In press, *Educational and Child Psychology*, Author Accepted version 3rd May 2021

**Using Digital Stories for assessments and transition planning for autistic pre-school children**

Henry Wood-Downie1,2,3, Verity Ward1,2, Kathryn Ivil2,4, Hanna Kovshoff2,5, Sarah Parsons1,2

1. The Centre for Research in Inclusion, Southampton Education School, University of Southampton
2. Autism Community Research Network @ Southampton [ACoRNS]
3. Educational Psychology Service, West Sussex County Council
4. The Aviary Nursery
5. The Centre for Innovation in Mental Health (CiMH), School of Psychology, University of Southampton

\*Corresponding author: Henry.Wood@soton.ac.uk

**Abstract**

**Aims:** ‘I am…’ Digital Stories are short videos designed to provide a holistic, strengths-based representation of the child through enabling them to contribute their perspectives to transition planning. Digital Stories have potential during periods in which professionals are unable to physically visit settings or spend time getting to know a child. This paper describes the use of Digital Stories in two contexts: (1) being shown at the beginning of person-centred planning meetings focusing on the transition to primary school and (2) as a tool to support educational psychologists conducting Education, Health, and Care Needs Assessments for preschool children during COVID-19.

**Method:** Data was collected via seven semi-structured interviews, 15 feedback forms, and videos of four meetings. Participants comprised six parents/carers, five nursery practitioners, three school staff members, and six educational psychologists. Thematic analysis resulted in five main themes: thinking differently; a wider conversation; more than words; seeing what they see; and potential barriers to making Digital Stories.

**Limitations:** Children were not able to make their own Digital Stories, which could have influenced their representation within the videos, transition meetings and assessments. However, children’s body worn camera footage was included, enabling a perspective on their interactions and preferences that was closer to the child’s worldview than other observational methods.

**Conclusions:** Digital Stories have a variety of benefits to practice, including being useful to educational psychologists during assessments, and have the potential to facilitate successful transitions from nursery to primary school.

**Introduction**

Descriptions of autistic children[[1]](#footnote-2) are often deficit-focused, describing their difficulties, rather than their strengths and abilities (Parsons, Ivil et al., 2020; Woods, 2017). This is unsurprising given that widely used diagnostic criteria for autism are defined in terms of ‘persistent deficits’ (American Psychiatric Association, 2013) and ‘abnormal or impaired development’ (World Health Organisation, 2019). However, this focus perpetuates negative stereotypes and beliefs about autism (Humphrey, 2008), which can lead to negative self-fulfilling prophecies (Gentrup et al., 2020), especially from ‘stigmatized social groups’, such as those diagnosed with autism (Jussim & Harper, 2005, p. 131). In addition, through failing to see beyond the label of autism and associated stereotypes, this may also lead to autistic children holding negative beliefs about themselves, which Milton (2012, p. 885) refers to as a form of ‘internalised oppression’. Therefore, it is important to develop individualised and strength-based accounts of autistic children, which counter deficit-based beliefs, and treat children as children first, beyond their label of autism. This aligns with the neurodiversity movement which asserts that autism is characterised by differences – not deficits – in thinking styles and that difficulties experienced by autistic people are perpetuated by societal factors which favour non-autistic individuals (Bottema-Beutel et al., 2020).

***Missing voices of autistic children***

As well as the deficit-based nature of many accounts of autistic children, their voices are often neglected in research and practice (e.g. Cascio et al., 2020; Ellis, 2017; Parsons, Ivil et al., 2020). Cascio et al. (2020) argued how this exclusion is greater still for autistic individuals from marginalised subgroups, such as those who do not communicate using speech. Young autistic children are, therefore, particularly vulnerable to exclusion both due to their age and because they are more likely to have difficulties communicating verbally than their non-autistic peers (Rabiee et al., 2005; Weismer et al., 2010). Indeed, Nuske et al. (2018) conducted a systematic review investigating difficulties associated with, as well as strategies to support, transitions between stages of schooling; out of ten studies that focused on the transition from preschool to primary school, none included the views of the children , highlighting their missing voices during this crucial transition (Parsons, Ivil et al., 2020).

Another area in which the voices of autistic children may be missing is within Education, Health, and Care Plans (EHCPs), a statutory document prepared by Local Authorities in England that describes a child’s strengths and interests, areas of need (e.g. communication and interaction), and the provisions designed to meet these needs (Department for Education (DfE)/Department of Health (DoH), 2015). Within the Special Educational Needs Code of Practice (DfE/DoH, 2015), it is mandated that when preparing EHCPs, Local Authorities must (1) ensure children and young people and their parents or carers are involved in decisions about their support and provision and that (2) parents’ views must not be used as a proxy for the views of the child or young person. In addition, there is a requirement that assessment and planning include reference to the strengths and capabilities of the child or young person and that psychological advice is sought from an educational psychologist (EP). (DfE/DoH, 2015; White & Rae, 2016).

