Studies in Technology Enhanced Learning

Journal homepage: **stel.pubpub.org**

Article type
Editorial, not peer-reviewed.

Publication history
Online: 22 December 2023.

Cover image
Badly Disguised Bligh via flickr.



Special issue Parents/guardians, education and digital technologies | **More at** https://doi.org/10.21428/8c225f6e.8e9598c2

Parents/guardians, education and digital technologies

Don Passey [1], Hazel Woodhouse [2], John Anderson [3], Amina Charania [4]

[1] Department of Educational Research, Lancaster University, Lancaster, United Kingdom

[2] Te Kura Toi Tangata School of Education, University of Waikato, Hamilton, New Zealand

[3] School of Education, Ulster University, Coleraine, United Kingdom

[4] Centre of Excellence in Teacher Education, Tata Institute of Social Sciences, Mumbai, India

Keywords
editorial

Citation
Passey, D., Woodhouse, H., Anderson, J., & Charania, A. (in press). Parents/guardians, education and digital technologies. **Studies in Technology Enhanced Learning, 3**(3), 1-9.

https://doi.org/10.21428/8c225f6e.e442623c

1. An introduction

When initially planned, this Special Issue sought to consider an under-represented topic in the research literature: 'Parents/guardians, education and digital technologies'. Whilst there has been previous literature published in this field, recent contextual changes have potentially affected this field in major ways. Our understanding of these recent contextual changes and related factors, such as how relationships associated with home learning and uses of digital technologies in home situations have been affected, immediately prior to and across the period of the Covid-19 pandemic and subsequently, is not widely known.

Through this Special Issue, an intention was to understand practices developed either prior to, during and from the Covid-19 pandemic period, or across that time period, which may have influenced parents/guardians in their engagement with teachers and educational institutions, through interaction or intervention with digital technologies. As will be seen, the papers published in this Special Issue have explored this context, where implementation and uses involving digital technologies have not only been used within specific home and educational settings and contexts, but also prior to transitioning into education. Practices are shown that have been developed and have both enhanced challenges and engagement between parents/

https://doi.org/10.21428/8c225f6e.e442623c

guardians and teachers, when supporting the education of young people, prior to, during and after the Covid-19 pandemic period, or across that period of time, in all educational sectors. The papers consider how digital technologies have been used, and what the social and interactive outcomes of those uses are, in national and regional contexts, as well as, in one case, through comparison between national and regional contexts.

The papers in this Special Issue highlight relationships between research, practice and policy, highlighting possible recommendations from research for policy and practice, as might be expected in this field. We, the guest editors, explore these dimensions, and wwe offer perspectives in this editorial that focus on relevant points arising for research, practice (including those from a developing country context), and policy.

2. From a research perspective

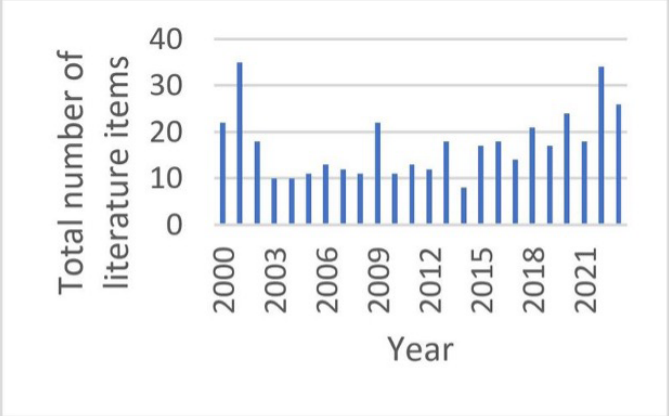
There has been a limited range of research that has been published in this field. A literature search using the Lancaster University Library OneSearch facility, with the keywords 'parents', 'involvement', 'schools', and 'technology', identified total numbers across all forms of research and research-related literature. Figure 1 shows the results of this search, suggesting higher ranges of literature for the years around the dates 2000 and 2022.

