

**This is a pre-print of the preface for my forthcoming book:**

**Seale, J (forthcoming May 2022) Technology Use by Adults with Learning Disabilities Past, present and Future design and support practices. Routledge, ISBN 9780367753573**

## **Preface**

A major focus of this book is the history of the use of technology with adults with learning disabilities. I position myself as an actor in this history because as both a researcher and practitioner I have been involved in some of the early work that sought to evaluate the potential of technology for adults with learning disabilities and build capacity for both adults with learning disabilities and their supporters to use technology. I therefore have a personal perspective which I think it is important I share with readers, not only to be transparent about my position regarding the potential of technologies but also to illuminate and justify in further detail why there are two core themes running through the book: (1) past, present and future and (2) potential. Therefore I will provide an overview of my experience as a researcher and a practitioner in the field of technology and learning disabilities over the past thirty-five years. I will then share some pertinent examples, drawn from my experience that illuminate these two themes.

### **A personal history**

My personal interest in special needs technology and learning disability stems from my practice in the field as a researcher, consultant and a social services employee over the past thirty years.

I began researching the use of microcomputers in 1986, when in my undergraduate psychology dissertation, I observed how adults with learning disabilities performed computer-based tasks and compared this to ‘equivalent’ non-computerised tasks (Galuschka 1987). In 1987 I joined the Computer Applications to Special Education (CASE) research unit at the University of Keele to undertake a PhD examining how microcomputers were introduced into adult training centres (Seale 1993, 1998a). In 1993 I took up my first academic post at the University of Southampton as a lecturer in IT and Therapy. Between 1993 and 2002 my research focused on whether and how adults with learning disabilities were using the Internet. My results revealed how parents and others were mediating use of the Internet (Seale 2001, 2002) and this led me to focus more generally on the role of supporters in facilitating access to technology (Seale 2007, 2014, 2020)

Throughout my research I have become increasingly concerned about the persistence of ‘uncritical hype’ regarding the potential of technology. My concern led me to argue that there is a need to consider the voices of disabled people in order to judge the potential of technology in more meaningful ways (Seale 1998b). In more recent times I have continued to examine the factors that mediate technology use and which might serve to undermine the ‘hype’ and suggest that the potential of special needs technology is not as great as it was earlier considered to be (Seale 2014; Seale and Chadwick 2017). Therefore over time, I have adopted a position somewhere in the middle between ‘techno-optimist’ and ‘techno-sceptic’. I believe that technology has some value for some adults with learning disabilities; that technology should not be uncritically promoted by professionals working in the field and that adults with learning disabilities should be supported to make informed decisions about whether or not using technology would be meaningful for them. This position, however, does not deny the positive ways in which practitioners can support adults with learning disabilities who wish to access and use technologies.

My role as a practitioner in the field began back in 1987 when I joined CASE at Keele University. As part of my work within this applied research unit I ran training courses and visited hospitals and social services day centres to support staff in assessing whether and how adults with learning disabilities would benefit from using microcomputer technology. In 1991 I was employed as a Day Centre Officer by Telford Social Services to work with staff and ‘service users’ to support their use of microcomputers. I also became a part-time free-lance consultant, working with staff and adults with learning disabilities in two adult training centres in Cheshire. Although I gave up this consultancy work when I joined academia, my interest in supporting practitioners in their use of technology continued. For example, I chaired a Special Interest Group of Occupational Therapists who were interested in microcomputers and led the development the first practitioner-focused Masters in Assistive Technology in the UK (Kings College, London 2000-2002).

As a practitioner, I experienced how factors such as social processes (e.g. training, support networks); cultural practices (e.g. differences between education, health and social services) and attitudes (e.g. regarding learning disability and/or technology) influenced whether or not adults with learning disabilities were afforded the opportunity to access and use micro-technologies. As a practitioner I also saw how motivated many (though not all) adults with learning disabilities were to use computers. For some, this motivation derived from being able to use the same technology that was valued and used by their peers and family. Microcomputers served a symbolic function- offering an opportunity for adults with learning disabilities to make a statement about who they were and how they would like to be seen (Blume 2012). I did not expect or witness any ‘miracle-cures’, however I did notice the subtle changes in behaviour or demeanour that I assumed to mean that the person with learning disabilities was deriving some benefit. Alongside this I experienced times when adults with learning disabilities positively rejected technologies and showed no interest at all.

