Children's divergent practices and access to digital media in homes, communities and informal learnings spaces

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Abstract

Research on children's engagements with new media in home, school and neigahbourhood communities can sometimes assume that particular uses of digital media are, in some way or other, representative of all children's digital literacy practices, as well as being socially neutral. The case argued for in this chapter is that children's digital literacy practices, because they are practices rather than simply skills, are always situated in and influenced by ideologies of social class, race, gender, language and place – and that digital literacy practices vary widely, and are tied up with social, cultural and idiosyncratic habits and uses that are specific to particular places and spaces. Digital media, from this perspective, exist in the local and offer particular kinds of agency and engagement to young children. Such uses and practices are shaped in situated ways that can make sense locally but can appear divergent or inadequate when viewed from the outside. Research on and interventions about young children's digital media uses should take constructive account of such differences. The chapter draws on contrastive research about children, teachers and their parents, in educational and play settings in middle-class as well as township and shack settlements in South Africa to illustrate and elaborate on this argument.

Introduction

Research on children's engagements with digital media can sometimes assume that particular children's uses of digital media are, in some way or other, representative of all children's digital literacy practices, because children are in some kind of loose way, thought of as being more the same as each other than adults are like each other. Kress (2003), in an influential example, suggested some general differences between how children write differently to adults in some key respects, thus implying a commonality amongst children on the one hand, and adults on the other. Where adults, he said, are more oriented towards what is 'correct' and see a ready-made path towards meaning-making, children are less constrained, partly because they are less informed about conventional orientations to literacy than adults, but also because they are more willing to work inventively with what is at hand. Kress

suggested that children make their meanings, "governed by their *interest* at the moment of making the sign" (Kress, 2003, 155) by drawing on available resources. While Kress acknowledged that children's interests were undoubtedly socially shaped as well, he was most interested in processes of creative individual design, or selection of items that were used to operate as signs (including circles drawn by a pre-school child to signify a car). In contrast, however, I am more interested in the socially specific aspects of children's digital and other meaning-making and activities. The point that emerges strongly in my research is that children's digital literacy activities respond to larger dynamics of social class, race, gender, language and place. I am particularly interested in what happens when particular digital resources, designed with certain contexts in mind, or carrying particular expectations regarding their uses, encounter complex, detailed, situated forms of life that differ in particular ways from those anticipated in the design of the multimodal digital resources. I see digital media as translocal resources that operate in local contexts and offer particular kinds of located agency and engagement to young children in ways that are tied up with where they are and who they are. Children and childhoods are not all the same (Orellana, 2009) and digital media uses are tied up, along with other resources for performance and representation, with being human in particular ways, so that we can't assume that these devices are the same thing or that technologies are used in the same way in different settings under different conditions. I turn now to prevalent models for studying children's early digital literacy activities that shape my research.

Literacy Studies and multimodal studies

Literacy Studies, since the early work of Street (1984), Heath (1983) and others, has tried to understand writing and reading, more recently including digital literacies, as social activity, people doing things together or on their own for purposes that are always shaped by what people (children and adults) are doing in relation to each other. The multimodality approach shifts focus slightly and tries to understand how the (socially shaped) tools work with which people do these things. These two theoretical orientations have since been drawn on together in literacy and new media studies (e.g., Kress and Street, 2006; Pahl and Rowsell, 2012), on the basis that they complement each other, although giving 'equal recognition' (Street, 2012, 1) to these two influences can sometimes be difficult in practice, because of the divergent ways

that they focus researcher attention. Kress's (1997) study of children's early multimodal sign-making was an innovative and influential example of this approach but he was not much interested in the socio-economic, cultural or placed location of the children studied.