When additional qualifiers were added to this search, the limited literature relating to specific sectors of education was shown even more clearly. Across the 2019 to 2023 period, the total number of literature items found was:

- 0 for early years education.
- 23 for primary education.
- 10 for secondary education.
- 5 for higher education.

During 2023, four articles related to this field were identified through the same form of literature search, using the Lancaster University Library OneSearch facility. Senkbeil (2023) studied how home learning environments "seem to be important predictors of the children's [information and communication technology] ICT literacy and ICT self-efficacy, e.g., parental ICT values toward digital media" (p.12) but concluded that both parental and children's beliefs and practices can affect ICT literacy and ICT self-efficacy. The importance of such relationships is, as will be seen, highlighted in papers in this Special Issue. Easterbrook et al. (2023) took

Figure 1. Total numbers of literature items per year



a quantitative approach to investigate inequalities in home learning during the Covid-19 pandemic time, gathering evidence from over 3,000 parents across the United Kingdom (UK). Their results showed that: "Overall, our results showed that boys and pupils from lower socioeconomic status families were less engaged and spent less time home learning, although for different reasons. Our results showed that girls spent more time home learning than boys, and that this was primarily because girls were more engaged and motivated to learn from home" (pp.33-34). Inequalities are also explored in papers in this Special Issue, but through more of a qualitative lens. Hernandez and Bendixen (2023) studied how remote learning had affected learning of children with autism, through the eyes of the parents. From their study, the authors concluded that: "Remote learning at home was an effective learning environment for students with [autism spectrum disorder] ASD. With the appropriate resources and team support, parents were able to aid their child's learning at home. However, remote learning at home may not be effective as a long-term educational setting. Children with autism need opportunities to practice their social skills, especially if they are known to have difficulties in that area" (p.14). Although the authors stress that parental context needs to be considered carefully before any generalisation can be made due to the small number of remote learning situations studied, a paper in this Special Issue also focuses on home learning for children with ASD and contributes additional evidence relating to this context. Delgado (2023) explores challenges of home learning for Latina immigrant mothers in the United States (US). The author states that: "A case study of 20 Latina immigrant mothers is used to demonstrate how civically engaged parents drew on their participation with a local advocacy organization—Parent's Choice—to overcome the barriers that emerged during the transition to remote learning due to the Covid-19 pandemic… to learn how to use technology, get district-related

updates, secure devices necessary for at-home learning, create complaints or demands for services at their children's school, fill out paperwork, and access community-based referrals. Parent's Choice provided support and empowered Latina immigrant parents by minimizing the overwhelming barriers they faced during online learning" (p.2). Delgado's study focuses on a specific population within a specific context, and the importance of understanding detail at this level is similarly brought out by papers in this Special Issue, taking parallel approaches.

Overall, this Special Issue adds important dimensions to this research field and contributes to gaps in the existing literature. The papers in this Special Issue also demonstrate how different research approaches can be valuable as they can contribute in different ways to further our understanding in this field. Whilst Sturgeon Delia takes a collaborative autoethnographic approach, which gathers important details from the perspectives of individuals in a higher education context, Mohammad adopts an autoethnographic approach that only involves the single researcher. By comparison, McCaffrey-Lau takes a mixed methods approach, which compares parents in different school groupings according to their e-learning implementation success. Smith uses a case study approach, which provides an in-depth view of parental practices in one primary school, whilst Skinner, Abbott, Taggart and Hou also adopted a case study approach, with the focus on the experiences of parents with children with special educational needs. Austin, Valanides, Brown and Taggart adopted a multiple case study approach, exploring experiences across four countries in Europe. While Balakrishnan and Charania took a qualitative exploratory approach, exploring forms of and changes in parental mediation across primary and secondary school sectors, Porkundil took a phenomenological qualitative approach, gathering evidence about benefits and challenges that parents experienced with their children in primary school contexts. Strongly contrasting with these previous authors, Lee and Levins adopted a historical study approach, which explored roles of parents as digital technologies emerged over the past 30 years, while Anderson adopted a novel evaluative methodological approach, exploring how a number of experts qualitatively assessed the ways that primary and secondary schools developed practices to support parental engagement with teachers and their children.

