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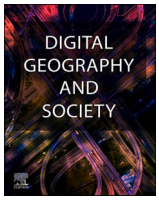

Evaluating a women's digital inclusion and storytelling initiative through the lens of empowerment

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ABSTRACT

In terms of digital inclusion, a global gender gap has been widely documented with women more likely to face digital exclusions, particularly in rural areas and especially in the Global South. Digital inclusion initiatives (DIIs) aim to address these disparities by providing hard-to-reach groups with access to digital infrastructures and/or competencies. In this paper, we heed calls for contextualised DII research that centres the oft-neglected experiences of socially and digitally marginalised women. As such, we contribute a case study from a women's project in Zimbabwe and elaborate a feminist framework of empowerment as an approach to qualitative evaluation. The study involved online Digital Storytelling workshops co-facilitated by and for women, using WhatsApp as the main communication platform. Thirteen participants were interviewed on WhatsApp following the workshop programme. Beyond supporting the development of digital competencies, we found that remote storytelling fostered relationship-building and a sense of solidarity to develop between participants. The paper shares findings around the practicalities of using WhatsApp to mediate online digital storytelling initiatives, which has transferable practical applications in other hard-to-reach contexts. Furthermore, we argue that the feminist framework and approach elaborated in the paper could be deployed more widely, as a tool for both co-designing and evaluating DIIs with communities to enhance the empowerment gains of digital inclusion projects.

1. Introduction

Digital inclusion is of increasing importance worldwide, as governments and institutions push "digital-by-default" policies and practices (Wagg et al., 2019, p.111). In this context, a global gender gap has been widely documented, with women more likely to face digital exclusions, particularly in rural areas and especially in the Global South (GSMA, 2015; IFLA & TASCHA, 2017). Digital inclusion initiatives (DII) aim to address this disparity by providing access to infrastructures and competencies (Mervyn et al., 2014). In their review of the digital inclusion literature, Wagg et al. (2019) identify a need for further research on the evaluation of DIIs, stating that, "[o]nly a limited number of articles focused on the actual process of measuring or evaluating the success and outcomes of digital inclusion initiatives" (ibid., p.123) and that even fewer explored "the experiences of women who have benefitted…" (p.129). In response, this article contributes a DII case study from a women's project in the Global South and elaborates an innovative feminist evaluation framework for assessment.

Scoping the existing literature on DIIs, we find that such initiatives are commonly evaluated using surveys and closed questions focused on pre-defined outcomes and the presence/absence of particular devices and infrastructures (Carretero et al., 2017; Smith, 2015). "Success" is often assessed in terms of metrics determined by large funding organisations (Rhinesmith & Siefer, 2017). In this study, we heed calls for more ethnographic, qualitative and contextualised DII research to centre the oft-neglected experiences of more marginalised ICT-users, such as women in the Global South (Rashid, 2016; Wagg et al., 2019). Framed by this motivation, our paper does not attempt to evaluate a project in terms of externally-defined metrics, but rather assesses a DII in relation to the participants' reflections on their own experiences. This approach aims to centre the voices of the women who took part in the DII, listening to how they valued (or not) the experience and why. To make sense of these individual qualitative experiences, or to assess them in a way that can inform DII research more generally, we integrate and analyse participants' reflections in relation to a feminist framework of "empowerment" (Carr, 2003; Cornwall, 2016; Rowlands, 1995).

The case study at the heart of this research took place in Zimbabwe and involved the authors in different capacities as both facilitators and

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researchers. The DII and accompanying studies were integrated into a Knowledge Exchange project that worked with a range of organisations during the height of the Covid-19 pandemic, delivering online video production workshops for farmers and rural communities (Make it Grow, 2023). The specific initiative that we focus on in this paper was a women's digital "storycircle", which arose following an invitation to collaborate with a Zimbabwean organisation. The organisation usually brought women together for in-person workshops/circles. However, with restrictions on travel and social gatherings in place due to the Covid-19 pandemic, people were unable to meet. The DII responded to the organisation's desire to continue with capacity-building processes, but via digital platforms. The resulting online workshop programme involved several weeks of video-making and storytelling activities and took place on WhatsApp, connecting four facilitators with 23 participants from across Zimbabwe. The situation brought about by the pandemic – that forced us to adapt to remote, online modes of communication and to move group-based activities online – will be familiar to many. While entailing challenges, the adaptations also resulted in learning that is valuable in terms of broader, post-Covid applicability.

Digital Storytelling (DS) was integrated into the initiative, serving several purposes. Audio and video content creation offered a rich medium for participants to convey their own stories, offering a means for sharing experiences and building relationships across distance. The hope was that through the workshop process, a wide range of digital skills could also be developed by the participants. However, both designing and assessing this online, remotely-facilitated initiative was challenging due to socio-technological constraints to be discussed in the paper. DS workshops have conventionally been carried out face-to-face and so the majority of related literature and resources refer to in-person initiatives. Given the recent and growing demand for online learning, this paper responds to a pressing need to explore how virtual workshops can support digital inclusion efforts and DS in particular. Although presenting a single case study, our findings have applicability and relevance for the design and evaluation of similar initiatives.