My experience as a researcher and a practitioner in the field of technology and learning disabilities over the past thirty-five years has given me an insight into whether and how the lives of people with learning disabilities have been transformed by technologies over time; and whether expectations regarding the potential of technologies to support the development of potential in people with learning disabilities have been met. I will share some pertinent examples, drawn from my experience that illuminate what I am calling narratives of time and potential.

## **Narratives of time: perceptions of past successes and failures**

During my thirty or so years working in the field of technology and learning disabilities I have had occasion to look back on the past. On reflecting on past times and comparing it to current practices sometimes I roll my eyes and silently sigh ‘here we go again’; sometimes I angrily conclude that things were better in the past.

### **Here we go again.....**

When I began planning this book I had been working in the field of technology and adults with learning disabilities for thirty-three years. My original plan was to use the book to argue that despite all the ‘hype’ in 1970’s and 1980’s about the potential of technology to revolutionize the lives of people with learning disabilities, this had not materialised. I was going to argue that we needed to look back at the history of technology and support practice in order to understand why this might be. And then the covid-19 pandemic struck and out of

all the trauma of deaths and stress of lockdowns something seemingly wonderful happened. Many people with learning disabilities were now being supported to access and use technologies to stay in touch with friends and families and to access vital health and well-being information and services. This support had been virtually non-existent prior to the pandemic. Furthermore, as my research at the time revealed, this opened many people's eyes to the potential of technologies, to the potential of what people with learning disabilities could achieve when supported to use technologies and to the potential for developing new support practices (Seale 2020). The covid-19 pandemic therefore triggered practices that had previously not been imagined necessary or possible (by the current generation of practitioners at least):

I think a lot of our colleagues said to us if you'd have said in January, we would have all been working like this, we would have said that's never going to work. And I think covid has [...] pushed us into using technology, so it's pushed some people into using it. But then also the benefits of it have been, lots of people are saying oh this is really good and are we going to carry on when we get back to working normally. So I think that it's a really interesting time (interviewee from Seale 2020 study).

But, as many have realised over the years, technology is a double-edged sword. Examinations of how technology is used always reveals good things and bad things. My pandemic research was no different. Therefore, despite all the positive stories that my research revealed about what could be achieved when support workers recognised both the potential of technology and the potential of people with learning disabilities, my research also revealed significant barriers to technology use such as not having access to or ownership of a device and not being able to access Wi-fi or afford data and support workers not facilitating access to and use of technology.

In response to the pandemic and experiences such as those I reported in my research, in 2021, the UK government launched a £2.5 Million "*Digital Lifeline*" fund which aimed to provide 5,000 tablets and data to people with learning disabilities as well to offer some digital skills training to people with learning disabilities and their support workers<sup>i</sup>. This was a huge milestone. The UK government has rarely, if ever, invested specifically in the provision of technology for adults with learning disabilities. For example, the Home Access Project (2008-2010) invested £300 million in providing financial support for families on low incomes to gain access to technology and Internet Access. It did not specifically target people with learning disabilities however, and although communication aids could be purchased to support access to learning at home, this was for children only<sup>ii</sup>. Government-led technology provision projects, like the Home Access Project, are always short-lived and any gains that might have been brought about by the project tend to dissipate once funding is removed. I am therefore concerned that investments like the '*Digital Lifeline*' project are, on their own, unlikely to significantly transform experiences or outcomes for people with learning disabilities. This triggers a fearful 'here we go again' response in me and leads me to argue that we need to examine in more depth the wider history of policy and practice in this field in order to avoid repeating the same mistakes that might undo any positive outcomes that the pandemic has brought us.

## **It was better in the past**

Often, the practice of looking back is characterized by a desire to learn from the mistakes of the past. Past actions are something not to be repeated in the future. However, when I look

back on my past, there are occasions when I think perhaps it was better in the past. This relates to my experience of working in two long term ‘mental handicap’ hospitals between 1987 and 1990, undertaking consultancy work for CASE. They were unpleasant and shocking places to work in. In many ways I was fortunate in that I did not work on the wards. I worked in the separate occupational therapy or social education units and therefore did not directly observe or experience the instances of abuse, one of which resulted in a death, that would later make the national headlines <sup>iii</sup>. However, I did visit the wards in order to escort patients to their therapy and education sessions and during those visits I witnessed patients stuck in their beds with nothing to do; sometimes dressed, sometimes naked in full view of everyone; sometimes washed, often not; sometimes calm, often not. It was clear to me they were being neglected and I felt complicit in their neglect. This sense of powerless complicity would ease somewhat when I was working with patients, introducing them to the microcomputer and seeing how some seemed to find the experience engaging and enjoyable. The computer sessions were, in a way, an oasis in the barrenness that was hospital life. But there were people in the hospital system trying to make a difference.

