disagree / strongly disagree
> 1. I believe that society should worry about technological change
> 2. Overall, using the internet benefits children's lives
> 3. It's important for my child's future that they understand how to use technology
> 4. Digital media like smartphones and tablet devices make parenting harder

We recoded the options so that lower scores numbers represent more negative views about the internet. We summed options 1-4 and calculated the means to measure overall parental attitude to technology.

To measure parental views about the benefits or harms that technology use may bring their child, we asked:

> Thinking about your child's use of technology, do you think that these help or hurt their chances of…?
> Help a lot / help a little / makes no difference / hurts a little / hurts a lot / don't know
> 1. Developing relationships with friends/family
> 2. Learning social or emotional skills
> 3. Learning technology skills
> 4. Learning things that will help [NAME or 'my child'] at nursery/school/college
> 5. Being creative/express themselves
> 6. Preparing for work in the future
> 7. Pursuing their hobbies and interests

To compare whether parents who do more e-learning support also do more mediation of online risks, we asked parents about enabling and restrictive mediation using these questions:

> Do you do any of these things in relation to [NAME or 'your child']'s internet use? Never / hardly ever / sometimes / often / very often / don't know
> 1. Encourage your child to explore and learn things on the internet
> 2. Suggest ways that your child can use the internet safely

3. Talk to your child about what they do on the internet
4. Do shared activities together with your child on the internet
5. Talk to your child about who else can see what they do or post online
6. Suggest that your child uses particular websites or apps that you think are good for them
7. Use parental controls or apps to block or monitor your child's access to some types of websites
8. Make rules about how long or when your child is allowed to go online

We summed the options 7-8 and calculated the means as measurement of parental mediation (restrictive) of online risks.

Table I: Regression Models			
Dependent variable: Number of e-learning activities parents perform in the past year			
Independent Variables	Model I Parent demographics	Model II Parent demographics & attitudes	Model III All parental & child factors
Parent's education: high school	.047 (.095)	.11 (.096)	.153 (.105)
Parent's education: graduate	.209** (.084)	.222*** (.084)	.245*** (.092)
Parent's frequency of internet use	-.039 (.034)		
Devices parent used to go online (#)	.235*** (.025)	.153*** (.024)	.124*** (.029)
Parents' number of digital skills	.172*** (.013)	.147*** (.013)	.137*** (.015)
Parent's age	.02*** (.004)	.015*** (.004)	.011** (.005)
Parent's gender: female	.091 (.067)		
Parent social economic status: C1	-.014 (.086)	-.033 (.085)	-.1 (.09)
Parent social economic status: C2	-.067 (.095)	-.098 (.092)	-.163* (.099)
Parent social economic status: DE	-.312*** (.099)	-.251** (.098)	-.281*** (.107)
Parental mediation of online risks		-.26*** (.027)	-.231*** (.032)
Parental worries		.13*** (.018)	.131*** (.02)
Child's negative online experience: yes		.132 (.09)	-.008 (.096)
Parent's overall attitude on technology		.213*** (.062)	.254*** (.068)
Parental attitude to how technology supports child		.149*** (.045)	. 111** (.05)
Devices child used to go online (#)			.059* (.031)
Child's age			-.03*** (.009)
Child's frequency of internet use			-.055 (.034)
Child's number of digital skills			.12*** (.025)
Child's gender: girl			.029 (.069)
Constant	-.376 (.259)	-.8*** (.301)	-.246 (.326)
Observations	1955	1802	1558
R-squared	.193	.272	.282
RMSE	1.411	1.343	1.337
Adj R^2	.189	.267	.273
Standard errors are in parentheses **** p<.01, ** p<.05, * p<.1*			

About our research

Parenting for a Digital Future investigates how parents and caregivers imagine and prepare for their own and their children's personal and professional futures in a digital age. Transcending the binary of 'digital natives' and 'digital immigrants', we recognize that parents are themselves gaining digital skills and interests, albeit unevenly, so we ask what they know and what difference this makes to how families engage with different forms of media in a digital age and in anticipation of a digital future.

The research included a survey of 2,032 parents of children aged 0-17. Participants were recruited via an online panel, supplemented with a sample of low or non-internet users interviewed in-person. We only interpret the regression results that are statistically significant; these do not permit causal inferences.[11] This report was made possible by grants from the John D. and Catherine T. MacArthur Foundation in connection with its grant-making initiative on Digital Media and Learning.

Parenting for a Digital Future recent publications (also see our blog at www.parenting.digital)

- Livingstone S. & Blum-Ross, A. (2020). *Parenting for a Digital Future: How Hopes and Fears about Technology Shape Children's Lives*. Oxford University Press.

- Blum-Ross, A., and Livingstone, S. (2020) Connecting learning: parents and young children in museum makerspaces. In Blum-Ross, A., Kumpulainen, K., and Marsh, J. (Eds.) *Young children in maker spaces (pp.148-164).* Routledge. Presentation at http://eprints.lse.ac.uk/101563/

- Livingstone, S., and Blum-Ross, A. (2019) Parents' role in supporting, brokering or impeding their children's connected learning and media literacy. *Cultural Science Journal*, 11(1), pp.68–77. At https://culturalscience.org/articles/10.5334/csci.124/

- Blum-Ross, A., and Livingstone, S. (2018) The trouble with 'screen time' rules. In Mascheroni, G., et al. (eds.) *Digital Parenting: The Challenges for Families in the Digital Age*. Nordicom. At http://www.nordicom.gu.se/sites/default/files/kapitel-pdf/16_blum-ross_livingstone.pdf

- Livingstone, S. and Blum-Ross, A. (2018) Imagining the future through the lens of the digital: Parents' narratives of generational change. In *A networked self: Birth, life, death*. Papacharissi, Z. (ed.) University of Chicago Press. At http://eprints.lse.ac.uk/87750/

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- Blum-Ross, A. and Livingstone, S. (2017) 'Sharenting', parent blogging and the boundaries of the digital self. *Popular Communication*, 15(2): 110-25. At http://eprints.lse.ac.uk/67380/

- Blum-Ross, A. and Livingstone, S. (2016) From youth voice to young entrepreneurs: the individualization of digital media and learning. *Journal of Digital Media Literacy*, 4(1-2). At http://eprints.lse.ac.uk/67045/

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[11] For the survey methodology: https://www.lse.ac.uk/media-and-communications/assets/documents/research/preparing-for-a-digital-future/Methodology.pdf For the questionnaire, data tables, and previous reports: https://www.lse.ac.uk/media-and-communications/research/research-projects/parenting-for-a-digital-future.