Despite these legal requirements, Palikara et al. (2018) found that only 31 of the 184 EHCPs they analysed reported how the voice of the child was sought. Additionally, many EHCPs contained first-person discourse which was deemed too complex for the children to have conveyed based on their language abilities, suggesting that the voice of the child may not have been directly obtained. Although Palikara et al. (2018) do not report how many of the EHCPs they analysed were for autistic children, it was likely a significant proportion since the primary need of children stated for approximately 30% of EHCPs in England is ‘autism spectrum conditions’ (DfE, 2019).

***The potential role of technology for enabling voice***

Technology, when used effectively, has much potential to both education generally and for autistic people specifically (Bölte et al., 2010; Education Endowment Foundation, 2019). However, as Parsons, Yuill et al. (2020) note, much of the literature tends to focus on how technology can be used to reduce ‘core deficits’ related to the autism diagnostic criteria (e.g. Boyd et al., 2015) and there is a need for research to be done ‘with’, not ‘on’, autistic individuals. Parsons, Yuill et al. (2020) conducted seminars with over 240 participants, including autistic people, families, teachers, and academics, and concluded that research into autism and technology should adopt more participatory approaches, such that research questions are developed from the needs and preferences of autistic people, their families and other stakeholders, in order to have a more direct impact on practice. Moreover, there were strong findings that technologies can support a shift in focus away from the so-called deficits of autism and towards strengths and talents instead. Technologies can aid communication and participation in a range of ways, thereby facilitating agency and decision-making (Parsons, Yuill et al., 2020). The Digital Storytelling approach described next is an example of using technology to enable voice and participation for young autistic children.

**Overview of Digital Stories**

‘I am…’ Digital Stories are short videos (~ 5 minutes) designed to provide a holistic (i.e., showing who a child is, including what they like and enjoy, beyond a list of difficulties), strengths-based representation of children through enabling them to contribute their own perspectives on their experiences without reliance on spoken words.. Digital Stories were developed within a research-practice partnership (described below) and used to support educational transitions within a participatory research approach (Parsons, Kovshoff et al., 2020). Digital Stories are designed to capture six core elements of children’s experiences and identity, based on the Froebelian principles of early childhood (The Froebel Trust, not dated): skills and capabilities; communication and expression; spaces; people and interactions; independence and agency; objects and interests; and support needed (Parsons, Ivil et al., 2020). One of the distinctive and innovative (i.e., novel) features of Digital Stories is the use, where possible and appropriate, of wearable cameras (‘WearCams’) that can be attached to children’s clothing. The footage generated by WearCams can be particularly powerful in showing children’s capabilities, choices, interactions, and communication such as self-talk which may otherwise not be heard in busy nursery environments (Parsons, Ivil et al., 2020).

It is beyond the scope of this paper to provide a comprehensive overview of the process and mechanisms involved in developing Digital Stories; we instead refer the reader to previous publications where we have described this in detail (e.g., Parsons, Ivil et al., 2020; Parsons, Kovshoff et al, 2020), as well our website[[2]](#footnote-3), where there is information about the process of making Digital Stories and examples that can be viewed.

**Current study**

There is a need to better capture the voices of young autistic children in their transition from preschool to primary school and their strengths and capabilities within EHCPs. Digital technologies have seen a large upsurge in use since COVID-19, including in education, which is likely to stay for years to come (De’ et al., 2020), thereby opening the potential for Digital Stories to become a vital tool in supporting planning in practice. Accordingly, the current study explores the use of Digital Stories in two contexts for the first time: (1) being shown at the beginning of person-centred planning meetings to support the transition of young autistic children from nursery to primary school and (2) as a tool to support EPs conducting Education, Health, and Care Needs Assessments (EHCNAs) for preschool children during COVID-19, which contribute to EHCPs.

**Methods**

***Context for the research***

Our team are members of the Autism Community Research Network @ Southampton [ACoRNS] which is an education-focused initiative that seeks to improve the lives of autistic children and young people through research and practice working collaboratively to build an evidence base (for further details see Parsons & Kovshoff, 2019). The context for the research was the Aviary Nursery[[3]](#footnote-4), which is a fully inclusive day nursery in the South of England. Specifically, the person-centred transition meetings took place within the Aviary Nursery and the EHCNAs were for children who attended the nursery.

***Design***

As this was the first time Digital Stories were used within person-centred transition meetings and as part of EHCNAs, an inductive exploratory design was employed to gather participants’ experiences of Digital Stories and their impact. We adopted a qualitative methodology as this gave primacy to the data based on the perspectives and experiences of those involved (Holloway, 1997). Within this paradigm, researchers should attempt to understand the same data through different perspectives (Woodside & Wilson, 2003). Accordingly, we included the perspectives of different stakeholders, utilising multiple data collection methods, as described below.