A distinctive digital literacies research direction has since emerged in Northern/trans-Atlantic settings, drawing on both multimodal and social practices approaches, that argues that the multimodal and networking affordances of digital resources have changed the ways that children are encountering and using writing, meaning-making and design. Rowsell and Pahl (2007) developed an approach to the examining of identities in multimodal texts, arguing that children's texts can be seen as traces of social practice, and as artefacts that have histories. Texts made at home, for example, are constructed in relation to home identities and practices and carry those traces. Wohlwend's studies (2015; 2011) identify the rich and layered nature of children's play through the merging of digital and real-life resources, in on-screen along with off-screen action, as children collaboratively and competitively manipulate virtual avatars and other digital resources and artefacts, along with actual toys in peer-play settings, in events that include singing and recited quotations of remembered dialogue, along with mimicry and hand-made puppets in sustained and meaningful play activities. Rowe and colleagues (2015; 2014) along with Rowsell (2017) found that e-book composing with digital tablets and iPads taught children how to move across images and words in story-telling and to draw on information, expertise and languages from both home and school. Flewitt and colleagues (2015; 2014) showed how iPads can enhance school learning, motivating children to make meaning through using a varied repertoire of signs and symbols across print and screen-based media. They describe how children can be creative and fluent across varied repertoires of signs and symbols. Several studies have gone on to identify a mismatch, however, between children's out-of-school media engagements and what schools expect from them. Burnett (2010) found digital literacy practices in classrooms to be frequently framed by influences from print literacy as to what was appropriate. Merchant (2009) studied the effects of a virtual world created for students and teachers to engage in virtual world game play at a school in England. He found that teachers' lack of familiarity with gaming routines meant that the virtual world often mirrored the world of the classroom, digital literacy being

marginalised in favour of traditional forms of literacy. Sefton-Green and colleagues (year) identified a 'top-down' conceptualisation of digital literacy in formal learning at school and contrasted this with the 'bottom-up' understandings of informal and popular cultural processes that children held. Marsh (2006) described how popular culture is integral to children and young people's engagements in a wide range of literacy. She explored reasons why teachers don't use popular culture and popular media texts in their teaching and suggested that the education of pre-service teachers should include making them aware of the realities of children's out-of-school literacy lives, shaped as these are by popular culture, media, and new technologies. Related research has drawn specific attention to the relations between digital access and social inequalities in the USA. For example, Warschauer and Matuchniak (2010) presented an overview of issues of access, use and outcomes regarding children and young people's use of digital media in the USA across socio-economic, racial, ethnolinguistic and gender categories in home, school and community contexts. They conclude that the original *digital divide* as regards physical access to such media was largely resolved, at least in the United States, in that everyone had some access. However, the divide still resided in the differential abilities of specific groups of youths to use these resources critically, creatively, and productively in the new economy. Moje and colleagues (2008) found that for high poverty children in the USA, the digital divide had not closed.

Research on young children's digital literacies in a Southern content

My own research interests have been in what might be called the social life of digital media, the ways that their uses are shaped and distinctive with regard to their embedded uses by situated users in particular settings. I see such variations as shaped in particular by the differences that children, youths, and teachers of various sorts bring to the use of digital media and differences in what people are up to more broadly when they are using digital media. My research features accounts of individuals and groups who improvise with the technologies that they have and who use these resources in ways that are novel and that, in particular cases, are sometimes less than successful. Rather than being simply accounts of deficit or disadvantage, however, these studies open up the space for an understanding of how people take hold of digital media resources in out-of-school settings and how these resources work in particular educational settings, most notably those in Southern and African

settings that have been less researched.

My research, along with students and colleagues, has included a contrastive study of the uses of digital media at home by children from professional-class and underclass families in South Africa. I worked with Polo Lemphane when she was a research student at the University of Cape Town and we researched the digital play of children of unemployed parents living in a shack settlement outside Cape Town and contrasted their play with children of working professionals living in a middle-class suburb in the same town (Lemphane, 2013; Lemphane and Prinsloo, 2014; Prinsloo and Lemphane, 2014). The research model was that of contrastive ethnographic-style case studies (Heath and Street, 2008). Each family was visited by Lemphane on alternate weekends, over a period of several months when both children and their parents were at home. She observed and recorded activities while children played with particular digital media and carried out unstructured and semi-structured interviews. Collected data included recordings of conversations and researcher discussions with children and parents, photographs of children at play in their environment, screenshots of electronic images and text, and field notes. The research shows that social class differences among African children take on globalized cultural dimensions by way of language practices and online media practices, which sharpen differences between middle-class children and poorer children. The children of professionals are seen to absorb the cultural capital that English-language resources, digital hardware, and unlimited broadband Internet connectivity in their home afforded them by way of connections to global middle-class cultural flows. They do this, however, in ways that are entangled in their particular context, as Black African children from a particular bilingual, sociolinguistic context who participate online in a predominantly White, Northern, Anglo-normative social environment. Whatever disadvantages they experience in these encounters, however, seems to matter less than the advantages they get from their emerging facility with the genres, registers and identity practices of globally connected youth culture, that in turn offer them precursory access to more local middle-class identities and practices, in contrast to their poorer peers in the same city who have no access to such participation in global youth culture at all (Lemphane and Prinsloo, 2014).