Our study adopts a feminist approach to conceptualise and evaluate how empowerment was experienced through a DII, whilst also attending to practical questions around the value of using WhatsApp to mediate the process. The paper proceeds by providing a conceptual framework and a review of the literature, addressing some of the key topics explored throughout the paper: digital inclusion; the context for women in Zimbabwe during Covid-19; Digital Storytelling (DS); approaches to evaluation of digital inclusion initiatives (DIIs); and our approach to viewing a DII through an empowerment lens. In Section 3, we outline the case study and chosen research methods. Section 4 presents the main findings of the research with regard to empowerment, identifying the specific processes and outcomes of the DII. In this section, we also share some of the challenges experienced by the participants and discuss the wider relevance of remote DS for women in the Global South and other groups. In Section 4.5, we reflect on the limitations and applicability of the evaluation approach and research methods. Finally, our paper concludes by offering a feminist framework for designing and evaluating DIIs with hard-to-reach communities.

2. Conceptual framework and literature review

2.1. Digital inclusion: the gender gap and global inequalities

Wagg et al. (2019) explain that "digital inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and meaningful use of information and communication technologies (ICTs)" (p.112). Drawing from the (U.S.) National Digital Inclusion Alliance, they explain that digital inclusion involves five key elements: (1) affordable internet services, (2) internet-enabled devices, (3) quality technical support, (4) suitable applications and interactive online content, and (5) access to digital skills training (NDIA, 2017 in Wagg et al., p.112; cf. Hashim et al., 2012). In practical terms, digital inclusion activities "promote digital literacy through outreach to unserved and underserved populations" (Jaeger et al., 2012, p. 3). In theoretical terms, Thompson and Paul (2016) define digital inclusion as an important pillar of social justice given that "the ability of the individual to participate fully in society is increasingly tied to the ability to access and to use digital technologies in a meaningful way for social, political, and economic participation" (p. 93). As has been argued by Mervyn et al. (2014) and Tapia et al. (2011), combating social marginalisation today is thus tied in complex ways to digital inclusion strategies, across various geographical scales and domains.

Digital inclusion research on/in the Global South context has a tendency to focus on access and infrastructure, which is often unevenly distributed (Correa et al., 2017; Wagg et al., 2019, p. 128). Within country populations, including in Zimbabwe, there is not only a disparity in access to infrastructure but also a high level of inequality in terms of competencies. One manifestation of this inequality is the gender-based digital divide, with women (particularly in rural areas) disproportionately lacking access to information and digital skills (Wagg et al., 2019). The International Telecommunication Union (ITU) reports that "of the estimated 2.7 billion people currently *un*connected [to the internet], the majority are women and girls. […] Globally, in 2022, 62% of men are using the Internet, compared with 57% of women.[…] Only 19% of women in Least Developed Countries (LDCs) used the Internet in 2020, compared to 86 percent in the developed world (in 2019)" (ITU, 2022). Similarly, the United Nations' Agency for Information and Communication Technology research (the UTU) suggests that "globally, the proportion of women using the Internet is 12% lower than that of men using the Internet" (ITU, 2017a, p. 3). In Africa, the same statistical relation stands at 25% (Wagg et al., 2019, p. 111). In order to address these stark global and gender-based inequalities in digital access and competency, DIIs operate to provide infrastructure and/or access through capacity-building programmes (ibid., 2019). DIIs are understood to be an important pathway to gender equality and empowerment for women (ITU, 2022) and to hold "potential to contribute to the improvement of women's […] well-being in rural communities" (Wagg et al., 2019, p.129).

The ITU's ongoing Gender Digital Inclusion Mapping project (ITU, 2017b) provides helpful examples of how DIIs are engaging with the issue of gender inequalities in the Global South, mapping initiatives for women from (more than) 97 countries. Of relevance to this study are the National Library's digital skills training programme in Uganda, which offers training for female farmers, and the Girls' Mobile Health Clubs in Burkina Faso, which provide access to health information and ICT skills. Research on these projects has shown that they can empower women "by ensuring that they have equal access to information and education, enabling them to gain knowledge and confidence and make informed decisions on issues such as family planning and health care" (Wagg et al., 2019, p.121). Similarly, Infocentros in Chile, designed to be women-friendly spaces, are another widely cited example of an initiative that has empowered women through providing a safe place whilst building women's digital capacities and capabilities (IFLA and TASCHA, 2017; Kleine, 2013). In many of these initiatives, mobile/smartphone technology has become a key access point, platform for provision, as well as a focus of skills development. The connection between women's digital literacy and wellbeing is also increasingly coming to the fore (Poveda & Gatti, 2017). The Zimbabwean case study presented in this paper contributes to this area of the literature on digital inclusion by elaborating a qualitative evaluative framework that focuses on womens' own experiences of a digital storycircle. We now outline the implications of the Covid-19 pandemic with regard to digital inclusion in Zimbabwe at the time of the DII, as this shaped the research context, case study and methods in significant ways.

