

REPORT 2025





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The Centre researches the impact of technology on education across all sectors, from early years and schooling to higher education and informal lifelong learning. Based in Moray House School of Education and Sport, and affiliated with the Edinburgh Futures Institute, we work with teachers, government and third sector organisations to understand what technological change means for the present and the future of education.



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PUBLICATIONS

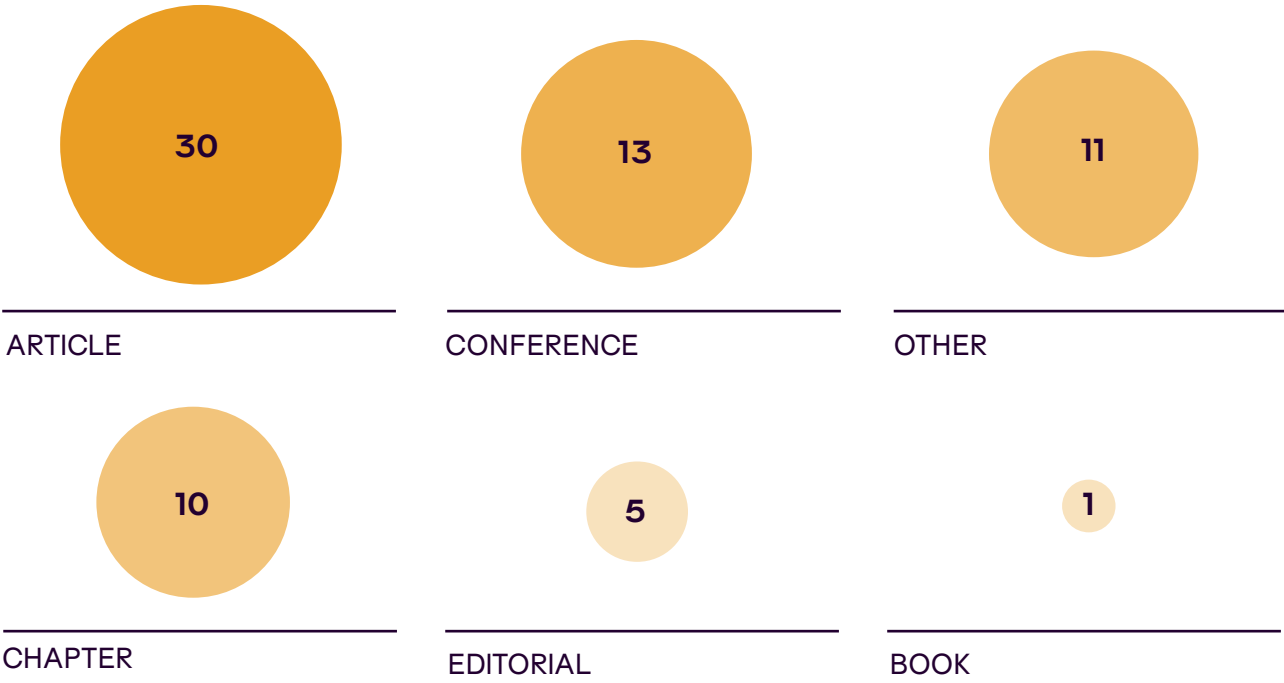


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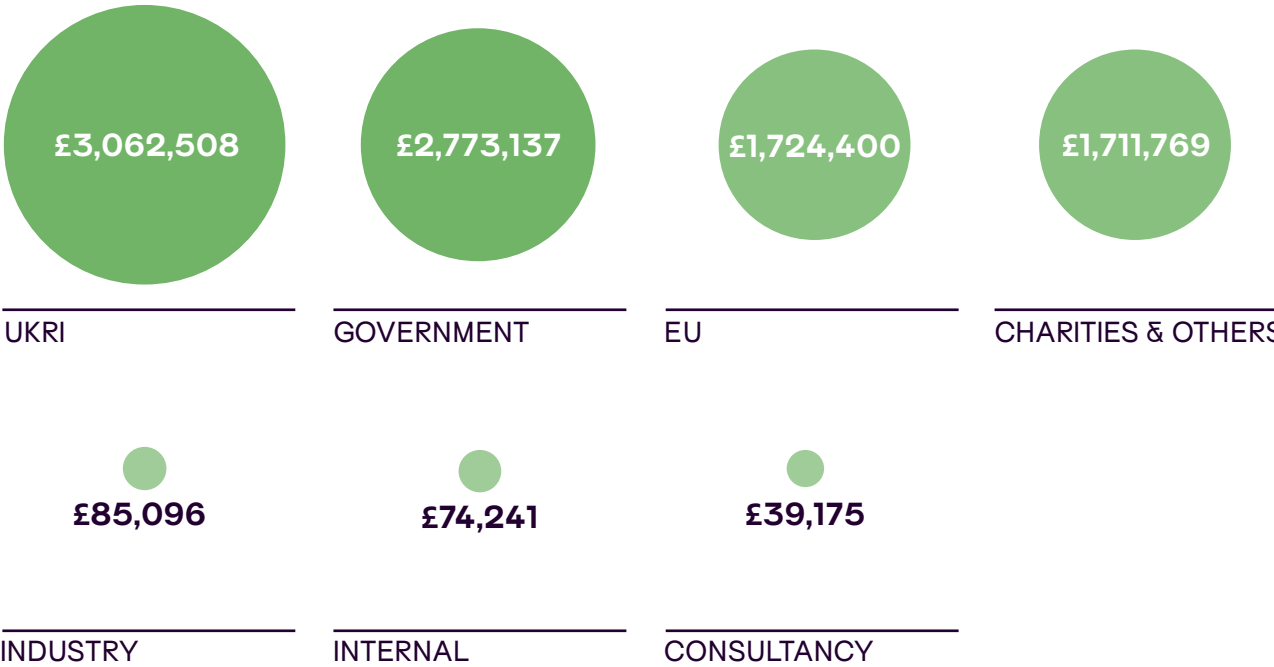


FUNDING



↑ More info

TOTAL FUNDS: £7,745,926





We have filled this report with colour and images of celebration to represent how pleased we are to be marking the 10th anniversary of our Centre this year. It includes many photos of the party we held for our supporters, students and friends back in May – images which convey the pleasure, pride and fun that continues to surround the work we do.

Although the Centre itself was established in 2015, we had a life before that as the Digital Cultures and Education research group (DiCE), set up in 2009. That group in turn grew out of the success of our MSc in Digital Education launched in 2006 – a groundbreaking online programme which has now supported hundreds of students to think deeply about what technological change means for education. Our Centre I think is a good example of how research power can grow out of innovative education programmes.