Studies of children's early digital media use in African settings cannot but help study

them in the context of complicated race, class, economic, language and cultural imperatives that shape these practices in distinct ways. In our research, Lemphane and I studied children living in a shack settlement on the edge of Cape Town who played with the Internet-connected cell phones of their parents. But such play did not provide any access to more global resources of information and entertainment—partly because the children did not share the sociocultural backgrounds or linguistic resources that are typically taken for granted on websites designed for children and partly because the environment and their parents limited the children's access to digital play. This family might be seen as one example of people who have been identified as the 'precariat' of the global economy (Standing, 2010; Wedekind, 2014), with the parents, who migrated to the city from rural areas, poorly educated, largely excluded from formal sector work, lacking income and job security and without predictability or security in their lives. The family home was a shack made from corrugated iron sheets and masonite, about 3½ by 4½ square metres, divided into several rooms by masonite dividers, in which the family of two parents and their five children lived. The children's mother worked part-time as a char in a home in a middle-class Cape Town suburb and her partner worked infrequently as a labourer on construction sites. The major source of income for the family over the period of research was through child grants provided by the state (R380 per child in 2015, or about US$29 at current exchange rates) and they shared this reliance on state welfare with millions of other out-of-work people in South Africa. There were two mobile phones, used interchangeably by the two adults, and used exclusively by them for making and taking voice-calls, and not for texting or for any other purpose. One of the phones had features which included an FM radio app and two preinstalled animated games, which were played by the children when they could get access to the phone which was not always easy because the phone had a relatively long-lasting battery compared to the other phone and the parents valued it for communicating with their family and friends. As a result, the children were allowed limited access to it.

The children had no access to a personal computer, laptop or iPad at all as these were not affordable items for their parents or their neighbours. Their parents' restrictions regarding the children's use of mobile phones gave the children limited access to

digital play. The conditions of play were also constrained by the limited space available in the home, as well as the parents' attitudes to children's noise. The children were never seen to make phone calls nor send SMS messages on the phones but used them to play games and also to examine their functions. When they played inside, the children often had to play silently so as not to annoy their parents or the visitors in the crowded collective space which they all occupied. The children's digital play consisted mostly of silently playing, and silently watching each other play, on the one available game on the cheaper and older Vodafone 150 phone, to which they had greater access than the better phone, a Vodafone 345 Text that had FM radio access and two preinstalled animated games. In the only game on the older mobile phone, the task in the game was to move three rings from one pole and stack them on the next pole in the same order. Success would lead to the next level with an additional ring, and so on. When they did have space to talk while taking turns to play the game of moving virtual hoops, their talk tended to not be about the game but about other things. In the conversation below, the child Thato imagines having a 'PlayStation' while he is playing the rings game on the phone. The other children explore his fantasy with him.

Thato : *Abanye abantwana esikolweni baphatha iPlayStation badlale yona* [Some children take PlayStation to school and play with it]

Thabang: *Uyaxoka* [You are lying]

Nthabiseng : *Hayibo Mputi* [No Mputi]

Thabang : *Ifakwa etivini iPlayStation* [It is connected to a TV]

Thabang : *Yimalini iPlayStation ?* [How much is PlayStation]

Thato : *Ninety rand* [Ninety rand]

Thabang : *Phi ?* [Where?]