***Creation of the Digital Stories***

Digital stories were developed by two nursery practitioners prior to the transition meetings, following the guidelines detailed in Parsons, Ivil et al. (2020). Nine Digital Stories were made for male children aged three or four years with a diagnosis of autism (*n* = 3), diagnoses of autism and developmental delay (*n =* 4), no diagnosis (*n* = 1), or found to be just below autism diagnostic threshold following assessment (*n* = 1).

***Participants***

Participants comprised six parents/carers, five nursery practitioners, six EPs and three school representatives, such as special educational needs coordinators (SENCos). All participants had either attended a person-centred transition meeting at the Aviary Nursery in which a Digital Story was shown or were an EP who had been shown a Digital Story as part of an EHCNA they were completing for a child who attended the Aviary Nursery.

***Measures***

Data was collected via seven semi-structured interviews, 15 feedback forms, and videos of four person-centred transition meetings (Table 1 provides further details about the person-centred transition meetings and the focal child of the meetings). Transcriptions of transition meetings, not video footage, was used for the final analysis. Interview schedules and examples of the feedback forms can be requested from the corresponding author. Participants were asked about their views of the Digital Story they viewed, the representation of the child and their views within the videos, the impact viewing the videos had on the transition meeting or EP assessment, and how Digital Stories could be improved in the future. The interviews completed following EHCNAs used the same questions with a few additions specific to EHCNAs. For example, ‘do you think the video made a difference to the report you wrote? If so, can you explain in what ways?’

***Procedure***

***Person-centred transition meetings***

 Digital Stories were shown to participants at the beginning of the meeting. The meetings then followed an adapted version of a person-centred planning tool called Planning Alternative Tomorrows with Hope (PATH, Pearpoint et al., 1993) to help plan for the transition to primary school. PATH utilises solution-focused questioning to create a colourful visual representation of a positive future dream, and the steps needed to get there (Bristow, 2013; Wood et al., 2019).

Six meetings were attended by parents/carers, nursery practitioners and staff members from the primary school to which the child was transitioning. The nursery manager facilitated the meeting whilst an EP acted as the graphic facilitator. When all attendees consented, meetings were video-recorded, which they did for four out of the six meetings. Participants were asked to complete feedback forms once the meeting had ended. Three semi-structured interviews were conducted with two collaborators from the nursery who were involved in developing the Stories and attended at least two of the meetings, as well as the EP who was present for two of the meetings.

*Table 1:* Data collection from person-centred planning meetings before the COVID-19 pandemic.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Meeting  | Was the meeting video recorded? | Focal child of the Digital Story | EHCP | Destination school | Who completed feedback forms? | Other participants present1 |
| 1 | No | male, 3, with a diagnosis of autism | Yes | Mainstream primary school | EP, parents, primary school SENCo  | nursery manager/SENCo, nursery administrator, nursery practitioner |
| 2 | Yes | male, 4, who just missed diagnostic test criteria for autism, being supported by typical autism support strategies | No | Mainstream primary school | parent, nursery practitioner, primary school teacher | nursery manager/SENCo, nursery administrator |
| 3 | Yes | Male, 4, with a diagnosis of autism | Yes | Mainstream primary school | parent, nursery practitioner, primary school teacher | nursery manager/SENCo, nursery administrator |
| 4 | No | Male, 4, without a diagnosis of autism  | No | Mainstream primary school | parent | nursery manager/SENCo, nursery administrator, EP |
| 5 | Yes | Male, 4, non-verbal with a diagnosis of autism and severe developmental delay  | Yes | Special primary school | EP, parent | nursery manager/SENCo, nursery admin, nursery practitioner |
| 6 | Yes | Male, 4, with an autism diagnosis  | Yes | Mainstream primary school | EP, parents, nursery practitioner | nursery manager/SENCo |

1. Includes those who contributed to data collection through meeting recordings, and interviews but who did not complete a feedback form for that meeting.

***EP assessments***

Digital Stories were developed by nursery practitioners and sent securely to four EPs who viewed these as part of their EHCNAs during the COVID-19 pandemic. Three of these EPs agreed to participate in a remote interview via Microsoft Teams, as did the nursery manager (who also provided feedback and took part in an interview in relation to the transition meetings and as outlined in Table 1)*.* The three focal children (in addition to those described in Table 1) had diagnoses of autism and developmental delay and were aged three (*n* = 2) or four (*n* = 1) years.

***Ethics.***

All participants provided informed consent prior to the transition meetings and/or interviews. The participants were all adult stakeholders and not the children who appeared in the Digital Stories. The Aviary Nursery were responsible for creating and storing the children’s Digital Stories, which is part of their normal practice.