By 2015 DiCE had formed allegiances with other areas doing similar work in different contexts – schools and computing, learning analytics, children and technology. It made sense to bring all of this together as the Centre for Research in Digital Education. Our field is fast moving and our themes have changed since then, but the energy and commitment to positive digital futures for education remains. Many thanks to all of you reading this who have helped us along the way – we are very much looking forward to the next 10 years, and the 10 after that!

Professor Siân Bayne
Director

EDITORIAL





MSC IN DIGITAL EDUCATION

Led by Dr Janja Komljenovic

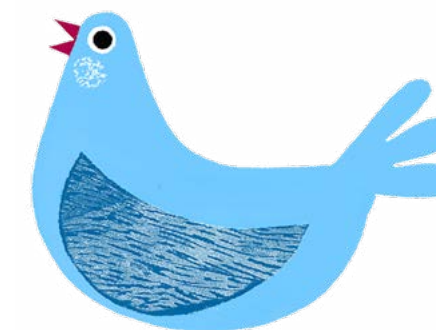
It has been a busy and productive year for the Digital Education programme. We updated our courses and course communications to emphasise their currency, relevance and timeliness, and refreshed our website to give a more vibrant and engaging presentation of the programme. By securing the prestigious Commonwealth Scholarship, the programme is now able to support even more diverse students from around the world to join us. Numerous events and staff features have showcased the expertise and strength of our community. We celebrated our 20-year anniversary alongside the Research Centre's 10th, highlighting our excellence, honouring our history and looking to the future.



