Digital storytelling with South African youth: a critical reflection

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Abstract

Purpose: In this paper the authors share, and reflect critically on, the experience of using digital storytelling (DS) methods in a South African township. We interrogate the innovations prompted as we operationalized DS in a context that has historically prized collectivist values and that experiences chronic resource constraints.

Design/methodology/approach: The authors ask: How can DS be optimally used to understand youth resilience in a collectivist, developing context? The authors worked with 18 older adolescents (aged 18–24) during two day-long events. The authors provide detailed descriptions of the method used, and offer reflections focusing on narrative, visuals and technology-mediation.

Findings: This study concludes by sharing four key lessons learned during the project. First, revisit the definition of "story" for your context, participant group and time. Second, a slower process yields more meaningful product. Third, facilitator competence matters. Finally, advance and deeper thinking about the ways in which technology will be used leads to richer research outcomes.

Originality/value: The paper reflects on the interplay between the transactional nature of contemporary digitally-mediated methods in a low-resource setting and with a seldom-heard population, and it's relationship with the ancient local traditions of story-making and audiencing.

Keywords: Qualitative methods, South Africa, Digital storytelling, Adolescence, Digital technologies, Resilience

1. Introduction

In this paper we will share, and reflect critically on, our experience of using digital storytelling (DS) methods in a South African township to surface understandings of youth resilience. As part of this purpose, we interrogate the innovations prompted in the course of our operationalising DS in a township context that has historically prized collectivist values and that experiences chronic resource constraints. This purpose relates to the significant increase in the use of arts-based research (ABR) methods and the parallel concern with the value of these methods, also in developing (e.g. South African) contexts.

Recent years have seen a significant increase in the use of ABR methods to generate qualitative insights (Emert, 2013; Chamberlain *et al.*, 2018). These methods are often intended to surface and amplify the complex, and sometimes difficult, realities of life around the globe (Woodgate *et al.*, 2017), linking individuals, environment, relationships and socio-economic circumstances (Power *et al.*, 2014). The literature surrounding ABR methods has attempted to describe the ways in which artistic praxis and knowing can provide insights where more established analyses or more dualist paradigms may not be easily applied (McNiff, 2008; Pentassuglia, 2017), and where research and social justice are inextricably intertwined (de Leeuw and Rydin, 2007; Deutsch *et al.*, 2014). Similarly, the resilience literature has called for greater use of ABR methods to address the lack of detailed insight into the complex processes that support people to adjust well to atypical levels of stress (Theron, 2016). However, ABR methods have also been challenged; problematic ethical considerations (Boydell *et al.*, 2017), debates about the quality of both data and art produced using ABR (Leavy, 2014) and the nature of the knowledge we derive from these methods (Boydell *et al.*, 2012; de Jager have all meant that while ABR have increased in academic popularity (e.g. Groff, 2013), they have not yet found a mainstream home in disciplines such as psychology (Chamberlain *et al.*, 2018).

DS is no exception (Rieger *et al.*, 2018). While the use of DS is well-established in community-building, advocacy, and as a tool for learning and teaching (Cunsolo Willox *et al.*, 2013; Lambert and Hessler, 2018; see also storycenter.org), there are still significant gaps in the literature exploring the robustness of the ways in which DS are systematically gathered and analysed for research purposes (de Jager *et al.*, 2017) and the functionalities needed to facilitate research-focused DS (rather than for advocacy, for example). Challenges to DS as a research method are further compounded by the multitude of definitions that exist for a practice that is, at the simplest of levels, a process that generates a short film with images and/or short video clips, perhaps music and a narration of a short story. For our purposes, in this project we adopted the DS definition developed by Lambert, Atchley and Mullen at the Center for Digital Storytelling (Lambert, 2010), and subsequently reported in the systematic review completed by de Jager *et al.* (2017) as a "2–5 min audio-visual clip combining photographs with voice-over narration (and other audio if desired)". Typically, a DS includes traditional story elements (i.e. a significant event that impacts a central character and leads to a response/responses from the character and/or others; the story of the response/s is followed by a conclusion that can take any form, such as a traditional "happy ending" or a reflection on lessons learned) (Ohler, 2006).

Given the rising use of ABR methods, their relevance to the study of resilience and the need to better understand whether DS specifically can be used to better understand lived experiences and perspectives, here we ask: how can DS be optimally used to understand youth resilience in a collectivist, developing context? To answer this question we organise the remainder of this paper as follows. First, we contextualise the South African research site and describe the adolescent participants with whom we were blessed to work. Next we explain how we operationalised DS differently on the two occasions that we engaged the participants in a DS process. As part of this explanation we comment briefly on the research team that collaborated with us in the aforementioned operationalisations. Then we reflect on what we learned from the two diverse operationalisations of DS. We use these reflections to distil lessons for researchers wishing to use DS with adolescents in resource-constrained contexts in sub-Saharan Africa.

2. Context and participants

We explored the aforementioned question in a project with 18 older adolescents (i.e. young people between the ages of 18 and 24; Sawyer *et al.*, 2018) living in the township of eMbalenhle (eMba) in Mpumalanga, one of the poorest provinces of South Africa. In Mpumulanga, 63% of 15–34 year olds live below the official poverty line (Stats SA, 2016). Approximately 26% of the 290,000 people living in and around eMba are officially unemployed, with chronic hardship most likely to affect Black people (Stats SA, 2018).

Like most townships in South Africa, eMba is mainly inhabited by Black people. Townships, a cruel legacy of South Africa's Apartheid era, are residential spaces characterised by geographical marginalisation, sub-standard infrastructure and service delivery, poverty, overcrowding and high incidence of crime, violence and communicable disease (Pretorius and Theron, 2018). eMba residents regularly engage in public demonstrations of their dissatisfaction with poor service delivery and other forms of disadvantage, but these appear to have done little to change the odds that continue to challenge them (Van Huysteen, 2018).

Further, eMba is surrounded by coal fields and adjacent to an extraction plant which produces oil from coal and other petrochemical plastics. Despite the challenging environmental conditions, the hope of employment has prompted an influx of migrants. In February 2018 – five months before we first engaged participants in a digital story process – there were riots in Secunda, with local adolescents and young adults demanding employment (Mathebula, 2018).