***Data Analysis***

Thematic analysis was applied by the first and second authors according to Braun and Clarke's (2006, 2020) recommendations. This allowed us to look for common patterns of meaning across the dataset that included different methods of data collection (Braun et al., 2019). Specifically, we adopted a ‘codebook’ approach, which is in accordance with our exploratory, inductive methodology. Our codebook approach involved: transcribing the data and immersing ourselves in it; inductive coding of the transcripts from the transition meetings, feedback forms and interviews with those that attended the meetings, which led to the development of an initial codebook and themes; inductively coding the transcripts from the EHCNA interviews and collaboratively developing initial themes and codebook; comparing the themes generated from the transition meetings and the EHCNAs, and combining these into one set of themes and subthemes; and finally, developing these into the coding manual and thematic map reported below (Figure 1).

**Findings**

Five main themes were developed: thinking differently; a wider conversation; more than words; seeing what they see; and potential barriers to making Digital Stories.

Figure 1. Thematic map of five themes (circles) and associated subthemes



***Thinking differently***

Participants spoke about how viewing Digital Stories led to them thinking differently which impacted on their practice both pre- and post- COVID. For example, SENCo 1 described how viewing Digital Stories benefited person-centred transition meetings which took place prior to the COVID lockdown:

*It helped to gain a bigger picture before starting the meeting, it meant that I was able to contribute more to the meeting than if I hadn't seen* it

The three EPs who viewed the Digital Stories as part of EHCNAs described how useful this was in the context of COVID, particularly as they were unable to physically visit the nursery. For example, EP 2 reported that:

*I thought in the context of what I was trying to do and the limitations we currently have because of the coronavirus, it was hugely helpful. I’ve not actually seen the child before … and just to see the child in that educational environment, that more natural setting was hugely important.*

In addition, EPs 2 and 3, respectively, described how viewing a Digital Story led to them thinking differently about provisions and/or outcomes:

*Certainly the one around language, I changed … based on an understanding that her understanding was a little bit higher than we thought*

*It helped thinking about provisions and about next steps. Actually, I felt more confident to think about outcomes*

EP 3 drew comparisons with assessments they had conducted during lockdown in which they were not able see a video of the child or visit the nursery:

*There's a bank of questions that we tend to use, but then there'd be some more personal ones depending on each case, but it definitely led me to asking different questions … I probably felt more confident going into those consultations that I knew what to ask and had a good picture of the child because I've seen that digital Story … I've written two other pre-schoolers in the last 10 days with autism without a Digital Story. I think the process of writing the report has been easier because I felt like I had a good understanding of his needs. The psychological perspective seemed to flow a bit easier. The child's views came a bit easier. I just felt more confident in that report being a really good reflection of how he is … like I'd captured his needs well and I think that was down to seeing the Digital Story*

EPs also saw a wide range of potential for Digital Stories for their practice after the COVID lockdown period had ended. For example, EP 2 said that they would like to see ‘Digital Stories as a matter of course really’ and EP 3 reported that Digital Stories have ‘got wide impact for EP work’. EP 4 discussed the potential benefits of Digital Stories during consultation meetings post-COVID:

*To be able to be able to watch a Digital Story at the beginning of the meeting, and particularly if I met the parents before I met the child. Yes, really lovely … because often when you go to medical appointments, you don't talk about the things that are going well, you talk about the things that aren't … It (viewing Digital Stories) would put a real focus on let's keep this positive as well as touching up on things that are not easy for this child*

***A wider conversation***

 Participants talked about using Digital Stories as triangulation tools, expressed positive attitudes towards Digital Stories, and made suggestions to improve them, which enabled wider conversations about the children. For example, Parents 1 and 2, respectively, discussed the value of the Story for helping them to see their child in a different context and being able to contribute more fully to the transition meeting:

*We saw him in a different environment which then showed himself in way he doesn't at home :) which again was lovely to see*

*It is difficult to comment in transition meetings outside the context of the home environment because this is all we see – The video enables a wider conversation in this respect*

With regard to triangulation, EP 3 described how she saw skills in the Digital Story that she was not expecting based upon the paperwork that she had read:

*You read the paperwork and … there's indication that there's no peer interaction at all, no interest in peers, no, no acknowledgement of them. But here in the clip we see some shared attention, which was really positive*

 Participants also expressed several ways to improve Digital Stories, including using them in new contexts, to track progress over time, developing them with older students, sharing with other stakeholders, and using them alongside observations:

*I think each child here should have one that is a bit like a learning journey, so it starts when they arrive and you have little snippets of what they do and then maybe do it every few months so you're adding to that digital journey as well as observations –* Nursery Manager

Importantly, participants believed that children should take a more active role in the development of Digital Stories:

*Also we want to do the stories that are really, based on what the children want to make for themselves. So who are you? What do you like best at nursery? But where do you like to play? Tell me about what, just tell me about you, but kind of working the questions with things that we've already got for digital stories, but also the Froebel principles* -Nursery Manager

*I know it's started with preschool, but … for any age group Digital Stories would be really useful and as children get older they could have more impact. They could talk to the camera themselves – EP 3*

The Nursery Manager also considered encouraging ‘parents to do some Digital Stories of their children at home’ in the future. Similarly, it was also suggested by EP 4 that parents/carers could be included within the Digital Stories video clips:

*It would have been quite nice to have mum or dad in it … what does he like to do at home that is different to nursery. If the story is the whole of the child that needs to include home in as well*

 In addition, EP 2 made a novel suggestion for future Digital Stories which they believed may lead to even more ‘naturalistic’ clips:

*To have a WearCam on another child, so you get the view from the other child, and you can see what the target child is doing, how they’re approaching other people, what their facial expressions are. That might add another level of richness around the child and child’s voice.*

***More than words…***

 Participants spoke about the child-centred and strengths-based nature of Digital Stories, and how they helped to develop a more holistic understanding of the children, which would not have been possible with words alone. For example, EP 1 described how videos provide richer and more detailed pictures of a child than written or verbal reports:

*I think you get far more information looking at a video of a child than you can do from getting a description. You can really see them for themselves*

Similarly, EP 4 commented on how much detail the Digital Story contained:

*I hadn't realised maybe how detailed it could be in showing me the things that they, a little boy liked and didn't like, what helped him and how … rather than it just being something nice to watch I suppose ... Seeing what language the child responded to, and what was perhaps a bit more difficult, and the communication tool the child had, which was some pictures and PECS, was helpful*

Finally, Parent 3 conveyed the importance of the Digital Story for her:

 *Beautiful. It captured just how he is which words cannot describe*

***Seeing what they see***

 This theme describes the different ways in which children’s perspectives were represented within Digital Stories. For example, many participants described the benefits of seeing through the ‘eyes’ of the child:

 *Breath taking! Such a treat to see the world through his eyes*  -Parent 6

 *It was really nice … to see what they see* - Practitioner 3

*You get to see the child as a person, and see things from their view, not just professionals* - Nursery Manager

The use of the WearCams was also noted as especially powerful by EP 1:

*Well, for sure the most powerful way of doing that was when the child was wearing a WearCam. I thought that was a really exceptional way of seeing things from the child’s point of view and obviously you could really hear them as well, you could hear what they were saying. So that was a really nice way of doing it. But also, I think it got them from their point of view, because obviously the videos have sound, it can really record what the children are saying and how they’re reacting to the environment that they’re in.*

***Potential barriers to making Digital Stories***

 Participants discussed different potential barriers to making Digital Stories as well as ways to overcome these. For example, the Nursery Manager reported that time and technical aspects could be problematic:

*The main challenge always is time … I think it's, I wouldn't say easy, but I think once you know what you're doing (with the technical aspects), I think it's fairly straightforward and self-explanatory really … I think it’s something you need to embed into your practice … I would think the whole Digital Story could be done in six hours.*

 Another potential barrier from EP3 related to the safety of WearCams:

*Everything is in his mouth and things, so they probably wondered about safety around that*.

**Discussion**

This study explored the use of a novel methodology - Digital Stories - for supporting pre-COVID person-centred planning transition meetings for (mostly) autistic children, and EPs conducting EHCNAs during lockdown for COVID when they could not meet or assess the child in person. Although Digital Stories were originally developed to enable the voices of young autistic children, it is an inclusive method that can be applied to any / all children and this study was a good opportunity to demonstrate this. Participants described that Digital Stories were a ‘powerful’ way of gaining the voices of young autistic children such that these voices are then given prominence within formal meetings and processes that are central to educational decision-making. Participants commented on how the Digital Stories were anovel and holistic way to present the voice of the child, such that it enabled them to see children’s strengths, interests and abilities. Crucially, this approach challenges the view that it is not possible to capture the voices of young autistic children who may communicate nonverbally (see also Parsons, Ivil et al., 2020; Parsons, Kovshoff et al., 2020). As also found by Parsons, Ivil et al. (2020), stakeholders particularly valued footage captured by the WearCams, which allowed them to see the world through the eyes of the child.