CULTURES & FUTURES

Led by Professor Jen Ross

We work to understand present and future connections between digital technologies and their cultural contexts. This year we renamed our theme to reflect the increasing importance of futures methods and research in our work. We've done wide-ranging research on the emergence of generative AI in higher education and secondary schools, with projects exploring responsible AI, developing futures thinking AI resources for schools, working with university teachers to create new approaches to teaching with AI, and mapping the European landscape of AI in the humanities. We published lots of new work, including an edited collection on Postdigital Learning Spaces.

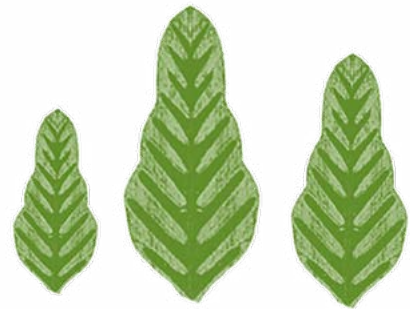




CHILDREN & TECHNOLOGY

Led by Professor Andrew Manches

This research theme looks at how children's interaction shapes the way they think, feel, communicate and learn. It has been a fruitful year for us, with five new funded projects each exploring ways to co-design with children to support their understanding in areas such as digital money, personal data, mathematics, artificial intelligence and the role of touch in science learning. We have also benefited from funding to scale the impact of previous work (into embodied learning) by licensing out an externally accredited self-study course to STEM educator charity SSERC, and a physical card game to an early learning spin-out. Reflecting our interests in design, we have also launched our interdisciplinary Children Interaction Design group – linked to our new Children Interaction and Design course – to bring together all those interested in designing hopeful futures with children.



DATA SOCIETY

Led by Dr Ben Williamson

The Data Society theme critically examines AI and other data systems and practices in education using interdisciplinary, critical and innovative methods. Highlights this year included a high profile journal special issue on assetization and rentiership in digital education, concluding a project on data-intensive biology funded by the Leverhulme Trust and co-organizing a first-of-its-kind international conference on critical edtech studies. We also worked with Education Scotland to research young people's political socialization online, analysed postgraduate labour market outcomes based on complex survey data, led an examination of the construction of 'learning futures' for the ESRC Centre for Sociodigital Futures and participated in the British Educational Technology Trade Show.



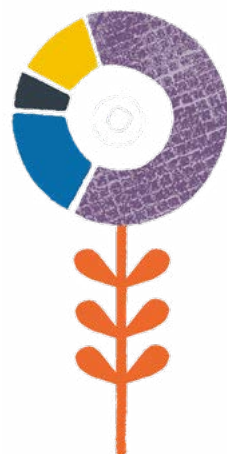


↑ Dr Serdar Abaci representing the research theme

DATA EDUCATION IN SCHOOLS

Led by Professor Judy Robertson

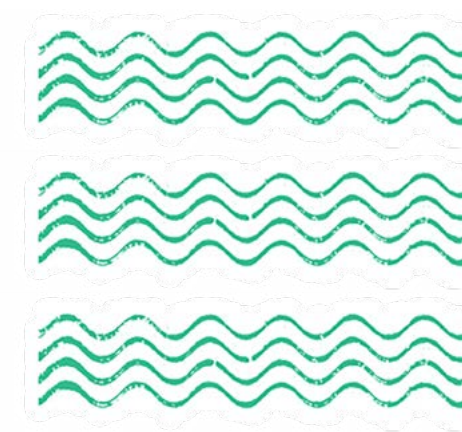
This theme works with teachers and learners across the six local authorities of Edinburgh and South East Scotland to strengthen foundational data and AI literacy in schools. This year, with support from Scottish Government, Education Scotland, the SQA, the Scottish AI Alliance and the Children's Parliament, we published a draft AI curriculum framework for Scotland and a 'Teach AI Literacy' guide for teachers. We worked with six AI-Teachers-in-Residence to write a portfolio of teaching resources and published an [AI repository for teachers](#). Alongside professional learning sessions for teachers, we hosted 140 learners at the Edinburgh Futures Institute to participate in a science show called [Unbelievably Creative](#), and worked with 8 young researchers to explore [young people's perceptions of AI](#) and its impact on education. We won an Eric Liddell award in November for our commitment to the values of compassion, passion and integrity.