Thato : *Apha Machaeneng* [There at the Chinese shop]

Nthabiseng : *Machaeneng* [At the Chinese shop]

Thabang : *Ewe bendifuna ukudlala, iphum'nento ezinintsi, ifuneka iconnektwe etivini. Xa uzofuna umntu umdlalise wenze imali* [Yes, in order to play it, it needs many things, it needs to be connected to a TV. When someone needs to play, make him/her pay and make money]

Nthabiseng : *Utheng'amagwinya* [You buy fat cakes]

Thabang : *For electricity le abadlala ngayo* [For electricity which they play with]

Nthabiseng : *Hayibo, Ndithenge is'kipa sePirates* [No, I buy pirates T-shirt]

Thabang : *Umntu xa efuna ukudlala, udlala nge-rand iPlayStation*. [Anyone who wants to play, plays the PlayStation for one rand]

Nthabiseng : *Ewe ungena nge-randi* [Yes, they will enter with one rand]

Thabang : *'Cause umbani* [Because electricity]

Nthabiseng : Ewe uyamoshakala umbani ungena nge-randi. [Yes, electricity is used; you have to enter with one rand]

'PlayStation' might appear to be a stable signifier here, identifying a globally recognisable copyrighted gaming console plus software, along with all the youthful pleasure and interactive intensity associated with digital gaming. But there are also apparent anomalies here. It is certainly surprising that the 'PlayStation' being talked about apparently only costs R90 (less than £6). We also notice that the children talked about it, first and foremost, as a tradeable resource rather than a source of direct pleasure in itself. They imagined the control of access to the PlayStation as a way to other somewhat random, non-virtual items of desire that were particular and localised in nature – these include *vetkoek* (deep-fried dough-cakes that are a common low-cost for-sale item in their neighbourhood), football club supporter T-shirts (Pirates FC, a soccer club based in Soweto but with a nation-wide mostly Black support base) and electricity which is a valued, expensive and not widely available local resource. The PlayStation, it turns out, is an item that is actually available in their extended social world, unlike a 'real' PlayStation which would be unaffordable and out-of-place here because of that. What they were talking about is a cheap, electronic PlayStation-like console that they had seen on sale locally, at the Chinese shop, with only a few basic games on it, not so unattainable after all, but still out of reach for them at this time. The 'Chinese shop' might also have raised echoes for the reader of high-tech global trade but the shop is again something different, one of many thousands of similar small, humble, low cost outlets scattered throughout poorer urban and residential sites across South Africa (and elsewhere in Africa), often run by immigrant Chinese, selling mostly low-cost, imported items that imitate popular branded commodities to poor people/ people who cannot afford the genuine article.

We can say that the children's fantasy about acquiring digital playgoods

simultaneously displays both creative agency and also reveals their material and discursive location. In ironic parallel with neoliberal discourse which places market logic above everything else, the children's imaginings quickly turn to the exchange value of PlayStations, what might be acquired through trading access to them. The children's sense that they could barter access to the PlayStation probably reflects the influence of both their parents and their wider neighbourhood, where few people have reliable income sources, everything that has value is considered tradeable. It also points to a problem with digital hardware and its relative (un)availability in this context. Anything that has value is also at risk of being stolen.

Schools and ICTs as valued resources

We see the 'tradeability' of digital resources again in the troubled efforts to provide a 'paperless school' environment in another region of South Africa over the last few years. In March 2014, the roll out of 88,000 digital tablets took place, to primary and secondary schools across the Gauteng Province which is the industrial heartland of South Africa but also home to millions of poorer people, or members of the precariat, living in shack settlements or the townships or dormitory suburbs previously designed by the apartheid government to house the Black workforce for the urban industrial centres. The rollout focused firstly on the poorest and least resourced schools which would also get Internet connectivity to a Department of Education Portal that would include curriculum material based on the most recent curriculum framework. "The project will have a significant impact on the delivery of quality and equitable education in Gauteng," said Gauteng Department of Education spokesperson Phumla Sekhonyane (*Southern Courier*, 2014, 1). The Department hoped to roll the project out to all Gauteng township and rural schools by the end of the 2017/2018 financial year at an estimated cost of R17 billion (more than a billion in Euros) that included the provision of WiFi and 3G connectivity to schools. In May 2015, the Department announced it was withdrawing all 88,000 tablets because they were being stolen in large numbers. Gauteng Education top official, Panyaza Lesufi said: "There've been a series of burglaries to our schools to steal the tablets that we've given to schools. So, the 88,000 tablets that we gave to our schools, unfortunately, regrettably, we're withdrawing them now" (*Business Tech*, 20 May 2015).

Later in 2015, 17,000 of the tablets were again installed in 4,000 classrooms, predominantly in township and rural schools, this time with heightened security features, along with 1,800 3D LED Interactive Whiteboards as part of a 'paperless schools' project and heightened security features but were still vulnerable to theft and damage during sometimes violent 'service and delivery' and other protests that took place periodically in some areas, as well as theft by organised criminals who in the case of one school used guns, wore bulletproof vests, pistol-whipped the security guard and used angle grinders to systematically remove Interactive Whiteboards from the walls (IOL, 2015).