This rich range of methodological approaches may offer other researchers some ideas of approaches that could be adopted to undertake data gathering in this field. The papers also present a picture of parental involvement across a range of countries, with single papers focusing on evidence gathered in Cyprus, India, Ireland, Malta, New Zealand, Northern Ireland, and Saudi Arabia, while one paper takes a more international approach to reviews of evidence.

The range of theoretical or conceptual frameworks that were used to support the research and analysis of findings in these papers is also notable. While some authors did not use theoretical or conceptual frameworks but adopted a more exploratory or grounded approach, others usefully used previously researched and published frameworks to support the analysis of their evidence, such as previous research on forms of parental mediation.

3. From a practice perspective

As has been recognised, and as is clear from papers in this Special Issue, the Covid -19 pandemic brought unprecedented challenges to the education system, forcing schools and families to adapt quickly to remote learning. Papers explore the pivotal role played by parents and schools during the lockdown, highlighting the effective uses of digital technologies to facilitate home and school practices, and the importance of social wellbeing in the context of online learning.

In recent years, the world has witnessed unprecedented waves of digital technologies that have rapidly transformed various aspects of our lives. In Lee and Levin's article, they discuss how one notable area where this change has occurred has been particularly evident in how families have embraced technology as an integral part of their home practices. From smartphones and tablets to specific applications (apps), digital technologies have become ingrained in daily routines and interactions of families worldwide.

In his Saudi Arabian study, Mohammad shares his own experiences of a parent navigating his transition into becoming a home educator of his children during the lockdown. His article highlights the shifts and adjustments in his families' practices and routines to create conducive learning environments at home. By establishing daily schedules and dedicated study spaces, parents have helped maintain a sense of normalcy and focus amidst the challenges.

In their Northern Ireland study, Skinner, Abbott, Taggart and Hou share the experiences of two families who faced the challenges of home learning and supporting their child with special needs during the lockdown. These families sought mentorship from teachers, special educational needs co-ordinators (SENCOs) and classroom assistants to navigate the extended situation of children 'shielding' and maintain-

https://doi.org/10.21428/8c225f6e.e442623c

ing their social connections digitally with school. Their study showcases the importance of collaboration and support from educational professionals in ensuring inclusive and meaningful learning experiences for children with special needs in challenging circumstances.

In their study, Austin, Valanides, Brown and Taggart explored and compared the experiences of parents in adapting to online education at home across four European countries. They found that this adaptation process is not a level playing field, as various factors impact on their practices. Accessibility to resources, language barriers, availability of device and access to the Internet all play a significant role in shaping how parents manage their home learning practices. Additionally, the parents' own digital literacy and support provided by their child's school also influence their ability to navigate and effectively engage with online education. These findings highlight the complex and multifaceted nature of the challenges faced by parents in embracing digital technology for educational purposes at home.

In some cases, the lockdown has been found to foster a stronger partnership between parents and teachers. Anderson, in his study of several schools which entered the Northern Ireland ICT Excellence Awards (2021/2022), found that parent-teacher collaboration across these schools had not only continued to enhance the learning experiences of children, but in some schools had also deepened the appreciation for the invaluable work done by teachers. With parents assuming a more active role in their child's education, communication channels between home and school became vital. Regular virtual meetings, email exchanges and online platforms facilitated ongoing dialogue, enabled, and have continued, so that parents can stay informed about their child's progress and address any concerns promptly. Furthermore, in enhancing parents' home practices in teaching, Anderson identified that technology played a crucial role in providing open access to learning material. This accessibility empowered students to pursue self-directed learning, foster curiosity, and independent thinking.