Professionals and parents indicated several direct benefits which resulted from them thinking differently after viewing Digital Stories, such as feeling more confident to contribute to transition meetings and gaining insights into the child’s strengths. Considering the legal and ethical obligations to include parents (and their children) in educational decision-making processes in England (DfE/DoH, 2015), this finding provides important indications that Digital Stories could be a useful approach. In terms of EHCNAs, EPs reported that viewing Digital Stories helped them represent the views of the child within reports, develop provisions and outcomes, formulate psychological perspectives, and led to more personalised questions being asked, thereby making important impacts on practice. This contrasts with previous research which showed that parents found EP involvement unhelpful when EPs ‘simply carried out a standard assessment or did not take the time to explore what questions really needed to be addressed’ (Squires et al., 2007, p. 352).

All the EPs who viewed Digital Stories during lockdown saw potential benefits for the longer-term. For example, they described different ways in which Digital Stories could become part of their normal assessment practice such as viewing a Digital Story at the beginning of consultations with parents/carers, as a holistic way of opening discussion about a child. This would include discussing the child’s strengths as well as sensitively acknowledging what the child finds more challenging. One EP described how a Digital Story could offer a preferable alternative to the often deficit-focused nature of medical appointments through providing insights into positive experiences as well as areas of challenge.

 Some potential barriers to Digital Stories were discussed. Unsurprisingly, time and technical aspects were mentioned, but the Nursery Manager also commented how it is possible to overcome these through embedding videoing within everyday practice such that staff quickly become skilled. In response, the ACoRNS team (2020)[[4]](#footnote-5) have also made several free resources to support settings who wish to make Digital Stories, including advice on the technical aspects and time-saving strategies. One EP also wondered about the health and safety aspects of WearCams and whether children may want to put them in their mouths, which is something that should be carefully considered prior to making a Digital Story. A related point is that some children might find it aversive to have a novel object on their clothing, which is particularly pertinent considering the prevalence of sensory processing differences in autism (e.g. Jussila et al., 2020). This is an important consideration and reflects a wider point around consent which is discussed further in Parsons, Kovshoff et al. (2020). Although some children may not be able to provide verbal consent to having a Digital Story made for them, the onus is on adults to check in other ways whether children may communicate their consent or otherwise to participate. For example, a child taking a WearCam off themselves may be communicating they do not wish for this to be on them, which must be respected.

***Strengths and limitations***

The study has several strengths, including using the Digital Stories methodology for the first time to support transition meetings and EP assessments. Another strength is the inclusion of a range of different stakeholders and the collection of data via a range of methods at different points in time (i.e. pre and post COVID). We welcome suggestions that future Digital Stories could include different environments within the videos (e.g., home), showing progress over time, as well as being developed with older students. Indeed, a project is already underway to explore the use of Digital Stories to facilitate autistic young people with complex needs to have more of a voice in their transition to adulthood (Burden & Marsden, 2020). An EP also made an interesting suggestion that other children could have WearCams on, so they were able to observe the focus child from the view of other children. This could extend and build upon the WearCam footage from the focus child’s perspective and provide naturalistic footage of social interactions from more than one perspective, which could be beneficial to EP assessment.

Where feasible, it will be important for children to take a more active role in developing their own Digital stories as the methodology develops, such as filming and editing their own video clips. This was not possible in the current study due to the very young age of the children, though WearCam footage played a central role such that children’s own perspectives were represented as respectfully and authentically as possible. The video clips were also compiled by adults who knew the children very well (e.g., nursery keyworkers), and the Digital Stories were described as representative of their children by parents, suggesting that the videos were, despite their limitations, child-centred. As an exploratory qualitative study, our aim was only to understand stakeholders’ experiences of Digital Stories within a specific context (Polit & Beck, 2010), but it would also be useful to extend the Digital Stories methodology to other children, settings and contexts to explore benefits and constraints.

**Conclusion**

The reliance on digital technologies has risen substantially since COVID-19 which is likely to stay. Our findings indicate that Digital Stories provide a means through which the voices of young autistic children can be enabled so that they can inform the assessments and decision-making of professionals during key transitions.

**References**

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th edn). Washington DC: Author

Bottema-Beutel, K., Kapp, S., Lester, J. et al. (2020). Avoiding Ableist Language: Suggestions for Autism Researchers. *Autism in Adulthood*, 1-12. doi:10.1089/aut.2020.0014

Bölte, S., Golan, O., Goodwin, M. S. & Zwaigenbaum, L. (2010). What can innovative technologies do for Autism Spectrum Disorders? *Autism*, *14*(3), 155–159. doi:10.1177/1362361310365028

Boyd, T. K., Hart Barnett, J. E. & More, C. M. (2015). Evaluating iPad Technology for Enhancing Communication Skills of Children with Autism Spectrum Disorders. *Intervention in School and Clinic*, *51*(1), 19–27. doi:10.1177/1053451215577476

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101

Braun, V. & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 1-25. doi:10.1080/14780887.2020.1769238

Braun V., Clarke V., Hayfield N. & Terry G. (2019) Thematic Analysis. In: Liamputtong P. (eds) *Handbook of Research Methods in Health Social Sciences*. Springer, Singapore. doi:10.1007/978-981-10-5251-4\_103

Bristow, M. (2013) An exploration of the use of PATH (a person-centred planning tool) by Educational Psychologists with vulnerable and challenging pupils (Unpublished doctoral thesis). Institute of Education, London.