Forty years later, I am shocked and saddened that people with learning disabilities and/or autism, labelled as having ‘challenging behaviour’ and living in secure hospitals are still being neglected and abused (for example the Winterbourne View Hospital scandal of 2011 and the Whorlton Hall Hospital scandal of 2019). What most people saw when they watched the TV documentaries that exposed these scandals were examples of hideous physical and mental abuse that was possible because the staff in those organisations simply did not view their patients as humans (Richards 2020). I saw that too. But I also saw some evidence to suggest that in both hospitals, technology was used as a tool of abuse. Specifically, the denial of access to technology either enabled abuse to go undetected or was used as a form of undeserved punishment. Having a learning disability and the label ‘challenging behaviour’ does not mean that you are incapable of operating and enjoying the use of technology, with appropriate support if required (Murray 2018). Yet in the case of Winterbourne View Hospital, I watched the television film very carefully and was struck by the lack of any observable technology. In ‘normal’ circumstances, I would expect to see hospital patients in possession of everyday technologies such as mobile phones, tablets, MP3 players and games consoles. I saw none. This was strange to me. It is inconceivable to me that not one of the parents of these patients thought to purchase them some kind of technology so that they could stay in touch. Until that is, I read that the company who owned the hospital had created a culture which deliberately sought to isolate parents from their adult children (Plomin 2013). In the case of Whorlton Hall, there is an instance in the documentary when a patient is dragged out of their room along the floor; beaten and shouted at. As this is happening, one of the abusers comes out of the patient’s room holding a pile of their belongings, explaining that these are going to be confiscated as a punishment. On top of this pile of belongings was an iPod (or similar music playing device) and a pair of headphones. It is understandable that it was the systematic physical beatings and verbal abuse in these two hospitals that captured the national headlines and lead to a government review of services; but I am concerned that the deprivation of an everyday tool of humanity went unmentioned upon. Hospital life in the 1980’s and 1990’s was oppressive for people with learning disabilities; but amidst this oppression, some practitioners were joining me in trying to offer an alternative, and in part, were using technology to do this (e.g. Horsefield 1987; Armstrong and Rennie 1984). Now, over thirty years later, it seems that in some cases, not even that is happening! I would argue that the examples I have shared with you are examples of the subtle ways in which support workers can and do use their power to abuse people with learning disabilities and that it is not

accidental that the tool used in these discriminatory acts is technology. This is why it is so important to examine and understand present support practice.

## **Narratives of potential: What counts as impact or achievement?**

During my time as a researcher and practitioner in the field of technology and adults with learning disabilities I have experienced or witnessed a wide range of examples of technology use (or non-use). All of these examples, in some or another serve to exemplify potential. Sometimes they exemplify the potential of technology; sometimes they exemplify the potential of people with learning disabilities and other times they exemplify the potential of supporters. When considered together as a collective, however, these examples also serve to illustrate the complexity of technology use and support and to alert and remind us that successful or effective technology use is not always easy to define, identify or guarantee.