We chose to engage adolescents from eMba in DS because of the second author's existing connection with eMba residents. This connection relates to the 5-year Resilient Youth in Stressed Environments (RYSE) project that had already been operating in the area for 18 months by the time we engaged adolescents in DS. Initial findings from the RYSE study include evidence that eMba adolescents value interconnected ways-of-being (Theron and Ungar, 2019). Interdependence is associated with traditional African culture that prizes the collective and that encourages all people to respect one another and contribute to family and community (Phasha, 2010). Even so, traditional values are fluid; concerns have been voiced that younger Black Africans are less inclined to value interdependence (Ramphele, 2012).

The RYSE study has a group of six youth advisors aged 19–24. As in other resilience studies that have included advisory panels (e.g. McCubbin and Moniz, 2015; Theron, 2013), these young people guide the operationalisation of planned research and can also engage in empirical work. We drew our sample from the RYSE Youth Advisor network and their contacts. We invited the advisors to nominate peers whom they were confident had deep, personal insight into what facilitates resilience in the face of chronic disadvantage. All the young people whom they nominated accepted the invitation to participate. In total 18 adolescents (average age: 21; 6 young women; 11 young men) participated.

This form of purposive, or selective, sampling was beneficial for three reasons. First, it increased the likelihood of us being able to work with the same participant group on more than one occasion, and thereby strengthened the homogeneity or typical case nature of the sample (Gentles *et al.*, 2015). Second, because there was already some degree of trust held between many (although not all) of the participant group and the research team, the chances of generating authentic data were advanced. Finally, this form of sampling supported the speed with which we could draw together a participant group open to working with us using DS.

Participants not only provided written consent, but also provided permission for their digital stories and photographs of the research process to be made public. Each participant exercised the right to use her/his real name or a pseudonym.

3. Operationalising the DS methodology

3.1 The team

The research team comprised the authors and four facilitators. One facilitator was the project manager of the South African RYSE activities. The three remaining facilitators were all postgraduate Psychology students at the University of Pretoria. All facilitators were able to speak both English and isiZulu/Sesotho. Three of the facilitators had visited eMba previously for research purposes.

Prior to engaging participants in a DS process, the authors held a day-long preparation workshop with the facilitators. Drawing from the lessons emerging from the de Jager *et al.* (2016) literature review, we aimed to develop in the facilitators an awareness of the factors potentially contributing to DS success, including: genuine participation; a meaningful, safe, supported and respectful development process for all involved; clear ethical procedures and processes including with regard to dissemination; effective use of the technology; group viewing of the DS that were created. To do this we viewed various DS, considered their core aspects and surfaced the potential challenges and opportunities afforded by DS in the eMba context. We also introduced the facilitators to the technology of DS. We had android and Apple™ tablets at our disposal. FilmoraGo™ was downloaded onto each tablet. This software was chosen because of its ease of interface, lack of reliance on text-based instructions (rather using icons for key actions), and because two of the research team were already familiar with it. The tablet-based version of the software, Filmora™ is different from the computer-based version; the latter is much more complex, using a traditional video editing layout. We tried to ensure that the facilitators were familiar and confident with the tablets and software by inviting them to create their own DS. Finally we co-established a schedule for the day and prompts for the facilitators to use in their interaction with participants (see Levine and Theron, 2020).

3.2 Two DS events

Although we (the authors) were aware that DS are historically individually-produced products, we were also aware that collectivist values can influence how young people engage in qualitative methods (Theron, 2016; Ungar and Theron, 2018). For this reason we invited guidance from the RYSE project manager, South Africa (a young Black woman with a post-graduate qualification in research psychology and experience in working in eMba and with qualitative methods). She recommended that the participants might be more comfortable with the DS methodology if it was implemented in a group context (i.e. if young people were invited to collectively author a DS that explained the resilience of young people from eMba rather than of their personal resilience). Given that the second author's experience of working with Black adolescents confirmed their comfort with group-based research activities, we (the authors) resolved to explore the potential of developing *group* stories of resilience in eMba.

We anticipated that this innovation would impact on both the data gathering process and outcomes significantly, but we were uncertain how that impact would manifest. For this reason, we planned two iterations (Time 1 (T1) and Time 2 (T2)). We reasoned that if a group-based DS methodology worked well we would contrast the stories from T1 and T2 for development

over time. If the group-based methodology was problematic, we would revert to an individual-focused development, and contrast the stories produced in T1 and T2.

T1 and T2 were day-long events. The brevity was dictated by budget constraints and participants' availability (e.g. a number of the young people had caring responsibilities or temporary work opportunities). T1 took place in July 2018, and T2 in October. Both events were held in a single large conference room at a local casino. We chose this venue because of the proximity to eMba (it is built on the outskirt of eMba), security, access to semi-reliable wi-fi and electricity, air quality and limited temperature control and generous food offerings for the participants. The other option was a community hall in the township, but privacy and electricity could not be guaranteed there. Moreover, the community hall does not provide wi-fi access. It is telling that the most appropriate venue bordering the township was a casino – a difficult compromise for the research team given the temptations this might offer to the participants, most of whom were unemployed. Upon arrival at both T1 and T2 the young people were invited to form four groups of similar sizes. A facilitator joined each group.

Three of the DS groups at the start of T1; the fourth group arrived late (Plate 1).

Plate 1. Three of the DS groups as the start of T1

Before each iteration, the RYSE project manager sent WhatsApp messages and short message service (SMS) to participants, reminding them of the event and asking them to bring drawn, digital or paper-based images that they related to adolescent resilience. She also telephoned one week prior to each event, to remind participants to attend, and to bring any images that represented things, people or places that "helped adolescents to feel strong when life is hard in eMba". The latter is a South African phrase that is considered synonymous with resilience (Theron *et al.*, 2013).