Burden, L. & Marsden, K. (2020) Moving into adult life with digital stories. *Special Educational Needs (sen)*. Retrieved 11 April 2021 from <https://senmagazine.co.uk/content/education/transition/12247/moving-into-adult-life-with-digital-stories/>

Cascio, M. A., Weiss, J. A. & Racine, E. (2020) Making Autism Research Inclusive by Attending to Intersectionality: a Review of the Research Ethics Literature. *Review Journal of Autism and Developmental Disorders*, 1-15. doi:10.1007/s40489-020-00204-z

De’, R., Pandey, N. & Pal, A. (2020). Impact of digital surge during Covid-19 pandemic: A viewpoint on research and practice. *International Journal of Information Management*, *55*, 1-5. doi:10.1016/j.ijinfomgt.2020.102171

Department for Education (DfE). (2020) *Special educational needs in England: Academic Year 2019/2020*. Retrieved 28 October 2020 from https://explore-education-statistics.service.gov.uk/find-statistics/special-educational-needs-in-england

Department for Education (DfE), Department of Health (DoH). (2015). *Special educational needs and disability code of practice: 0 to 25*. Retrieved 27 October 2020 from <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/338195/Code_of_Practice_approved_by_Parliament_290714.pdf>

Education Endowment Foundation (2019) *Using Digital Technology to Improve Learning: Guidance Report*. Retrieved 2 October 2020 from https://educationendowmentfoundation.org.uk/public/files/Publications/digitalTech/EEF\_Digital\_Technology\_Guidance\_Report.pdf

Ellis, J. (2017) Researching the social worlds of autistic children: An exploration of how an understanding of autistic children’s social worlds is best achieved*. Children & Society*, *31*, 23–36. doi:10.1111/chso.12160

Gentrup, S., Lorenz, G., Kristen, C. & Kogan, I. (2020). Self-fulfilling prophecies in the classroom: Teacher expectations, teacher feedback and student achievement. *Learning and Instruction*, *66*(101296), 1-17. doi:10.1016/j.learninstruc.2019.101296

Holloway, I. (1997). *Basic concepts for qualitative research*. Oxford: Blackwell

Humphrey, N. (2008). Including pupils with autistic spectrum disorders in mainstream schools. *Support for Learning*, *23*(1), 41–47. doi:10.1111/j.1467-9604.2007.00367.x

Humphrey, N. & Lewis, S. (2008). `Make me normal’. *Autism*, *12*(1), 23–46. doi:10.1177/1362361307085267

Jussila, K., Junttila, M., Kielinen, M. et al. (2019). Sensory Abnormality and Quantitative Autism Traits in Children With and Without Autism Spectrum Disorder in an Epidemiological Population. *Journal of Autism and Developmental Disorders*, *50*(1), 180-188. doi:10.1007/s10803-019-04237-0

Jussim, L. & Harber, K. (2005). Teacher Expectations and Self-Fulfilling Prophecies: Knowns and Unknowns, Resolved and Unresolved Controversies. *Personality And Social Psychology Review*, *9*(2), 131-155. doi:10.1207/s15327957pspr0902\_3

Kenny, L., Hattersley, C., Molins, B. et al. (2016). Which terms should be used to describe autism? Perspectives from the UK autism community. *Autism*, *20*(4), 442-462. doi:10.1177/1362361315588200

Merton, R. K. (1948). [The self-fulfilling prophecy](https://www.jstor.org/stable/pdf/4609267.pdf?casa_token=u_rRgsBNwzEAAAAA:TxN-zWae5wVhSbesaAeXamVt24Nu2oKh2YjDw9WQzixTNiDoKBKodSgmgoIy52i4Ze5O6Qg7a93Ya-G41ouGFOTvSMDUq1r2Bv2UUS8CkOmEwljsFa0). *The Antioch Review, 8*(2), 193-210.

Milton, D. (2012). On the ontological status of autism: the ‘double empathy problem’. *Disability & Society*, *27*(6), 883-887. doi:10.1080/09687599.2012.710008

Nuske, H., McGhee, E., Bronstein, B. et al. (2018). Broken bridges—new school transitions for students with autism spectrum disorder: A systematic review on difficulties and strategies for success. *Autism*, *23*(2), 306-325. doi;10.1177/1362361318754529

Palikara, O., Castro, S., Gaona, C. & Eirinaki, V. (2018). Capturing the Voices of Children in the Education Health and Care Plans: Are We There Yet? *Frontiers in Education*, *3*(24), 1-9. doi:10.3389/feduc.2018.00024

Parsons, S., Ivil, K., Kovshoff, H. & Karakosta, E. (2020). ‘Seeing is believing’: Exploring the perspectives of young autistic children through Digital Stories. *Journal Of Early Childhood Research*, 1-18. doi:10.1177/1476718x20951235

Parsons, S. & Kovshoff, H. (2019) Building the evidence base through school-research partnerships in autism education: the Autism Community Research Network @ Southampton [ACoRNS]. *Good Autism Practice*, *20*(1), 5-12.