### **The potential of technology**

My first example of the need to think carefully about the potential of technology for adults with learning disabilities stems from my experience as a student. I first became aware of the role of technologies in the lives of adults with learning disabilities in 1986 when I was a final year undergraduate psychology student at Plymouth Polytechnic. For my final year dissertation I was invited by a PhD student to help her develop a method for observing and measuring the 'on task' behaviour of adults with learning disabilities when they were engaged in a computer-based task and an equivalent non-computer-based task. A local social services day centre had consented to her introducing a BBC microcomputer and some simple games to their clients who were adults with learning disabilities. She filmed the adults with learning disabilities using the games and some equivalent non-computerised games. My dissertation work involved watching those videos and using an early computer called an Epson HX-20 to code and analyse the behaviours of both the person with a learning disability and the member of staff who was supporting them during the task. The main aim of my dissertation was to evaluate the reliability of this behavioural analysis technique by comparing the coding of two different observers (myself and the PhD student). The ultimate goal of the PhD project was to test whether the adults with learning disabilities were more engaged, needed less help and learnt more with the computerized tasks compared to the non-computerized tasks. This reflected the dominant research agenda of the time, which was to try and prove that computers performed as well, if not better than teachers (e.g. Lancioni and Oliva 1988). With regards to the reliability of the computer-based coding system, the results of my dissertation revealed that it was reasonably reliable. Perhaps more interestingly, my results revealed that staff helped more in the non-computerized task, but that there was no significant difference between the computerized and non-computerized tasks in terms of the 'on-task' behaviour, correct responses or inappropriate behaviour of the adults with learning disabilities (Galuschka 1987). When the PhD student completed her work, the results of three experiments that she ran suggested that while the adults with learning disabilities paid more attention to computerized tasks compared to non-computerized tasks, there was no difference in what they learnt. (Baldrey 1994). Compared to the dominant discourse of the time, which positioned technology, particularly microcomputers, as a prosthesis and panacea (e.g. Chapman 1982; Cain 1984) results such as these paint a more complex picture of the transformative potential of technologies. Furthermore, at the time, the only outcomes that were valued by funders of services were improvements in learning. It is doubtful whether improvements in engagement would be sufficient to convince them to fund the provision of microcomputers.

My second and third examples are drawn from my early experiences of working in CASE alongside my fellow PhD student Sue Newberry-Tarrier. Using a Psion palm-top computer, Sue developed a programme called 'Cupboards' which aimed to help adults with learning disabilities make decisions about what they needed to buy when visiting the shops (Newberry-Tarrier 1991). In order to understand the shopping behaviours adults with learning disabilities needed support with, Sue spent months observing adults with learning disabilities who were living in a 'group home' linked to a local mental handicap hospital and being trained to live independently in the future. Sue's detailed ethnographic work helped her realise that the residents of the group home found it particularly difficult to generate shopping lists prior to visiting the shops. In other words, making decisions about what items need to be bought. Adopting stock-control principles Sue worked closely with keyworkers to develop an expert system, that knew the usual levels and kinds of items that needed to be in the cupboards of the group home in order for it to run normally (e.g. how many tins of baked beans are needed each week to feed everyone in the home). She then created a symbol-based interface for the palmtop computer to enable the adults with learning disabilities to produce a shopping list for use in the local supermarket based on what is usually in the cupboards and what the current stock levels were. 'Cupboards' was a PhD project, and as is typical of many potential solutions that emanate from postgraduate research, it was not developed into a commercial product. It therefore quickly faded from community memory banks. More recently, there are examples of technologies being developed to assist in money-management (Davies, Stock, and Wehmeyer 2003; Lopez-Basterretxea, Mendez-Zorrilla, and Garcia-Zaprain 2014) and in buying goods from a supermarket (Cromby et al. 1996; Mechling, Gast and Langone 2002; Standen and Brown 2005). However, there have been no other examples of researchers or developers trying to design a contemporary technology that would aid in the decision-making relating to producing a shopping list. This raises the question of whether technically, it is not possible to develop such a technology, in which case we may need to reassess in some way our judgement regarding the transformative potential of technologies. On the other hand there may be other, more socio-cultural reasons why people with learning disabilities are not being supported to use technology to produce a shopping list. For example, the move towards a 'digital by default' lifestyle whereby most shopping is undertaken online can exclude people with learning disabilities because they do not possess or are not allowed to possess a debit or credit card (Parsons et al. 2006; Sallafranke-St-Louis and Normand 2017). In other words, is not always a lack of technology that denies people with learning disabilities the potential to be included in everyday life:

However, there were other controls operating on people's lives that made it difficult for adults with learning disabilities to take full advantage of wider opportunities offered by ICT. For example, in relation to the use of the Internet, many staff members in residential units commented how useful it would be to help service users do their grocery shopping online. The main difficulty was that individual houses did not have credit cards, and service users did not have their own debit cards, so the facility of shopping online (for groceries or any other item) was denied them (Parsons et al. 2006: 42).