While digital technologies facilitated remote learning practices, it is crucial to acknowledge the importance of well-being in the education process. Schools and parents collaborated to establish virtual platforms that allowed children to interact with their peers, promoting a sense of community and minimising feelings of isolation. As shared in Sturgeon Delia's article, the connections formed between parents, teachers, learning assistants and SENCOs created a sense of belonging forming their own digital community for families.

The New Zealand-based study by Smith discusses the potential and challenges of developing home-school engagement practices using app-based practices with Seesaw. It highlights the potential for real-time interaction for parent engagement, accessible 24/7, which provides families with innovative opportunities to engage with their child's learning and school. However, the article also raises the dilemma of whether it is easier for schools to continue using traditional practices that they have tried and tested over the years or to be brave and explore the innovative possibilities of this app-based digital technology with families.

The lockdown highlighted the indispensable role of parents and schools in ensuring continued education of children through the effective use of digital technologies. By embracing home practice, adapting to remote learning, and fostering collaboration, parents and teachers demonstrated resilience and dedication. It is crucial that schools continue to leverage digital technologies to enhance the learning experiences, prioritise social well-being, and continue to strengthen the bond between parents, schools, and students.

4. From a developing countries perspective

As highlighted in Lee and Levin's article, with greater access to and advancement in digital technologies, parents around the world - in both developed and developing nations - have invested in their children's entertainment, education and overall development. Although Internet and smartphone penetration have grown in developing nations, and grew exponentially during the Covid-19 pandemic, children from poor families could not continue learning due not only to the digital divide but also due to a lack of learning support from their parents.

The literature review in the Austin, Valanides, Brown and Taggart article shows that many studies before and during the Covid-19 pandemic established that, even in developed countries, the socioeconomic status of families is known to affect parents' engagement with digital devices and their engagement in their children's development and education. However, Austin, Valanides, Brown and Taggart's study comparing parents in four European countries concluded that there was no direct relationship between the socio-economic status of parents and their engagement in their children's learning during the Covid-19 lockdown period (CLP). Many other relevant factors played an important role: "socio-economic status on its own was neither a reliable predictor of disadvantage nor a barrier to parents becoming co-tutors; many other factors, such as whether parents were recent

migrants, the quality of Wi-Fi in the area, the number of children in the family, parental expertise in ICT and school intervention were all important variables" (p.6).

Two studies in this Special Issue from India highlight parents' engagement with their children's digital uses. Both studies focused on parents largely from lower socio-economic and rural backgrounds and found that practice during the CLP enhanced parents' exposure to digital devices, built their digital skills, and increased their engagement in their children's education. Both studies were conducted in rural Kerala, the southern state of India, known for the highest literacy rate in India. Female mothers were found to be primarily in charge of their children's education at home, learning digital interventions without any dedicated training from their children's schools. They learned 'on-the-go' with their children, to continue to support their education.

In the study by Balakrishnan and Charania, all except one parent interviewed were women from families with annual incomes up to 100,000 Indian rupees (around 1,200 US dollars). This study brought to light that access and use of digital devices in CLP increased for parents and their children, but parents lacked the knowledge and competence to safeguard their children against digital safety. Parents were unaware of terms (even in the local language) like cyberbullying and spam e-mails. In Balakrishnan and Charania's study, parents with younger children 6-to-11-years-of-age were found to have some digital competence and monitored their children's digital use in terms of time spent on digital devices. On the other hand, parents whose children were adolescents were found to be more permissive with their children's uses of digital devices because of a lack of digital awareness and competence to understand what their children were doing with digital devices.