DIGITAL EDUCATION IN THE GLOBAL SOUTH

Led by Dr Michael Gallagher

This research theme looks at the impact of digital technologies on education systems, policies and practices in Global South contexts. This year we secured new funding to continue work on [digitally-informed refugee education](#) in East Africa, completed a large consultancy for UNHCR on conditions for digital learning in several refugee hosting countries, and explored the role of AI on [teacher training in refugee contexts](#) in Uganda. We worked with Ministries of Education in Sub-Saharan Africa on digital policy, and as part of a UNESCO consultancy we are investigating the role of digital technologies on educational resilience in Pacific island states. We have more projects lined up focusing on sustainable and community-owned digital infrastructure in refugee settlements, and educational sentiment analysis in Ethiopia with its implications for educational governance.



RECENT EVENT

PROFESSOR RUHA BENJAMIN

Who Owns the Future?
Reimagining Education
from Artificial Intelligence to
Abundant Imagination



↑ Photographer credit: Sian Bayne

On 23rd June Professor Benjamin, Professor of African American Studies at Princeton University gave the Centre's Stewart Alan Robertson public lecture. Ruha is an academic of international standing, a phenomenal transdisciplinary scholar whose work spans sociology, technoscience, justice, creativity, medicine, culture, race, innovation, citizenship and justice.

Her most recent book *Imagination: A Manifesto* advocates for the liberation of our imaginations in order to foreground the solidarity, responsibility and relationships we need to collectively build desirable futures.

Professor Benjamin's fabulous talk set out for us some of the ways in which universities can work to support the building of futures worth having, describing higher education as 'ground zero for re-imagining and re-tooling the default settings of technology and society'.

RECENT EVENT

UNBELIEVABLY CREATIVE AI

Young people discussing the
ethics of generative AI at the
Edinburgh Futures Institute



↑ Photographer credit: Chris Scott

Along with our partners at Digital Skills Education we brought the free, interactive Unbelievably Creative AI Show to the Edinburgh Futures Institute in February. 140 young people from Edinburgh secondary schools came along to learn about – and respond to – the potential risks of generative AI in creative contexts.

Unbelievably Creative is a talent show contest where young people are asked to distinguish between human and AI-created products in art, design and fashion.

Our participants had a rich discussion around key questions such as, 'is it ever fair to use AI to create art?', 'do we always need to label AI content?' and 'what are the consequences of GenAI for the work of artists?'.

PEOPLE



**Professor Siân Bayne,
Centre Director**

Using interdisciplinary theory and methods to research education futures, while also developing new and interesting ways to teach with and without AI.

**Dr Huw Davies,
Lecturer in Digital
Education**

Doing research which places the sociology of race, gender, and class at the centre of the study of digital technology.

**Dr Michael Gallagher,
Senior Lecturer,
Centre Co-Director**

Researching digital education in the majority world, particularly in marginalised contexts and with a focus on forced displacement.

**Tommy Lawson,
Schools Technology Advisor
(Data Education in Schools)**

Using sensor technology to support the development of data and digital literacy, numeracy and science education in schools.

**Clara O'Shea,
Associate Lecturer**

Teaching on the MSc in Digital Education and developing research-based, playful approaches to learning and assessment.

**Professor Judy Robertson,
Centre Co-Director**

Leading the Data Education in Schools programme with a research focus on computer science education, serious games for children and gender equality.

**Jo Spiller,
Director of Operations
and Partnerships (Data
Education in Schools)**

Holding overall responsibility for the operational and strategic development of the Data Education in Schools programme.