The third example I wish to share relates to when my colleague Sue Newberry-Tarrier and I worked briefly with a man with learning disabilities called Christopher (pseudonym). Writing of our experiences, I shared how Christopher who lived in a mental handicap hospital and was labelled 'spastic and apparently blind' would bang his head against anything hard in what was assumed to be attention-seeking behaviour (Seale 1989). Working in close consultation with the hospital staff, Sue and I became involved in trying to ascertain whether the man would find pressing the switch on a computer in order to hear a particular song play

an engaging activity. We noted that there were times when the man smiled, giggled, and opened his eyes while lifting his hand to press the switch. We also noted that there were times when his self-injurious behaviour of head-banging decreased, and he needed less and less prompting to release the switch once it was pressed. There were also times, however, when he did not respond at all. Technology was not powerful enough to guarantee a consistently positive response from Christopher.

## **The potential of people with learning disabilities**

When I give talks about the role that technology in the lives of people with learning disabilities, I often tell the story of two men that I worked with called Trevor and Neil (Seale 1992). Trevor and Neil attended an Adult Training Centre that I worked at (1990-1992) and were keen attendees of my weekly computer sessions. Changes to my role meant that I would no longer be visiting the centre. This prompted me to approach Trevor and Neil to see if they would like to become 'Computer Co-ordinators' and undertake an eight-week course I had devised. Using BBC microcomputer equipment, I taught Neil and Trevor to recognise and name individual components of the computers and understand what each one did; understand what the function of a disk was and how to look after it so that it did not get damaged; identify all of the computer leads and plug them in correctly; know where all the switches were on the computer, screen and printer and how to switch them on and off correctly; the correct procedure for loading, running and changing a disk; listing, loading, saving and deleting a file, formatting and copying a disk; keyboard skills such as the use of the CAPS and SHIFT keys; basic programming skills and simple trouble-shooting procedures. Neil and Trevor responded really well to the course and with some help from me gained the confidence to run the weekly computer session themselves. They would get the computer out of the cupboard, set it up and switch it on, walk around the centre inviting their peers to come and have a go on the computer and then supervise and support that use. Trevor and Neil themselves, valued their use of microcomputers because it meant that they could now do something that other members of their family could do and also because they knew that being good at computers was a 'label' that was rarely applied to people with learning disabilities. It was an opportunity to shine a light on what they could do, rather than what they could not do. At the time, I marked this down as a success because Neil and Trevor acquired some level of control over their computing activities and were able to position themselves as computer experts, a role that we would now call 'Digital Champions' <sup>iv</sup>. However, I was also uneasy, because I was not confident that when I left the centre, the staff would continue to encourage and enable Trevor and Neil to sustain their peer support activities. My experience suggested that sometimes advances in support practice could be fragile and easily disrupted.

## **The potential of supporters and support practice**

Throughout my whole career I have witnessed a huge variation in the nature and quality of support that is provided to people with learning disabilities in relation to their use of technology. Here I will offer two examples from more recent times that illustrate this (Seale 2014). Firstly, in 2006/7 I was involved in running a seminar series called '*Concept of Access*' where academics, support workers and people with learning disabilities came together to discuss what 'access' meant for people with learning disabilities in the context of education, work, leisure and health. Two young men, with learning disabilities, Darren and Drew, were regular attendees at these seminars. They were supported to attend the seminars by two highly skilled advocacy workers that I admired greatly for the way that they stayed in the background as much as possible and sought to enable the two men to travel to and from

the seminar venue independently. This involved the two men using their mobile phones to call a taxi home at the end of each seminar. This is a positive story about the power of technology and of high-quality support. However, the same two young men shared with me a drastically different experience, involving the same technology, but different supporters. They told me how when they attended their weekly class at the local college, the college staff would take their mobile phones away from them. The reason given by college staff for this sanction was to ensure that the two young men paid attention, or that they did not disturb others. This is unsettling for a number of reasons. Both men were over the age of eighteen and no other students appear to have had their mobile phones confiscated. Furthermore, during the seminars I have no recollection of the two men using their mobile phones whilst others were speaking; they knew how to use their mobile phone considerately.