A reporter for *The Economist (*Oct 19th 2015) summed up a critical view of the rollout:

> Critics wonder if South African schools might do better to get the basics right first. Technology is no help if teachers aren't competent in their subjects. They also must be trained up to properly use education technology. And while some schools are getting tablets, many others lack sanitary lavatories. An audit by the advocacy group, Equal Education, found that the conditions of toilets at some Gauteng township schools are worse than in South Africa's overcrowded prisons. In 2012, pupils in Limpopo province failed to even receive textbooks.

In 2017, the paperless school project was only being implemented for Grade 12s (the final year of schooling for youths who are upwards of sixteen-years old) in Gauteng. This time Lesufi said: "Since the installation of paperless classrooms the level of thuggery and vandalism has taken an ugly turn and we are worried. We are calling on the police to assist us, but we are not going to be deterred by this kind of thing." (*EyeWitness News*, 25 June, 2017). Apparently passionately committed still to the idea of the 'paperless school' which he had initiated in Gauteng, in December 2017, Lesufi declined nomination to the ANC's National Executive Committee, the highest decision-making body of the ruling party in South Africa, saying that he could not leave the 'paperless school project' as 'unfinished business'. He was quoted earlier as saying: "We know that where schools have a library, ICT, connectivity and quality teaching resources, pupils do better," (Brainstorm, 7 August 2017).

According to this government official driving the paperless schools project, the decision to radically introduce ICT in Gauteng schools was to ensure young people participate in the digital economy. This generalized notion of an undifferentiated global economy and undifferentiated young people is clearly a problem, though, particularly in a country which is often described as being amongst those with the highest levels of social inequality worldwide (World Bank, 2018). Policy interventions concerned with 'levelling the playing fields' for children from poorer social backgrounds sometimes assume that technologies have an effect on practices that is predictable, moving those practices closer to the model of middle-class schooling which is sometimes thought of as a neutral model for everyone else, rather than as situated, ideological practices that help to entrench elite groups in a host of ways, not least by marginalising other forms of life. My interest then continues to be: What happens when particular digital resources, designed for one purpose, or carrying particular expectations regarding their uses, encounter complex, detailed, situated forms of life that differ in particular ways from those anticipated in the design of the digital resource?

In earlier work, with the same concern, I argued that we should study digital media and digital literacies as 'placed resources' (Prinsloo, 2005; Prinsloo and Rowsell, 2012; Prinsloo and Snyder, 2007). In an example of children encountering desktop computers in a school 'computer lab' (Prinsloo and Walton, 2008) I showed with a colleague that the assumption by the teacher that literacy-learning was a drill-and-practice activity was consistent with the software the class had access to, which gave strong emphasis to skills-based phonics packages delivered by computers. The teacher's view was that such activities taught children fine-motor skills and eye-hand co-ordination, reflecting her own understanding of the reading-readiness ideas from earlier behaviourist models of how children learn literacy. The teacher said that the following term she was going to teach the children how to get in and out of a programme, but now they were started with pre-reading exercises. We made the point then, in discussing this setting, that rolling out newer and better machines and more up-to-date software would not mean that digital resources would suddenly start to work 'as they were supposed to' in such contexts as the school studied here if they

were thought of as simply marginal or deviant contexts rather than as distinctive ones (See also Lynch and Redpath, 2014 on tensions in iPad use in an Australian preparatory classroom).