**Dr Serdar Abaci,
Lecturer in Data and Digital
Literacies**

Applying research to improve the digital skills of learners and teachers, currently focusing on AI use in education.

**Dr Seongsook Choi,
Senior Lecturer in
Interdisciplinary Studies**

Bringing expertise in interdisciplinarity to the development of innovative methods.

**Dr Alice Dias Lopes,
Lecturer in Data and
Education**

Using quantitative data to analyse trends in inequalities and labour market outcomes in higher education.

**Angela Hunter,
Centre Administrator**

Organising all aspects of the finances and day-to-day running of the Centre for Research in Digital Education.

**Professor Andrew Manches,
Centre Co-Director**

Leading design-based research which explores the role of interaction in how children think, communicate and learn, and the implications for new technologies.

**Dr David Overend,
Lecturer in Interdisciplinary
Studies**

Researching interdisciplinary education, art and performance, often using creative methods and multidisciplinary collaborations to explore diverse topics and spaces.

**Professor Jen Ross,
Centre Co-Director**

Leading research on digital futures and developing speculative methods for education, engagement and learning.

**Dr Ben Williamson,
Senior Lecturer,
Centre Co-Director**

Leading research on data and society, looking at how data-intensive biological sciences and futuring methods are influencing education.

**Dr Ayça Atabey,
Post-Doctoral Research
Associate**

Bringing legal and interdisciplinary expertise to the design of appropriate and child-centred AI, working for (and with) children.



**Dr Peter Evans,
Senior Lecturer**

Exploring the professional development and organisational implications of digital learning for tertiary education, currently focusing on capacity-building in the majority world.

**Dr Janja Komljenovic,
Senior Lecturer in
Education Futures**

Bringing interdisciplinary approaches to research on the political economy and governance of higher education in the context of digital transformation.

**Dr Ivana Milojević,
Senior Lecturer in Futures**

Mobilising critical social theory and transformative pedagogies to explore how communities and individuals envision and create alternative and preferred futures.

**Dr Giovanna Pasquariello,
Impact and Engagement
Administrator**

Organising communications, events and impact monitoring of Centre activities, with a particular focus on the Data Education in Schools programme.

**Antonia Sewell,
Project Officer (Data
Education in Schools)**

Creating educational resources about data and AI literacy for use within schools, recently focusing on AI lessons, data science education and robot cards.



**Megan Baker,
Research Project
Administrator (Grasping
Data project)**

Managing the day-to-day activities of the Grasping Data project, including all things admin, finance, impact, communication and events-related.



**Kate Farrell,
Director of Curriculum
Development and
Professional Learning,
Data Education in Schools**

Developing fun and engaging data and AI literacy activities for school learners while also running professional learning for teachers.

**Dr James Lamb,
Lecturer in Digital
Education (Education
Futures)**

Bringing postdigital thinking and theories of sociomateriality to research on contemporary and future learning spaces.

**Dr Rovincer Najjuma,
Lecturer in Digital
Education and the Global
South**

Integrating critical theory approaches to research ed-tech developments and ecosystems in the global south and refugee education.

**Dushani Imesha Perera
Ushettige,
Research Associate**

Exploring interdisciplinary qualitative research with a particular focus on HCI, sustainability, information visualisation and data physicalisation.



**Dr Cara Wilson,
Lecturer in Children
and Technology**

Exploring how to better support inclusion and diversity in the development of technologies which pervade children's lives.

SELECTED PUBLICATIONS

A full list of our publications can be found at www.de.ed.ac.uk/publications



Atabey, A., Wilson, C., Urquhart, L. D., & Schafer, B. 2025, ‘Fairness by Design: Cross-Cultural Perspectives from Children on AI and Fair Data Processing in their Education Futures’, CHI ‘25: *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*, pp. 1–20.

DOI: [10.1145/3706598.3714402](https://doi.org/10.1145/3706598.3714402)

Recommending ways in which design and legal communities can align AI-EdTech design and data practices with children’s values and rights.