My second example is of a woman with learning disabilities, Katy (pseudonym), that I spoke to in 2014 about the role technology played in her life. I was struck by the very different ways in which she talked about her past and present use of technologies. Thinking back to the 1980's, her eyes lit up with great joy when she spoke of using the Spectrum ZX, the Acorn and the BBC microcomputer at school to play educational games. Talking about her present use of technologies in the supported housing where she lived, her story was more about fear than joy. She told me that she had an Internet connected computer in her room, but she was afraid to use it because she was afraid of accidentally accessing porn sites and the police finding them on her computer and her getting into trouble. Unpicking this story a bit more, it appeared that the staff in her home had warned her of the dangers of Internet use and that this message had been misunderstood. But more than that, it seemed that the staff in the residential home were undisturbed that the outcome of this misunderstanding was for the Katy to completely stop using the computer. They had not shown or explained to her what the positive aspects of Internet use could be, or even better, sought to support her to develop strategies for using the Internet safely.

## **Conclusion**

In sharing my research and practice experiences with you I have painted a complex picture of the potential of technologies for adults with learning disabilities and the potential of the practices that support adults with learning disabilities to access and use technologies. Sometimes adults with learning disabilities want to use technologies, sometimes they do not. Sometimes using technology brings about meaningful outcomes for adults with learning disabilities it does not. Sometimes adults with learning disabilities are supported to access and use technologies sometimes they do not. The purpose of this book is to describe the kind of support practice that is needed in order to help adults with learning disabilities use technologies if they wish to and to scope a framework for building the capacity of support workers to provide this support.

## **References**

Armstrong, J., and J. Rennie. 1986. "We can use computers too! The setting up of a project for mentally handicapped residents." *Occupational Therapy* 49 (9): 297-300.

<https://doi.org/10.1177/030802268604900909>

Baldrey, S.P. 1994. "Computer-assisted learning and learning disability: An evaluation." PhD diss., University of Plymouth.

Blume, S. 2012. "What can the study of science and technology tell us about disability?" In *Routledge Handbook of Disability Studies*, edited by N. Watson., A. Roulstone & C. Thomas, 348-359. London: Routledge

Cain, E.J. 1984. "The challenge of technology; educating the exceptional child for the world of tomorrow." *Teaching Exceptional Children* 16 (4): 239-241.  
<https://doi.org/10.1177/004005998401600402>

Chapman, B.L.M. 1982. "Warnock in the light of new technology." *Bulletin of the British Psychological Society* 35: 454-455.

Cromby, J.J., P.J. Standen, J. Newman, and H. Tasker. 1996. "Successful transfer to the real world of skills practised in a virtual environment by students with severe learning difficulties." In *Proceedings of 1st European Conference on Disability, Virtual Reality & Associated Technologies*. Maidenhead: ICDVRAT and University of Reading: Maidenhead.

Davies, D. K., S.E. Stock, and M.L. Wehmeyer 2003. "Utilization of computer technology to facilitate money management by individuals with mental retardation". *Education and Training in Mental Retardation and Developmental Disabilities* 38 (1): 106–112.  
<https://www.jstor.org/stable/23880189>

Galuschka, J. 1987. "A behavioural video-analysis of computer-assisted learning in adults with severe learning difficulties." BSc diss. Plymouth Polytechnic.

Horsefield, A. 1987. *The Microcomputer as a teaching aid for mentally handicapped adults*. Norwich: Hales Hospital.

Lancioni, G. E., and D. Oliva. 1988. "A computer-aided programme for promoting unsupervised activities for multi-handicapped adolescents." *Journal of Mental Deficiency Research* 32 (2): 125–136. doi:10.1111/j.1365-2788.1988.tb01398.x

Lopez-Basterretxea, A., A. Mendez-Zorrilla, and B. Garcia-Zapirain. 2014. "A telemonitoring tool based on serious games addressing money management skills for people with intellectual disability." *International Journal of Environmental Research and Public Health* 11 (3): 2361–80. doi:10.3390/ijerph110302361

Mechling, L. C., D.L. Gast, and J. Langone. 2002. "Computer-based video instruction to teach persons with moderate intellectual disabilities to read grocery aisle signs and locate items." *The Journal of Special Education* 35 (4): 224–240.  
doi:10.1177/002246690203500404

Murray, F. 2018. "Using Assistive Technology to generate social skills use for students with emotional behaviour disorders." *Rural Special Education Quarterly* 37 (4): 235-244.  
doi:10.1177/8756870518801367

Newberry-Tarrier, S. 1991. "Computers as decision aids- What does the future hold?" In *Into the 1990's: The Present and Future of Microcomputers for People with Learning Difficulties*, edited by J. Hegarty, 117-122. Market Drayton: Change Publications.