Table 1. Changes made in operationalising the methods between times 1 and 2

Min	Segment	Operationalising the method time 1	Operationalising the method time 2
15	Welcome	Included ethics	No change
45	1 – Sensitising participants to elements of a resilience story	Participants were asked: Please draw anything or anyone that explains what it means for you or a young person in [township name] to be strong/okay when life is hard?	Omitted
60	2 – Verbalising a resilience story	For this section we will be telling stories. So, growing up we heard iintsomi (stories) that started with kwasukasukela (once upon a time). Please tell us a REAL story about how you or someone you know is strong/okay when life is hard	Today we would like you to work on your own story. Your group will be still be here to help and support you, but we are interested in your individual SHORT-SHORT story. Again, we know that there are probably many reasons why young people are strong when life is hard in [township name], but we want you to tell us a story that focuses on ONE reason why young people are strong when life is hard in [township name] Take a few moments to think about your story • -It should start with what makes life hard for you – or someone like you – living in [township name] • -The middle is the biggest part of the story and it's about YOUR one reason why you/young people are strong when life is hard in [township name] • -The end is short and can be anything you like *Probes* • -How does # make you strong? • -What does # do to make you strong? • -When does # make the most difference? • -Can you give an example of a time when # really helped you to be strong? • -What would your life have been like without #?
30	3 – Verbalising a collective resilience story	From the stories we have heard, what ideas do we get about what helps young people in [township name] to be strong/okay when life is hard? Building on what we just heard, let us now make a short story as a group on how people in [township name] are able to be strong/be okay when life is hard?	Omitted

Min	Segment	Operationalising the method time 1	Operationalising the method time 2
120	4 - Story-making	We have a story. Let's make a short 3 min movie of your story using the tablet. This movie is special because it only uses pictures, words and voice(s) Please select 12–15 pictures that help to make your story come alive. You can use the pictures that you brought with you, or you can create (draw/take) a picture to tell your story. We will upload your pictures on to the tablet (Introduce FilmoraGo) Put your pictures in the order of your story. You can use the postcards/story board to create an order for your story. You can use the same picture more than once. (Please use FilmoraGo to put the pictures in the order that you've decided on while the other members do it on the table.) Now that we have an order, start to think about what you will say in each picture to tell your story. Please remember that you can speak for 10 s or less per picture Decide whose voice(s) will be used for each picture. We can start with recording (Show how to add voiceover) [Check Time] You can add music to your movie, if you do choose a song you it cannot be the whole song, you can use only a part of it	Now we would like you to turn your story into a digital story of no more than 3 min. Digital stories are special because they use photographs, words and voice(s) Please select 12–15 photographs that will help you to make your story about *any ONE reason why young people are strong when life is hard in [township name] come alive.* You can use the photographs that you brought with you, or you can create (draw/take) pictures to tell your story We will upload your photographs on to the tablet. You will be sharing a tablet with one other person, but there will be enough time for you both to digitize your stories. (Remind how to use Filmora) Put your uploaded photographs in the order of your story. (Please use Filmora to do this.) *-The first one or two photographs show what makes life hard for you – or someone like you – living in [township name]* *-The next 8–10 photographs make the middle of the story and explain in detail YOUR one reason why you/young people are strong when life is hard in [township name]* *-The last one or two photographs make up the end of your story* Now that the photographs are ordered, think about what you will say in each photograph to tell your SHORT story about any ONE reason why young people are strong when life is hard in [township name]. Please remember that you can speak for 10 s or less per photograph Now record what you want to say (Show how to add voiceover). You can speak, rap, sing, or tell your story in any other way you like. You can use isiZulu, Sesotho, or English. If your story is not in English, and if there is time, work with me to add English sub-titles
45	Sharing	The seats were moved to rows, and we screened the stories on the large screen in the room Thanks to all, stipend receipts	No change

Methodological adjustments and changes implemented at T2 are available in Table 1 (Levine and Theron, 2020). Our experience of T1 was that a group-based DS methodology did not facilitate rich enough understandings of adolescent resilience in context and so we decided to adapt the methodology for T2. In short, there were three key adaptations. First, we decided to invite each participant to create an individual own digital story. Second, we adapted the prompts to support a more structured approach to the creation of the stories. The prompts sensitised facilitators and participants to the inclusion of a more recognisable story structure, i.e. a focus on a beginning that specified a key risk, a middle that explored positive adjustment to that risk, and an ending. Finally, to support the facilitators we included probe questions into the prompt to enable a more sophisticated exploration of the ways in which protective and other factors impacted on participants' day-to-day resilience (see Levine and Theron, 2020).

4. Methodological reflections

We organise our reflections around the narrative, visual and technology-enabled dimensions of the DS at T 1 and 2. We chose these dimensions because these themes arose in our inductive observations and debriefs with facilitators, and because they are common threads in the wider DS literature (de Jager *et al.*, 2017).

4.1 Reflections about narrative at T1 and T2

The team's key impression was that the group-based design and associated prompts (see Levine and Theron, 2020) failed to produce *stories* of resilience. Largely, they produced lists of resilience-enabling factors that read like collections of motivational sayings. We illustrate this with the stills and transcript of the DS called *Light at the end of the tunnel* (see Plates 4–10) (Figures 1–3).
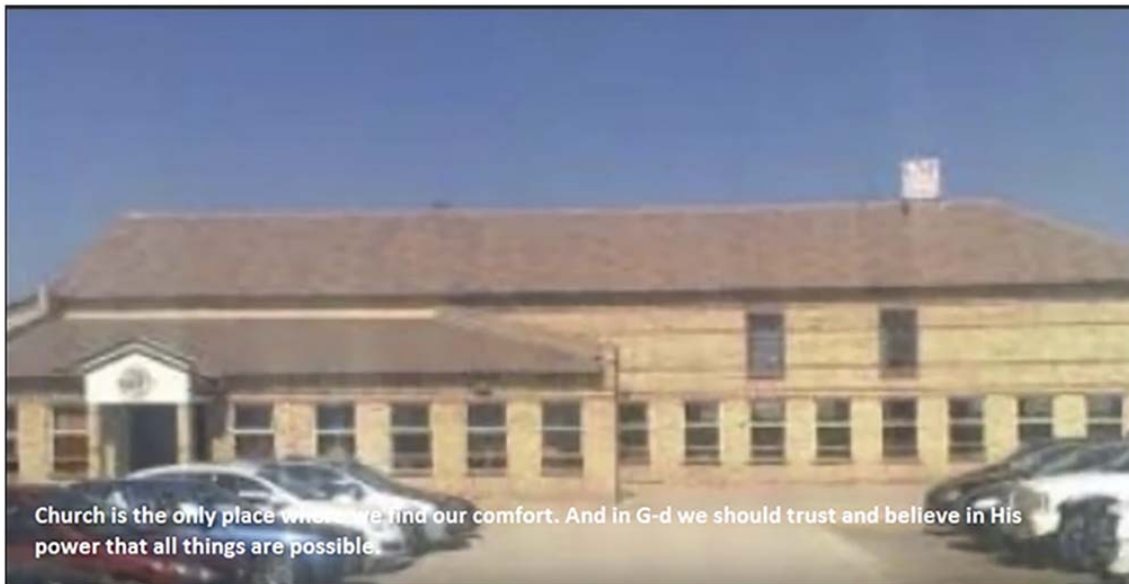