Bayne, S., Ross, J. Speculative futures for higher education. 2024, *International Journal of Educational Technology in Higher Education* 21, 39.

DOI: [10.1186/s41239-024-00469-y](https://doi.org/10.1186/s41239-024-00469-y)

Speculative methods can help open up new kinds of conversation capable of supporting active and fundamental hope in universities.

Botta, C., Robertson, J., McMellon, C., Lawson, J., Ajala, J., Lugo Gonzalez, S., Hamidi, A., Hicks, N., McDonald, K., Paterson, R. J., Scott, P., & Tang, J. 2025, ‘Secondary Students as Co-Researchers on Generative AI in Learning: Empowering Youth to Shape National Education Policy’, *Proceedings of the 2025 Conference on UK and Ireland Computing Education Research (UKICER ‘25)*, 1–7.

DOI: [10.1145/3754508.3754519](https://doi.org/10.1145/3754508.3754519)

This paper, co-written with a team of young researchers, is about young people’s perspectives on AI in school.

Charitonos, K., Najjuma, R., & Gallagher, M. 2025, ‘Editorial-Connected learning in contexts of forced displacement’, *Journal of Interactive Media in Education*, issue 1, pp. 1–7.

DOI: [10.5334/jime.1005](https://doi.org/10.5334/jime.1005)

Record numbers of people are facing forced displacement, but higher education is failing to create pathways needed to help them rebuild their lives.

Overend, D., Choi, S., Cross, A., Scoles, J., Jay, D., Cullen, C., Winter, M., Dures, S. & Zhang, S. 2024, *Toolkit for Interdisciplinary Learning and Teaching TILT*. University of Edinburgh.

blogs.ed.ac.uk/tilt

A collection of ideas, methods and resources to support everyone interested in the possibilities of working across and beyond disciplines.

Davies, H. 2025, ‘A Great Awakening of Men of Action’: what does the ‘Right-wing Davos’ represent?’, *Discourse & Society*.

[10.1177/09579265251368397](https://doi.org/10.1177/09579265251368397)

As a contribution to political literacy, this paper establishes the concept of regressive neoliberalism.

Dias Lopes, A., Hancock, S. 2024, ‘International mobility after the PhD: exploring the characteristics and early labour market outcomes of UK doctoral graduates’, *Higher Education*.

DOI: [10.1007/s10734-024-01357-0](https://doi.org/10.1007/s10734-024-01357-0)

PhD leaver destination data show a small positive association between international mobility and PhD graduates’ likelihood of securing an academic job.

Gallagher, M., Evans, P. & Sarpong-Duah, J. 2024, ‘Radiating out rather than scaling up: Horizontalism and digital educational governance in Ghana’, *International Journal of Educational Development*, vol. 111, pp. 1–9.

DOI: [10.1016/j.ijedudev.2024.103168](https://doi.org/10.1016/j.ijedudev.2024.103168)

Horizontalism helps us understand how educational governance in Ghana is being structured around digital technologies, and its effects on local educational diversity.

Gallagher, M. & Najjuma, R. forthcoming 2025, ‘The geopolitical arrays of digital and educational development in Uganda: discourses, homogeneity, and domestic alternatives’, in M. A. Peters, B. J. Green, O. Kamenarac, P. Jandrić & T. Besley (eds), *The Geopolitics of Postdigital Educational Development*, Springer.

Uganda’s first [Digital Transformation Roadmap](#) can be used to understand the geopolitical arrays that shape the development and educational agendas of countries in East Africa.

Komljenovic, J., Sellar, S. & Birch, K. 2025, ‘Turning universities into data-driven organisations: seven dimensions of change’, *Higher Education*, vol. 89, 1369–1386.

DOI: [10.1007/s10734-024-01277-z](https://doi.org/10.1007/s10734-024-01277-z)

Datafication of universities is not an easy process. The paper empirically explores the challenges faced by UK universities to make digital and personal data useful and valuable.