In a more recent study with a research student who worked as a primary school principal, we examined the use of Interactive Whiteboard Use in a Cape Flats primary school (Prinsloo and Sasman, 2015). Interactive Whiteboards (IWBs) are large, touch-sensitive screens that control a computer that is connected both to a digital projector as well as to the Internet, where this is available. Users control the computer via the screen, using a pen, finger, or stylus. Developed first in the early 1990s by a Canadian technology company for corporate meeting, seminar, and training purposes, IWBs were subsequently marketed internationally for educational purposes, introduced into schools on varying scales and offered as a major resource for teaching and learning activities that include talk, print, image, and sound along with digital connectivity. The research I describe here (Prinsloo and Sasman, 2015) posed the question of how IWBs travel as resources across social spaces and how they get "taken hold of" (Street, 2009, 24) by language and literacy teachers and their students in sub-elite school settings in the global South. We studied their situated use not as evidence of what affordances they might carry across contexts but as resources that get assembled and adapted in distinctive ways (Prinsloo & Rowsell, 2012). In analyzing recorded video data on classroom teaching, we argued that IWBs in our study were functioning as *boundary objects* rather than having the transformative impact on classroom pedagogy that their more enthusiastic advocates were claiming. Boundary objects in Actor Network Theory are objects that are engaged with across varying networks of people and things (Bowker and Star, 1999). They don't change or stabilise those practices in pre-given ways across different groups of people or communities of practice but instead are flexible enough to embed in or become part of those practices across varying or contrasting social locations, while still being recognised as "the same thing" across contexts. We could similarly think about mass schooling as a generalized social technology as being a boundary object. While it might appear to be 'the same thing' in different contexts, there is no doubt that it is not so across very different social contexts, even though curriculum developers and centralized testing bodies continue to work on the assumption that it is or should be the same thing regardless of context. Our attention

therefore should be less on their design features, what their designers intend digital resources to do and more with how they are engaged with by children and adults whose meaning making activities are profoundly informed by concrete, material, located, historically shaped social dynamics.

The research took place at a primary school in Mitchells Plain on the Cape Flats, a suburb which grew through apartheid government planning as a "Coloureds"-only dormitory suburb for people evicted from designated "Whites"-only suburbs of Cape Town in the middle decades of the 20th century. In the contemporary, hierarchically stratified schooling market in Cape Town where the demand for equal education for all remains unrealised, the school recruits mostly lower middle-class and working-class children from the immediate vicinity as well as from elsewhere on the Cape Flats. I will just give one brief example here from that study of an experienced and engaged early primary school teacher who had taken hold of the IWB as a teaching resource and used it to teach in ways that were consistent with how she had learnt to teach over the years. In her use of the IWB and software as a "big book" in the data extract below she followed closely a well-established model of teacher-led "big book" reading that preceded the IWBs in this setting and was part of entrenched classroom literacy-learning activities, where children sit on the carpet facing the teacher and the screen and engage in a teacher-led reading and question-answer engagement. The software used for this exercise similarly mimics the pre-digital "big book" classroom activity where an actual book was previously used. The software design includes sets of vocabulary activities that are done by students and teacher, often with the children going up to the IWB. The heart of the lesson is an extended reading-out-loud activity.

Reading Goldilocks

> The teacher brings the class to order before continuing. She sets the colour of the IWB pen to yellow and reveals the next page. She reads the sentence to the students and asks them to read it with her. She also breaks from reading to reinforce spelling and vocabulary work, using the IWB.
>
> Teacher I.: I've got a big word and it starts with a 'g.' What is it?
>
> Students: Goldilocks!
>
> Teacher : I am asking Erin, Do you know where's Goldilocks. Find me the word of Goldilocks and colour it in with your yellow hand. (to the students)

> Ssh and be quiet, you see she's doing a great job. Colour in girl, colour in, *daar's hy* (that's right). Lovely! Give her a nice round of applause.

The teacher deactivates the colour and draws her students into the deactivating activity. They agree there's no more magic and the yellow has disappeared. She continues with the next page and reads the sentences to them. The students complete the sentence. The teacher instructs them to write the word *hot* in the air. She asks them which sound they heard first and which sound they heard last. The students answer in unison.

> Teacher I.: Why did she choose to sit on baby bear's chair?
>
> Student: She was too heavy.
>
> Teacher I.: (First repeats what student said) Why did she want … why does she want to sit on baby bear's chair?
>
> Student: Because it was just right.
>
> Teacher I.: (First repeats what student said) But why … why not mommy or daddy's chair?
>
> Students: Cause the chair's too hard or too soft!
>
> Teacher I.: Too hard and too soft so that one is just right. How did the chair break?
>
> Students: She's too heavy! She's too big! She ate too much porridge!
>
> Teacher: She could have eaten too much porridge. What do you say?
>
> Student: She's too small but she can't fit on the chair
>
> Teacher I.: She can't fit on the chair. So … what … what do Faith normally do when she sits on that chair? Now what does she normally do?
>
> Student: She rocks on it.