Plate 2. Courage is not running away from pain, but embracing it and overcoming it
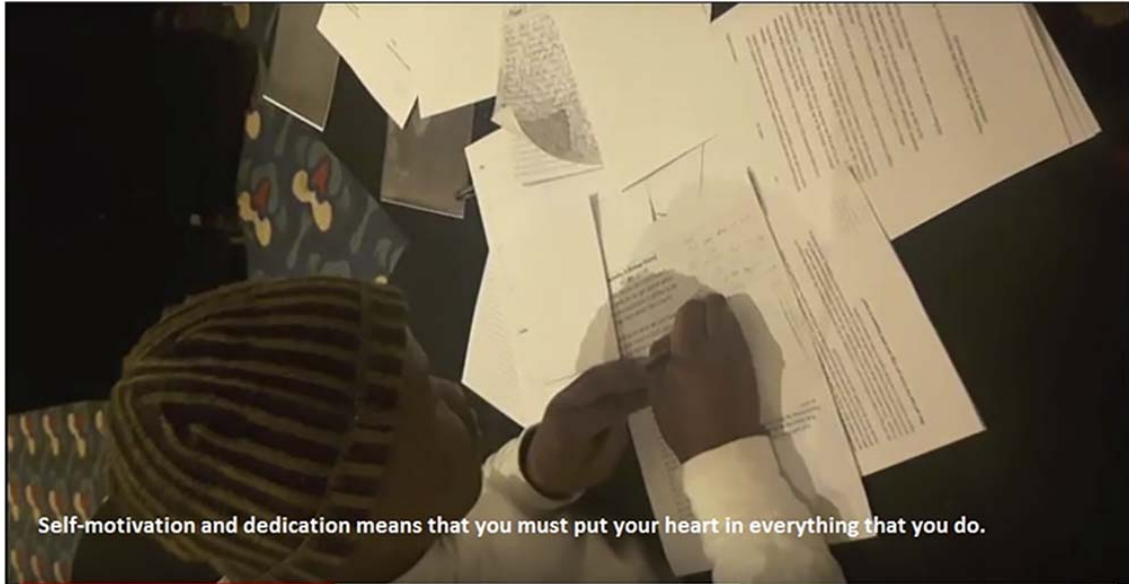
Plate 3. As youth in eMbalenhle these are the things we do to be strong

Plate 4. Church is the only place where we find our comfort. And in G-d we should trust and believe in His power that all things are possible

Plate 5. Self-motivation and dedication means that you must put your heart in everything that they do

Figure 1. For a seed to grow it needs to know that it has everything it will become already within. So for us to grow we have to value what we already have and embrace it

Plate 6. For every seed to rise above the ground it has to be rooted in good soil. The same applies to us. We have to be connected to good and positive people
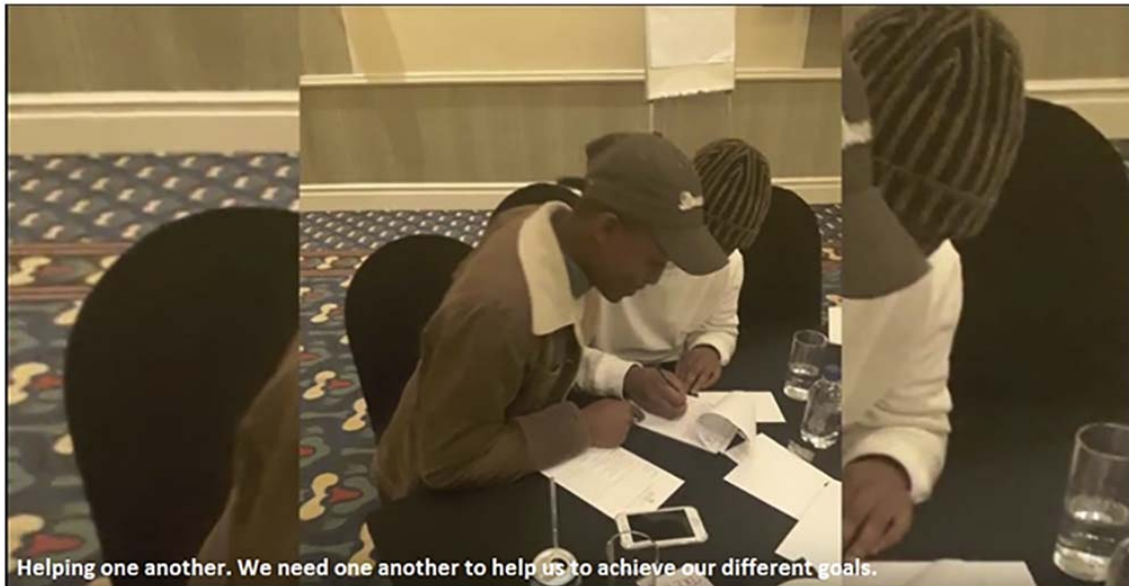