Lamb, J., Fawns, T., Noteboom, J., & Ross, J. 2025, 'Choreography and improvisation in hybrid teaching', *Higher Education Research & Development*, vol. 44, issue 1, 98–115.

DOI: [10.1080/07294360.2024.2435855](https://doi.org/10.1080/07294360.2024.2435855)

Choreography and improvisation, as understood within the field of dance, can help us understand the interactions between human and material elements in hybrid teaching.

Manches, A., Nygren, M., Price, S., & Revueltas Roux, A. 2025, 'Challenges of translational education research: Teachers' interpretations of embodied learning', *Cogent Education*, vol. 12, issue 1.

DOI: [10.1080/2331186X.2025.2490443](https://doi.org/10.1080/2331186X.2025.2490443)

Researchers need to stay involved with teachers in developing scalable resources, and in building understanding of how they are re-interpreted and used in classrooms.

Milojević, I. & Roth, S. 2025, ADB Foresight in Action: Prospective Policy Making in Asia and the Pacific, Asian Development Bank.

adb.org/foresight-in-action.pdf

Futures thinking and foresight are critical for navigating the complex and rapidly changing environments faced by policymakers.

Overend, D., Ewing, S., and Swanton, D. 2024, "“Loose Ends and Missing Links”: Learning Journeys in the Postdigital City", in J. Lamb & L. Carvalho (eds), *Postdigital Learning Spaces: Towards Convivial, Equitable, and Sustainable Spaces for Learning*. Springer.

DOI: [10.1007/978-3-031-59691-9_6](https://doi.org/10.1007/978-3-031-59691-9_6)

The urban environment is a dynamic space supportive of an entangled pedagogy, in which learning can happen across classrooms, online and in the streets.

Pachler, N., Turvey, K., & Abaci, S. 2025, 'AI Solutionism and the Techno/Human-Centric Remediation of Agency in Higher Education', in M. A. Peters, B. J. Green, P. Jandrić and T. Besley (eds), *Postdigital Education for Development*. Springer.

link.springer.com/book/9783031992469

Providing a critical exploration of the potential impact of new AI structures on higher education.

Perera, D., Kaufmann, D., Ramírez-Duque, A., Atabey, A., Brewster, S., Wilson, C., Vines, J., Plowman, L., Hinrichs, U., & Manches, A. (2025). Grasping Data Through Play: Exploring Co-Design Activities for Children's Engagement with Personal Data. In *EuroVis Workshop on Visualization Play, Games, and Activities*. The Eurographics Association.

New personal data frameworks and play-based activities are introduced which can be used to classify and analyse the personal data interactions of children and adults.

diglib.eg.org/items/d10ca752-b935-409f-9579-6falc96be2a6

Ross, J., Priyadharshini, E., Dyer, H., Atabey, A., Botta, C., Wilson, C. & Robertson, J. in press, 'Imaginaries of responsible generative AI in secondary education', in W. Holmes (ed), *Handbook of Critical Studies of Artificial Intelligence and Education*, Edward Elgar.

Speculative and participatory methods can be used successfully with young people to investigate responsible AI futures for education, its disconnects and its risks.

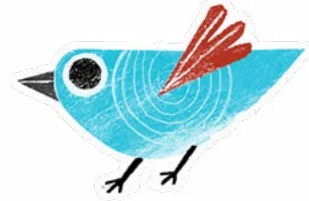
Williamson, B., Valladares Celis, C., Sriprakash, A., Pykett, J., & Facer, K. 2025, 'Algorithmic futuring: predictive infrastructures of valuation and investment in the assetization of edtech', *Learning, Media and Technology*, vol. 50, issue 1, pp. 87–101.

DOI: [10.1080/17439884.2024.2435820](https://doi.org/10.1080/17439884.2024.2435820)

Algorithmic futuring in the ed-tech industry exploits a gap in public investment, making an assetized future for education seem attractive, attainable and actionable.



COLOPHON



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Printer: Push Print (UK)

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How technology, culture,
learning and policy intersect
within research and practice
in digital education.

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