- Parsons S., H. Daniels., J. Porter, and C. Robertson. 2006. "The use of ICT by adults with learning disabilities in day and residential services." *British Journal of Educational Technology* 37 (1): 31–44. <https://doi.org/10.1111/j.1467-8535.2005.00516.x>
- Plomin, J. 2013. "The abuse of vulnerable adults at Winterbourne View Hospital: the lessons to be learned." *Journal of Adult Protection* 15 (4): 182-19. <https://doi.org/10.1108/JAP-05-2013-0020>
- Richards, M. 2020. "Whorlton Hall, Winterbourne ... person-centred care is long dead for people with learning disabilities and autism." *Disability & Society* 35 (3): 500-505. <https://doi.org/10.1080/09687599.2019.1646530>
- Sallafranque-St-Louis, F., and C.L. Normand. 2017. "From solitude to solicitation: How people with intellectual disability or autism spectrum disorder use the internet". *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 11(1) article 7. <https://cyberpsychology.eu/article/view/6757/6215>
- Seale, J. 2020. *Keeping connected and staying well: the role of technology in supporting people with learning disabilities during the coronavirus pandemic*. Milton Keynes: The Open University. <http://oro.open.ac.uk/75127/>
- Seale, J., and Chadwick, D. 2017. "How does risk mediate the ability of adolescents and adults with intellectual and developmental disabilities to live a normal life by using the Internet? *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 11 (1) Article 2. <https://cyberpsychology.eu/article/view/6764>
- Seale, J. 2014. "The role of supporters in facilitating use of technologies by adolescents and adults with learning disabilities: a place for positive risk taking?" *European Journal of Special Education* 29 (2): 220-226. <https://doi.org/10.1080/08856257.2014.906980>
- Seale, J. 2007. "Strategies for supporting the online publishing activities of adults with learning difficulties." *Disability & Society* 22 (2): 173-186. <https://doi.org/10.1080/09687590601141626>
- Seale, J.K., and R. Pockney. 2002. "The Use of the Personal Home Page by Adults with Down Syndrome as a Tool for Managing Identity and Friendship." *British Journal of Learning Disabilities* 30 (4): 142-148. doi:10.1046/j.1468-3156.2002.00195.x
- Seale, J.K. 2001. "The Same but Different: The Use of the Personal Home Page by Adults with Down's Syndrome as a Tool for Self-Presentation." *British Journal of Educational Technology* 32 (3): 343-352. <https://doi.org/10.1111/1467-8535.00203>
- Seale, J. 1998a. "Management Issues surrounding the use of microcomputers in adult special education." *Innovations in Education and Training International* 35 (1): 29-35. <https://doi.org/10.1080/1355800980350105>
- Seale, J. 1998b. "Two perspectives on the language of special needs computing: towards a shared view." *Disability & Society* 13 (2): 259-267. <https://doi.org/10.1080/09687599826821>

Seale, J. 1993. "Microcomputers in Adult Special Education: Management of an Innovation." PhD diss., University of Keele.

Seale, J. 1992. "Training: clients as peer computer tutors." *Keynotes 2*: 3.

Seale, J. 1989. "Self-injurious behaviour: A role for the computer." *Computer Applications to Special Education Bulletin 9*: 6-9

Standen, P. J., and D.J. Brown. 2005. "Virtual reality in the rehabilitation of people with intellectual disabilities: Review." *CyberPsychology & Behavior 8* (3): 272–282.  
doi:10.1089/cpb.2005.8.272

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<sup>i</sup> DCMS (2021) <https://www.gov.uk/government/news/free-tablets-to-improve-lives-of-thousands-of-people-with-learning-disabilities>

<sup>ii</sup> <http://www.homeaccess.org.uk/>

<sup>iii</sup> Hunt, L (2011) Worker suspended over scalded patient, *The Independent*.  
<https://www.independent.co.uk/news/uk/worker-suspended-over-scalded-patient-1476797.html>

<sup>iv</sup> Digital Champion platform for adults with learning disabilities provided by Digital Unite  
<https://www.digitalchampionsnetwork.com/aspire>