Plate 7. Having a positive support system from our caregivers or family members helps us to focus on our goals and do better in our future
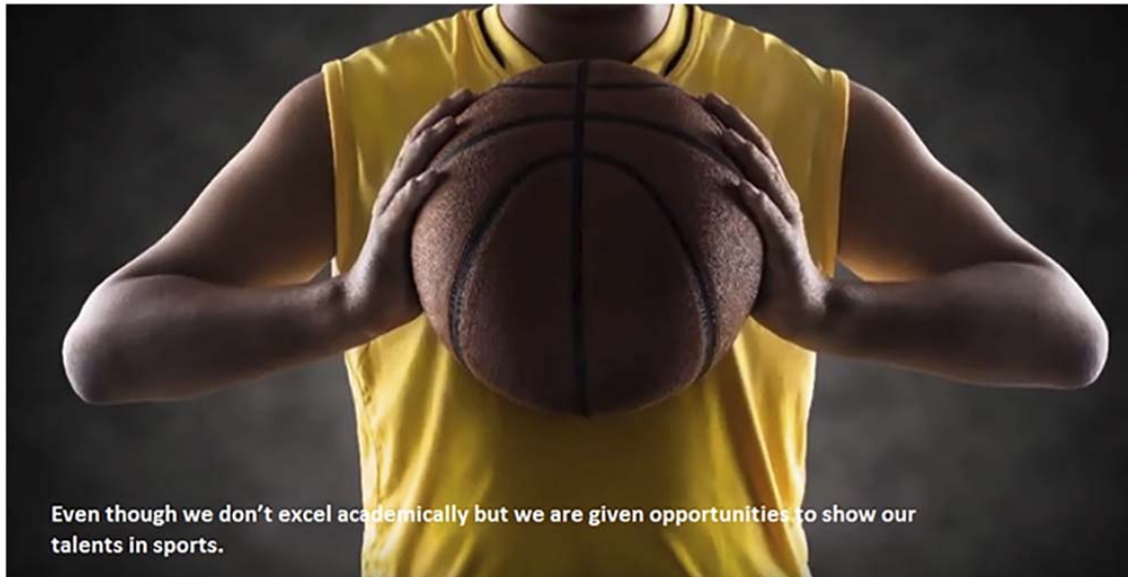
Plate 8. Real friends push each other to do better in life because nothing can break a squad that is dedicated on the same mission and focused on the same vision

Plate 9. Helping one another. We need one another to help us to achieve our different goals

Plate 10. [silence]

Figure 2. Even though we do not excel academically but we are given opportunities to show our talents in sports


Figure 3. In conclusion, life is made of small building blocks but it's our duty to take them and make one bigger picture

Moreover, the lists that characterised the DS reflected what each individual group member had contributed. For instance, on completion of segments 2 and 3 (see Levine and Theron, 2020), Group 2 produced a list that reflected what each group member had contributed to segments 2 and 3 (see Plate 2). Although the lists provided insight into participants' understandings of the personal and systemic supports that matter for resilience, they lacked rich explanations that would advance understandings of the *process* of resilience. Resource- or support-focused explanations of resilience are considered the "poor cousin' of process-directed explanations (Masten, 2014). During our debriefing sessions, the facilitators theorised that the list-like structure of the DS probably related to groups being respectful of each individual participant's contribution. They were sensitive to being inclusive, rather than to narrating a story of

resilience that was more like a traditional story (i.e. one with a clear beginning, middle and end).

In addition to being list-like, the T1 stories generally omitted a context of risk. It was as if the participants assumed that their daily hardships were universal and therefore did not need to be made explicit. As per resilience theory (e.g. Luthar, 2006; Masten, 2014), accounts of resilience require two conditions: first, an explicit condition of risk that predicts negative outcomes (e.g. structural disadvantage and sexual violence), and second, evidence of positive outcomes in the face of the aforementioned risk that can be linked to protective or facilitative supports (see Plate 11).
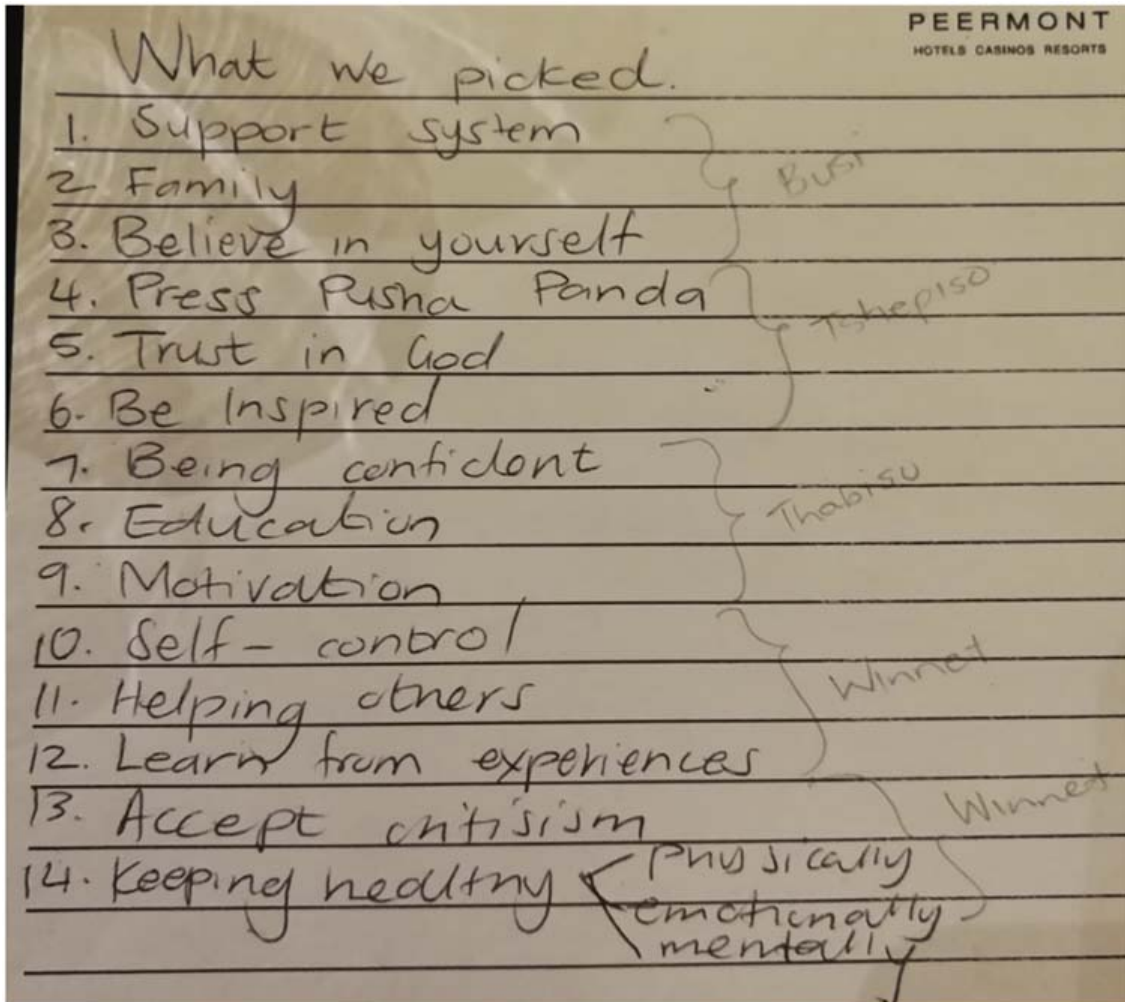
Plate 11. Group 2's list of what each participant had contributed to Segments 2 and 3