Parsons, S., Kovshoff, H. & Ivil, K. (2020). Digital stories for transition: co-constructing an evidence base in the early years with autistic children, families and practitioners. *Educational Review*, 1–19. doi:10.1080/00131911.2020.1816909

Parsons, S., Yuill, N., Good, J. & Brosnan, M. (2019). ‘Whose agenda? Who knows best? Whose voice?’ Co-creating a technology research roadmap with autism stakeholders. *Disability & Society*, *35*(2), 201–234. doi:10.1080/09687599.2019.1624152

Pearpoint, J. O'Brien, J. & Forest, M. (1993). PATH: A workbook for planning positive, possible futures and planning alternative tomorrows with hope for schools, organizations, businesses and families. Toronto: Inclusion Press.

Polit, D. & Beck, C. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies*, *47*(11), 1451-1458. doi:10.1016/j.ijnurstu.2010.06.004

Rabiee, P., Sloper, P. & Beresford, B. (2005) Doing research with children and young people who do not use speech for communication, *Children & Society*, *19*(5), 385-96. doi:10.1002/chi.841

Sinclair, J. (2013). Why I dislike “person first” language. *Autonomy*, *The Critical Journal of Interdisciplinary Autism Studies*, *1*(2). Retrieved November 8 2020 from http://www.larry-arnold.net/Autonomy/index.php/autonomy/article/view/OP1/pdf

Squires, G., Farrell, P., Woods, K. et al. (2007). Educational Psychologists’ Contribution to the Every Child Matters Agenda: The parents’ view. *Educational Psychology in Practice*, *23*(4), 343-361. doi:10.1080/02667360701660993

The Froebel Trust (not dated) *Froebelian Principles.* Retrieved November 19 2020 from <https://www.froebel.org.uk/about-us/froebelian-principles>

Weismer, S. E., Lord, C. & Esler, A. (2010). Early Language Patterns of Toddlers on the Autism Spectrum Compared to Toddlers with Developmental Delay. *Journal of Autism and Developmental Disorders*, *40*(10), 1259-1273. doi:10.1007/s10803-010-0983-1

White, J. & Rae, T. (2016). Person-centred reviews and transition: An exploration of the views of students and their parents/carers. *Educational Psychology in Practice*, *32*(1), 38–53. [doi:10.1080/02667363.2015.1094652](https://doi.org/10.1080/02667363.2015.1094652)

Whitehurst, T. (2007). Liberating silent voices? Perspectives of children with profound & complex learning needs on inclusion. *British Journal of Learning Disabilities*, *35*(1), 55–61. doi:10.1111/j.1468-3156.2006.00405.x

Wood, H., O’Farrell, K., Bjerk-Andersen, C. et al. (2019). The impact of Planning Alternative Tomorrows with Hope (PATH) for children and young people. *Educational Psychology In Practice*, *35*(3), 326-338. doi:10.1080/02667363.2019.1604323

Woods, R. (2017). Exploring how the social model of disability can be re-invigorated for autism: in response to Jonathan Levitt. *Disability & Society*, *32*(7), 1090–1095. doi:10.1080/09687599.2017.1328157

Woodside, A. G. & Wilson, E. J. (2003). Case study research methods for theory building. *Journal of Business and Industrial Marketing*, *18*(6/7), 493−508.

World Health Organization. (‎2019)‎. *International Statistical Classification of Diseases and Related Health Problems* (10th edn).

1. Within this paper, identity-first language (e.g., autistic child) and ‘on the autism spectrum’ are used to refer to people with an autism diagnosis. This stance is in line with many autistic self-advocates (e.g., Sinclair, 2013), was favoured by autistic people and their families in a large UK survey (Kenny et al., 2016) and does not promote an ‘ableist ideology’ (Bottema-Beutel et al. 2020, p. 1; see especially Table 1). [↑](#footnote-ref-2)
2. https://autismtransitions.org/ [↑](#footnote-ref-3)
3. Consent has been given to refer to the name of the nursery by parents/carers and the Nursery Manager. [↑](#footnote-ref-4)
4. All the resources are available from: https://autismtransitions.org/how-to-make-your-own-2/ [↑](#footnote-ref-5)