In the second study from India, on pre-school children's parents by Porkundil, it was brought to light that their exposure to digital technologies during the CLP connected them more closely with their children's schoolwork and teachers than they ever were before the Covid-19 pandemic. Parents who were not exposed to digital technologies before the Covid-19 pandemic also started using WhatsApp and YouTube resources as mandated by schoolteachers. In this study, a few parents were better educated and had better digital competence and awareness. They were able to leverage digital technologies beyond what was dictated by the teachers, which benefitted their children's learning during the CLP. Similar to the findings of Austin, Valanides, Brown and Taggart, these two Indian studies also indicated factors complementing socio-economic factors like prior exposure of parents to digital devices and the age of their children, which affected parents' engagement in their children's education during the CLP.

These two studies in India also highlighted the adaptive nature of mothers in rural and lower socio-economic sections of Indian society. While many reports in India have emphasised learning loss and the challenges of digital interventions, these studies highlight positive aspects and parents' abilities to mitigate challenges and learn new digital skills, and willingness to engage with digital technologies for their children's education. It also points to the need for more research to understand parents' adaptations to digital technologies and their sustainability beyond the pandemic.

In developing countries where many governments are focused on bridging the digital divide in educational and other public institutions, the CLP has brought forth the contribution and value of parents in fostering their children's education and character using digital media. The National Education Policy of India emphasises the importance of parents' roles, especially in supervising school teaching and learning environments, early childhood and inclusive education, and fostering digital education.

The studies in this Special Issue emphasised the need for training parents in digital literacy, which includes digital safety. Teachers and administrators, especially in the government schooling system that largely serves underprivileged children, face multiple demands. Taking on the additional task of educating parents in digital literacy will thus be quite daunting and unrealistic. Other programmes that focus on women's basic literacy, financial literacy, self-help groups in rural communities, etc., can integrate digital safety and literacy in their curricula to prepare parents to directly participate and benefit future generations.

5. From a policy perspective

Considering the wider policy agenda, education authorities, generally, urge the development of effective links between home and school because effective parental engagement "has a significant positive effect on children's achievement… across all social classes and all ethnic groups" (Desforges and Abouchaar, 2003, pp.4-5). However, it is uncommon to find authorities promoting the role of digital technologies to optimise parental partnerships (Education Authority, Northern Ireland, 2020).

https://doi.org/10.21428/8c225f6e.e442623c

Papers in this Special Issue underpin a call for reform in policy guidance and strategies to manage digital transformation and ensure that the dynamics of digital, online technologies in teaching and learning, inside the teacher-pupil-parent triangle, work beneficially for all. But the studies provide evidence of considerable variance in the responsiveness of national/local/school authorities to steer the digital vehicle to an educational destination. Only a handful of the papers provide evidence that significant improvements arising from rapid digital transformations occurring during the Covid-19 pandemic are still being sustained.

Some, Balakrishnan and Charania, and Porkundil, found authorities and schools strategically unprepared for the sudden change to emergency online/remote teaching and learning during the pandemic. Balakrishnan and Charania detail how teachers, parents and pupils struggled, with little or no significant improvement in learning, and conclude that policy needs to pivot to educate parents, especially those of low income, with the capabilities to raise their children in a digital era.

Aspects of policy which need attention are those relating to heightened awareness by parents of their children's learning, combined with closer insight to teaching and to children's educational progress when digital, online technologies are being integrated.

Some of the papers tell of positive and constructive responses – some emerging rapidly, others more slowly. Anderson, Mohammad, Skinner, Abbott, Taggart and Hou and Austin, Valanides, Brown and Taggart all pay tribute to the urgent efforts made by schools, backed (sometimes promptly, other times after a long pause) by education authorities, to respond to the challenges of delivering remote teaching and supporting home-based learning. Some schools were starting from scratch, others from a position of greater maturity in the uses of digital technologies in teaching and learning. Indeed, McCaffrey-Lau explores this differential through a detailed comparison of the response of two sets of primary schools: one already more advanced, and one at an earlier stage. The comparison exposes the many ways in which the digital divide is a multidimensional phenomenon. The conclusion provides evidence for the need for a renewed policy focus on parent/school partnerships to improve outcomes, not just for learners but for their parents as well, a finding echoed by Porkundil for the parents of children in early years of schooling.