The only non-list-like DS among the four T1 digital stories was Group 1's DS about a fictional individual – a young woman – who rose from challenging circumstances to become an air steward. As illustrated in the selected stills that follow, the challenges included her family's and community's scepticism about the suitability of her dream career (see Plate 12) (Figure 4) (Plates 13 and 14).
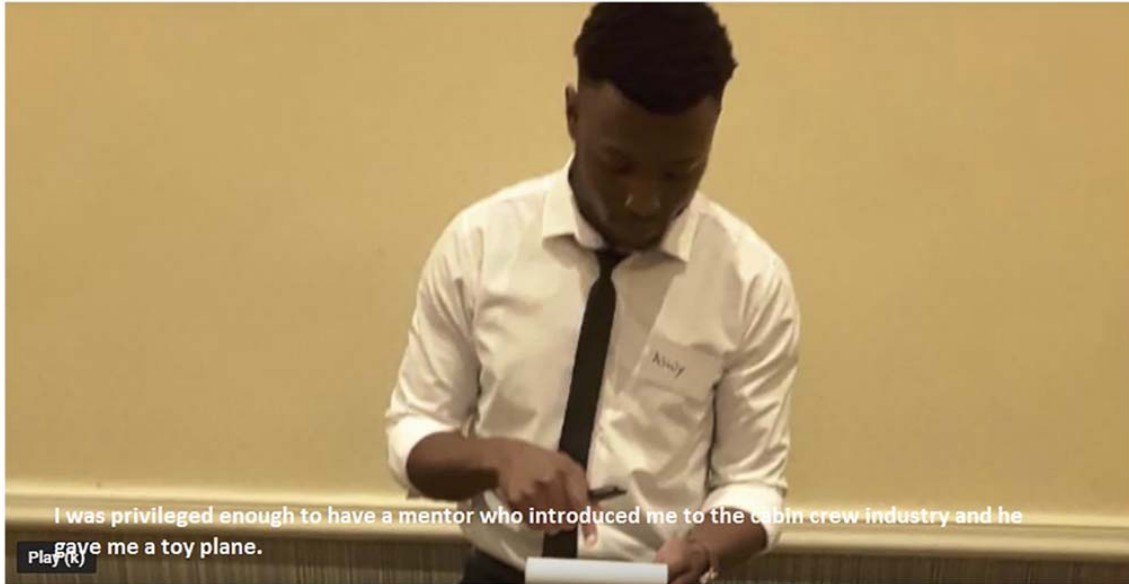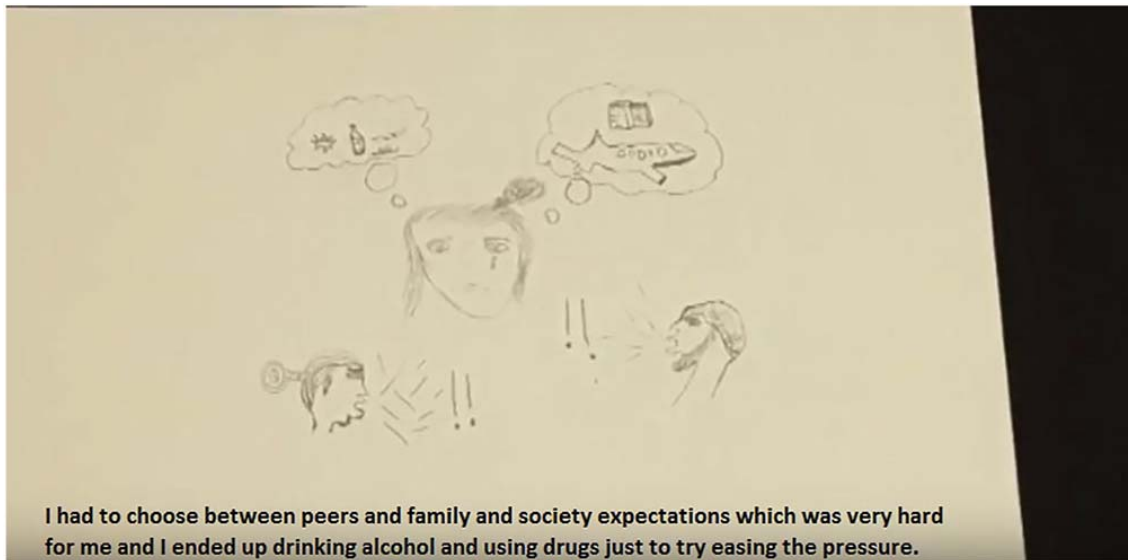
Plate 12. I was privileged enough to have a mentor who introduced me to the cabin crew industry and he gave me a toy plane

Figure 4. This toy was not just a toy plane; but it meant something. This was given by my mentor who got it from his mentor who got it from the cabin crew and it was precious to me

Plate 13. I had to choose between peers and family and society expectations which was very hard for me and I ended up drinking alcohol and using drugs just to try easing the pressure

Plate 14. I tried convincing my family towards my career but I faced challenges along the way. Despite everything I never lost hope but I pushed even though it was very challenging

The team reflected that when a DS was told from the perspective of an individual (albeit fictional), rather than a group, the result was less list-like and more a narrative of a process of positive adjustment. The authors wondered to what extent the particularly able facilitator of this group scaffolded the group's capacity to produce a recognisable story. Both authors independently noted this facilitator's capacity to regulate the group's focus and to encourage a storyline by means of gentle and timely questioning throughout the development process. She was attentive to the process throughout.