In this extract from a Grade 1 class (children's first year of primary schooling) we see the teacher's working through a familiar nursery story. It shows an early childhood activity that must have been carried out in related fashion over many decades in the Anglo-American world and it is perhaps not surprising to see it here in a postcolonial setting with a long connection to the British Empire. Nonetheless, the story about a little blonde-haired girl's encounter with a family of bears is not a local story, neither in the girl's distinguishing feature (her hair colour) nor in the bears that are not African animals at all. The IWB contributes some features, the 'magic yellow pen' and the enhanced variety of teacher as well as student boardwork being the most obvious. The teacher-run Initiation-Response-Evaluate (IRE) discourse

sequences clearly signal to her children what she wants them to absorb, learn, and reproduce, where students get signals as to what counts as successful reading and language use in school and how to perform the persona of 'good student'. While primary schools such as this one in Mitchells Plain are urged to manage the tasks of teaching Standard Language and basic decoding and encoding skills more effectively, and their students are increasingly subjected to annual testing to see how well they are doing this, it is necessary, I suggest, to see language and literacy as historically based, context-bound communicative practices and to see language and literacy learning not just as technical skills but also as prescriptions about what counts as school knowledge and how to display it (Krause and Prinsloo, 2016; Freebody & Freiberg, 2008; Cook-Gumperz, 2006). The IWB as a teaching resource does not redirect the orientation to teaching language and literacy that the teacher brings to her work but adapts to it and adds the novelty for the children of screen-based reading. Because the focus is on a form of reading and textual engagement that precedes the introduction of multimedia resources into the classroom, the visual and interactive dimensions brought to the activity by the IWB serve primarily illustrative functions that support the language and literacy learnings. They do not introduce any new dimensions of reading, writing, or language use that might be associated with the affordances of digital media and with digital media practices. Nor do they draw from any out-of-school repertoire that the children might be developing. This point is also made in Mills and Exley's study (2014) which contrasts the limited forms of writing demanded by national and statewide curricula and assessment regimes with the multimodal texts produced by primary school children. Maybin (2013) similarly identified the narrow focus on textual comprehension in the Progress in Reading Literacy Survey (PiRLS) tests carried out in England in 2011 as missing out on the multimodal, imaginative and dialogic engagement with reading and writing of the children she studied in informal and non-testing contexts. Hamilton et al (2015) present a range of rich ethnographic studies that make the case for allowing children in educational settings to access a fuller range of semiotic modalities arguing that this would give rise to expanded communication and identity options for children as well as teachers.

Constructions of literacy teaching as primarily comprised of print-based code-recognition and comprehension activities of a limited kind are deeply embedded in

the history as well as contemporary design of primary school curricula in South Africa, and elsewhere. While promising so much more resourcefulness than the older blackboards for maintaining student attention because of their ability to stream the outside world in the form of images and videos with sound and colour, the potential of IWBs to enhance learning is constrained by the prevailing schooling ideologies. As regards the language practices of schooling, the bilingual, heteroglossic resources that characterise everyday language in this strongly bilingual community get displaced by an insistence on a boundaried Standard English-language, monolingual classroom discourse around often alien learning content (Prinsloo and Krause, 2018)

Conclusion

Writing in a UK context, Merchant (2009, 39) identified a tendency in educational research to look at educational uses of new technology in terms of their capacity to enhance the learning of traditional literacy skills. He saw that in some classrooms this was manifest in some uses of IWBs and in the research community in a restricted view "of what is at stake". He urges that our attention turn toward developing our understandings of how new multimedia and networked literacy practices are impacting the lives of children and youths and identifies the challenge for the classroom as a way to make educational use of the new literacy practices. The incorporation of digital and multimedia resources in literacy teaching within a linear and singular model of literacy policed by high stakes testing and other accountability measures might have to give way to more permeable models of curricula that bring on board more of children's out of school worlds and linguistic resources (Dyson, 2008). While I am broadly supportive of these suggestions, my wider research also raises questions about the sometimes context-free models of how children's out-of-school engagements are rich and enabling, as well as how digital technologies can enhance schoolwork. In a world of rising income and social inequalities, the early digital experiences of middle-class and Northern children should not be treated as universal models for all children.

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