Mohammad reports improved study skills, evidence of agency, improved fluency in online working, closer appreciation - admiration even - of the work of teachers, and an improved intimacy within the family valourising their engagement in education.

Skinner, Abbott, Taggart and Hou investigated the plangent challenges to children with special education needs during pandemic lockdowns which "left working parents… exhausted, anxious about their ability to cope, and concerned for their children's learning and their future" (p.1). They found that the quality and frequency of online contact with parents and children varied markedly even between teachers in the same school. They argue that policy needs to take much better differentiated account of the developmental, physical, emotional, pastoral, and technological needs of children with special education needs.

Austin, Valanides, Brown and Taggart found common barriers to the 'parental embrace of digital learning' across a study of four European countries (resource access, immigrant status, their digital technology expertise and language). Their CAPTURE model sets out the context-sensitive factors that need attention in reviewing policy and strategy for more effective online parental partnership. In common with Austin, Valanides, Brown and Taggart, Anderson illuminates the constructive steps taken by schools to help parents transition to online education, especially by providing social and pastoral support which rapidly enhanced the relationships with the home. While Austin, Valanides, Brown and Taggart found variation, Anderson sets out what schools referred to as the 'Covid Keepers' - innovative changes in practices which were, initially, exogenous but, on reflection, were seen to be advantageous and were then built into continuing policies and practices.

Of interest to developers of learning environments, as well as to policymakers, two studies focus on the complexity of working within the chosen learning environment and how this complexity may have aided or constrained educational interaction. Smith and Sturgeon Delia both unpick the complex interaction of humans and technology. They show that, without clear policy and a good understanding of principles to guide engagement (a 'sense of belonging' as Sturgeon Delia articulates it), the affordances of an online environment will not guarantee that the agency of teachers and pupils, nor that of parents, as partners, will be developed and optimised. Indeed, Smith argues that without a clear policy on parental engagement, control through the learning environment leads to the school retaining agency, and parental engagement in learning not being maximised.

Lee and Levins, in their article, do not give authorities any credit at all. For them, education providers globally have failed, through decades of technological evolution, to respond in ways anything other than negatively to opportunities of digital technologies' usages to enhance teaching and learning. They assert that the growth of 'being digital' amongst young people is almost wholly down to the liberality of their parents. Some in educational governance might find this hard to swallow, but it is, most certainly, cogently argued.

6. In conclusion

From the guest editor reviews of the papers in this Special Issue, the papers make contributions to the research literature, as well as contributions to discussions and recommended actions for practice and policy. These papers offer us insights that can contribute to our understandings of how to better prepare for future crises (Passey, In press), where home or remote learning may again be needed. Indeed, the papers offer us insights also into discussions about the shifting roles of parents, schools and teachers in a digital age. Continued work in this research field has much to offer for the future.

References

Delgado, V. (2023). Civic Engagement and Latina Immigrant Mothers' Remote Learning Involvement During COVID-19. *Sociological Forum, 38*(1), 192-213. https://onlinelibrary.wiley.com/doi/10.1111/socf.12872

Desforges, C. & Abouchaar, A. (2003). *The Impact of Parental Involvement, Parental Support and Family Education on Pupil Achievement and Adjustment: A Literature Review. Research Report RR433*. Department of Education and Skills, London: DfES.