In comparison, the design used for T2 generated DS products that were more recognisable as "stories". Most were a first-person account that included a beginning, a middle, and an end,

and included a narrative thread that could be followed. This required some intervention from authors and facilitators during the workshop; some participants still had a tendency towards a sequence of motivational statements. To intervene, the authors and facilitators repeatedly encouraged attention to narrative structure. They used questions such as "Is this the middle of your story?" and "How will you end your story?". The facilitators appeared to be more sensitive to this need for structure at T2 because of the adapted prompts (see Levine and Theron, 2020) that signposted narrative structure.

The facilitators theorized possible reasons for a few participants' tendency to still list sequences of motivational statements rather than tell a detailed story related to the challenges of the research work taking place in English. Even though all participants were schooled in English their mother tongue was isiZulu or Sesotho. When working in their mother tongue, with subsequently added English sub-titles, there was less likelihood of lists. In addition to language barriers being a potential driver for the tendency to list motivational sayings rather than tell a *story*, it is possible that the complex nature of resilience processes is difficult to express as a story.

4.2 Reflections about visuals at T1 and T2

We had considered access to images as a potential issue prior to T1. As a result we (1) made paper, pencils and crayons available during both sessions in case participants wished to draw images and (2) provided printed and digital free images that had been tagged as "resilience" in Shutterstock^{TM}. Most of our participants had nominal access to technologies they could use to source images representing their resilience. Many had Facebook and Instagram accounts, and used WhatsApp for communication purposes on which they had stored images.

At T1, we were struck that most participants chose to co-create images on the day within their groups rather than using stock or personal images. For example Plate 3 depicts Group 2 creating a scene of collective prayer, to signify religion as a protective factor. They requested the facilitator take the photograph (using the tablet) so that all of the group members could be present in the image. In addition to creating their own images, a minority downloaded free images from the Internet. Broader use of free images was hampered by participants' struggle to find images that represented their ethnicity and context-specific experiences (for example, a search for free images online rarely offered visuals of *Black* adolescents mourning the passing of a family member) (see Plate 15).

Plate 15. Group 3 pose for a still image representing prayer

At T2, the majority of participants came with their own personal digital images, primarily located on their Facebook^TM and Instagram^TM accounts. They struggled to use the tablets to access their social media accounts due to patchy WiFi at the venue, and so the majority used Bluetooth to transfer saved images from their mobile phones to the tablets. To access these images, all the participants needed to charge their mobile phones: there had been prolonged power outages during the week prior to the workshop. At T2, some participants also chose to combine their personal images with free images found online in order to illustrate thematic strands of their story. For instance, one participant included an image of Tower Bridge (London) to illustrate how aspirations for the future (such as his dream to travel) helped him accommodate current challenges.

4.3 Reflections about technologies at T1 and T2

Two key themes arose relating to the choice of technologies and socio-technical context for both T1 and T2. The first surrounds the *functionality* of the technology at our disposal at both the infrastructural and device-driven levels. Given participants' dependence on their social media and the wider Internet for images, electricity and Wi-Fi infrastructure at the venue was critical. We found that using a range of operating systems on different devices in a single session was highly problematic in a context where the Wi-fi was slow and patchy, and thus where technology-enabled sharing of images was slow and difficulty. There were several instances of these more confident participants taking on peer support roles as they completed their own stories, helping their peers to obtain/edit images or add voiceover.

The second theme relates to the transactionality of the technology at our disposal. As stated we adopted the Lambert, 2013de Jager *et al.* (2017) definition of a digital story as a "2–5 min audio-visual clip combining photographs with voice-over narration (and other audio if desired)". We learned that this definition, while practical and useful, does not address the transactional nature of technology (Levine, 2019). Transactionality acknowledges that in the relationship between a participant and a technological device there is a transaction, a movement or a communication that is driven through by an individual (for example through performativity), a group (for example through obligation or collective agency), or even a technological feature (for example a private chat function in a social media platform).

Transactionality is complementary to reciprocity (Pelapratt and Brown, 2012), in which an exchange (a giving and a return) forms a social relation between people, or digitally-mediated and arguably between a person and a technology (for example in the context of artificial intelligence). In a transaction, a participant or collective of participants are *changed* as they use technologies designed to capture an image or a sound, or software designed to facilitate the creation of a digital story, or as they use technology to mediate between their perspectives and understandings of their worlds and the ways in which they are perceived. At the same time, participant(s) change the substance of content available online as their story is made and shared. The listener, too, is changed on experiencing the story.

We found that both for both T1 and T2, our participants struggled to develop a transaction between their experiences and perspectives of resilience, and the stories of their resilience. As discussed, the problem was exacerbated at T1 by the group nature of the activity. At T2, however our facilitators suggested that one barrier to making the story explicit lay in the technological process, which was structured by the zones or frames facilitated by our choice of the software package FilmoraGo. One way of systematizing an understanding of the facilitating features offered by FilmoraGo is through an adaptation of Valsiner's Zones (Valsiner, 1997; Levine, 2019).

The theory sees any technology-mediated activity occurring within three zones, and can be applied to the features of FilmoraGo (the software we used in this project). First, the Zone of Free Movement (ZFM), which frames opportunities as what is safely available to a user within a particular context. In FilmoraGo the ZFM relates to the conventional features associated with video editing software, such as the ability to trim or extend clips. The Zone of Promoted Action (ZPA) "promotes" particular forms of action, belief or activity in a nonbinding way. In FilmoraGo, the ZPA crucially promotes a form of product development in which the sequencing of images takes precedence over the voiceover. And, the Zone of Proximal Development (ZPD) defines the "set of possible next states of the developing system relationship within the environment" (Valsiner, 1997, p. 200) that is crucially constructed together with others (Hammond and Alotaibi, 2017). In the ZPD user "imports" meanings by communicating with others (for example obtaining an image from a social media space), and then "exports" the meanings to others through their digital stories.

In our process we progressed from aural/verbal storytelling (Segments 2 and 2/3), through to image sequencing (Segment 4), returning to storytelling to explain the images in a voiceover (i.e. a verbal-image-verbal sequence). The progression represented a narrow ZPA. Arguably, the narrow ZPA was both artificial and counter-intuitive to our participants, who may have benefited from software that offered two ways of transacting with the ZPA: either verbal-image-verbal or verbal-verbal-image. In the debriefing, for instance, some of the facilitators

thought that participants may have preferred telling their story, then reducing this story into key voice-overs, and then adding visuals that matched the voice-overs.

5. Potential lessons for researchers wanting to use DS with Black African adolescents in resource constrained contexts

Our intention in this article was to share our experience of operationalising DS in a township context that has historically prized collectivist values, and that experiences chronic resource constraints. We offer four tentative lessons. Embedded in each are possible directives for those intending to use DS methods in future research.

5.1 Lesson 1: revisiting the definition of a story

During T1, when participants were working as a collective, they were true to the values of respectful interdependence underpinning many of the social structures in eMbalenhle. This proved obstructive to the story-building not because it was not possible for a group to co-develop a story that was typical (i.e. one that starts with a significant event and then narrates how a central character deals with this event and what this response lead to; Ohler, 2006), but because individuals apparently did not want to omit or exclude any voices and so produced a list-like account of all insights. In contrast, when working on individual stories participants were free to include both individual and collective resources as fitted their personal experience and to weave these into a first-person account that was more like a traditional story. This exemplified much of what we understand about African-centred understandings of resilience: they are predominantly about collectives, but their complexity means they are also about what individuals bring to their own pathways (Motsomai, 2017; Ratele, 2012; Phasha, 2010).

There are potential lessons for future researchers in this phenomenon. For instance, researchers wishing to use DS with adolescents who respect traditional collectivist values could use group-processes to support adolescents to voice and reflect on their stories of resilience and become familiar with the DS technology. Individual creation of the subsequent DS is likely to give adolescents the freedom to create a first-person account, but perhaps researchers should invite adolescents to choose their preferred approach to creating a DS (i.e. to work individually, in dyads or as a small group). Such choices imply a potential trade-off between traditional understandings of a DS (see Ohler, 2006) and collectively authored stories of what enables adolescent resilience. On the other hand, a potential lesson is to question definitions of what constitutes a story in DS. A list-like account of what enables adolescent resilience tells a story too. Researchers aiming to analyse stories with a common arc (e.g. beginning, middle and end), then the story development method will require scaffolding, for example using story maps. Researchers aiming to analyse traditional or folk style tales will need to deploy examples and meta-narrative features to facilitate those outcomes.

5.2 Lesson 2: more haste, less meaningful process and product

DS is often a process that takes several days (de Jager *et al.*, 2017). Because of constraints relating to access to participants and technologies in a resource-constrained environment, and the exploratory nature of this research, we asked our participants to deliver their stories in a single day. While we found that this kind of temporal compression was possible (as evidenced by the DS produced at T2 in particular), it was reliant on existing trusting relationships already established with many of the participants in the RYSE project. If we had had to develop these relationships from nothing, it is possible that we could not have delivered meaningful outcomes

within a single day timescale. In reviewing our field notes and debrief notes, we realised that three sacrifices were made as a result of the time compression. First, the quality of the products; Second, the final stages of production before the viewings were very stressful for the facilitators. Had we had more time, the issues we experienced due to the range of operating systems and sharing challenges may not have been experienced so acutely. Finally, the process could have been gentler, and unfold more organically. While we cannot say whether we would have ended up with more detailed stories if there had been time to create them, future work could explore outcomes if African young people are encouraged to create digital stories of their resilience with longer time frames, and no time constraints on the stories produced. These sacrifices notwithstanding, the temporal compression process did deliver a process that kept the participants engaged and committed for the full day, and products that they were proud of and represented the messages they wished to communicate, both indicators of the potential value afforded by DS as a method, even under challenging practical circumstances.

5.3 Lesson 3: facilitator competence matters

The particular success of one of the facilitators in particular highlighted to us the importance of this role. This facilitator was skilled at questioning, at unpicking the complexity of an emerging DS, at knowing when to intervene and when to step back. We learned that facilitators needed more than a single day of training. Where we had focused most of our training on ensuring confidence and competence with the software, the facilitators would have benefited from more focused training on the nature of narrative, and of story. Our T2 experience also taught us that facilitators need very detailed prompts in order to ensure richness and depth of data.

5.4 Lesson 4: thinking about the ways in which technology will be used in advance leads to richer research outcomes

Those wishing to use DS in low resource, collectivist research contexts may wish to consider not just the conceptual and methodological framework in which they intend to operate, but the interplay between these dimensions and technological functionalities. At the simplest level, we learned that it is necessary to consider whether stories should arise from images, words or music, or a combination of these. Thinking about the Zones, and their relation to the research questions and crucially the *context* in a project could lead to the most appropriate technology and software being chosen. Using a framework that accounts for the "digital" as well as the socio-cultural context will suggest particular software and connectivity platforms that will influence the types and richness of stories that emerge from the storytelling process.

6. Conclusion

We learned four lessons that we would encourage others to take on if using DS in their own work, namely:

1. Revisit the definition of "story" for your context, participant group and time.
2. More haste, less meaningful process and product.
3. Facilitator competence matters.
4. Thinking about the ways in which technology will be used in advance leads to richer research outcomes.

Our experience has implications for wider arts-based methods and practice. Participatory arts-based approaches in particular, use visual and aural methods to engage vulnerable groups in the research process. These methods are intended to surface and amplify the complex realities of life around the globe. Story-telling is an ancient tradition in South and sub-Saharan Africa, and with the close-to-ubiquity of mobile technologies young people are increasingly using these for telling and audiencing their stories. This changing context invites us to reflect on the ways in which technology-mediated methods interplay with story.

Acknowledgements

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