Easterbrook, M.J., Doyle, L., Grozev, V.H., Kosakowska-Berezecka, N., Harris, P.R., & Phalet, K. (2023). Socioeconomic and gender inequalities in home learning during the COVID-19 pandemic: examining the roles of the home environment, parent supervision, and educational provisions. *Educational and Developmental Psychologist, 40*(1), 27-39. DOI: 10.1080/20590776.2021.2014281

Education Authority Northern Ireland (2020). *Advancing and enhancing parental engagement with schools through digital technology*. Accessible at: https://www.eani.org.uk/parental-engagement

Hernandez, S., & Bendixen, L.D. (2023). Autism Spectrum Disorder and Remote Learning: Parents' Perspectives on Their Child's Learning at Home. *Education Sciences, 13*, 716. https://doi.org/10.3390/educsci13070716

Passey, D. (In press). Lessons from learner home engagement prior to and during Covid-19 – are parents and guardians prepared for future crises? *Journal of Information Processing*.

Senkbeil, M. (2023). How well does the digital home learning environment predict ICT literacy and ICT self-efficacy? Comparing the predictive power of adolescent and parent reports. *Computers & Education, 207*, 104937.

https://doi.org/10.21428/8c225f6e.e442623c

About the authors



Don Passey

Don is Professor of Technology Enhanced Learning and Director of International Strategy in the Department of Educational Research at Lancaster University, UK, and an Honorary Professor of the Institutes of Education and of Information Technology at Amity University, Uttar Pradesh, India. He is a current staff member of the Centre for Technology Enhanced Learning in the Department of Educational Research, and and was the founding director and co-director of the Centre. His research investigates how digital technologies support learning and teaching. Recent studies have explored innovative and inclusive practices, in and outside educational institutions and classrooms, in off-site, home and community settings. His findings have informed policy and practice, for international institutions and groups, government departments and agencies, regional and local authorities, companies and corporations. His publications span theoretical as well as empirical studies, and the methodological approaches he adopts widely range across bespoke mixed methods. He is currently chair of the International Federation for Information Processing (IFIP) Technical Committee on Education, has chaired a number of international conferences in his academic field, and is the recipient of Outstanding Service and Silver Core Awards from IFIP for his international contributions to his field in education.

d.passey@lancaster.ac.uk 0000-0002-9205-502X



Hazel Woodhouse

Hazel Woodhouse has been a classroom teacher in both early childhood education and new entrants for over 25 years in both the UK and New Zealand. She is currently a teaching fellow at Te Kura Toi Tangata School of Education at the University of Waikato.

hazel.woodhouse@waikato.ac.nz 0000-0003-3868-9387



John Anderson

John is Visiting Professor of Education at Ulster University. He is the Independent Chair of the Northern Ireland Innovation Forum, which promotes and evaluates innovation in the use of digital technologies in schools. He supports the Education Information Solutions Programme and the Council for Catholic Maintained Schools and is non-executive director of the Controlled Schools Support Council. John retired after 35 years in the Education and Training Inspectorate, with experience in all sectors, and led in corporate development of the inspectorate. He was formerly a teacher, lecturer, a director of the UK Microelectronics Education Programme and Northern Ireland Education Technology Strategy Coordinator.

johnanderson180152@gmail.com



Amina Charania

Dr. Amina Charania is an Associate Professor at the Centre of Excellence in Teacher Education at the Tata Institute of Social Sciences (TISS). She has and currently leads many research, field action and teacher professional developments on constructivist teaching and learning with technology at scale. These interventions have brought national and international accolades. Over the years, she has published and presented her research and practice in some of the leading journals internationally. Her research has provided evidence-based frameworks and policy guidelines for teachers' agency, pedagogical integration of technologies, and learners as producers (a concept for adolescents in government schools across multiple geographies). She has also served as a member of the Committee for Mentoring Mission, National Education Policy, anchored by NCTE 2021-22.

amina.charania@tiss.edu 0000-0003-0549-6669

Open Access (CC BY 4.0)

© 2020 The Authors. This article is distributed under Creative Commons Attribution 4.0 International licence.

You are free to

- Share — copy and redistribute the material in any medium or format
- Adapt — remix, transform, and build upon the material for any purpose, even commercially.

Under the following terms:

- Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

The full licence conditions are available at: **https://creativecommons.org/licenses/by/4.0/**