2.2. Covid-19 and the amplification of digital exclusion for women in Zimbabwe

As in many other societies, gender-based inequalities in Zimbabwe are high and correlate with statistics pertaining to digital exclusion (Mare, 2021).[1] The Covid-19 pandemic and resulting lockdowns impacted women in Zimbabwe in specific ways, including disproportionately restricting movement (Chigevenga et al., 2020), increasing social isolation (Mutongwiza, 2020), increasing childcare and caregiving responsibilities (Gelhaus, 2021) and most seriously, precipitating an increase in domestic abuse towards women and children, described by Mutongwiza (2020) as a 'pandemic within a pandemic'. Research undertaken in 2021 found that Zimbabwean women faced multiple challenges to participating in online learning activities at this time (Gelhaus, 2021). With the closure of educational institutions and restrictions on movement, many women had to stay at home and care for children. Although most women owned a mobile phone, some did not own a (suitable) smartphone and many did not have adequate access to the internet from their own home. This mirrors an emerging trend across the Global South, with smartphone acquisition mushrooming and being the entry point for the majority in terms of encountering the internet and developing basic digital competencies (IFLA and TASCHA, 2017). In Zimbabwe, almost 90% of households own mobile phones but only 30% have regular access to the internet (DataReportal, 2022). When travel restrictions were reduced in 2021, women often felt insecure about making journeys to nearby towns to access the internet, as police checkpoints were set up to curb "unnecessary" travel and many feared that they may get stuck (ibid.). Moreover, schools remained closed for several months and many women could not justify leaving their families at home while they went out to access the internet.

Unequal, gendered experiences of digital exclusion were exacerbated by the Covid-19 regulations, but as shown in Fig. 1, gender was not the only factor that led to differentiated experiences of exclusion (Bhanye et al., 2023; Ranganai et al., 2022). Rurality and remoteness from network transmitters increased the relative marginalisation of people in particular areas and people living in towns (with access to Wi-fi) fared much better in terms of participation in online activities (Gelhaus, 2021). Employed or higher income participants suffered less insecurity during the pandemic and were able to purchase data. Yet, the cost of data in Zimbabwe rose sharply between 2020 and 2022, and became unaffordable for unemployed or low income participants. At the same time, globally and in Zimbabwe, the pandemic increased the need for virtual methods of teaching and learning, creating a heightened awareness, tension and sense of isolation/exclusion for those who could not easily access the necessary resources (Mbunge et al., 2020; pers. comm. 2023). For these reasons, the pandemic served to amplify the experience and awareness of digital exclusions faced by women, particularly in rural areas of Zimbabwe (Chigevenga et al., 2020) and also called for creative ways of engaging them in a digital learning environment.

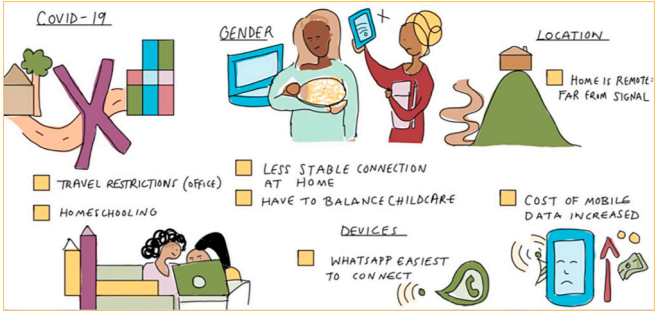

Fig. 1. Constraints to participation in online digital learning activities for participants in the MIG project, Zimbabwe 2021. Illustration by Alexandra Plummer based on findings of Gelhaus, 2021.

[1] In statistical terms, Zimbabwe is ranked 110 (of 149 countries) on the Gender Inequality Index, with patriarchal social norms resulting in a high level of gender-based inequalities, especially in rural areas.

2.3. Digital storytelling

Digital storytelling (DS) is a process that combines traditional storytelling with new technologies (Lambert, 2006). The process involves workshops to support sharing narratives, creating storyboards, writing scripts, recording audio clips, gathering video footage and images, and editing (De Jager, Fogarty, Tewson, Lenette & Boydell, 2017; Brushwood Rose, 2009). Participants learn to tell stories with their own words, sounds and (moving) images (Vacchelli & Peyrefitte, 2018). Creating a digital story thus simultaneously supports story-sharing and the development of digital literacy skills (Rouhani, 2019). Importantly, DS integrates more ancient and also feminist traditions of sharing stories in community. In the context of working with groups of women in the Global South, researchers have found DS to be an effective entry point into discussing sensitive topics (Moletsane et al., 2009) and inspiring action (Yoder-Wise & Kowalski, 2003). Storytelling, it is argued, allows people to feel valued and to gain self-confidence (Bove & Tryon, 2018; Mwaba et al., 2021; Nichols, 2021; Rizzi et al., 2020). When practised in a group setting where storytelling is reciprocal, sharing stories can be a validating experience, fostering a sense of social solidarity (Hung, 2012) and wellbeing (Kellas, 2017). For these reasons, it has been argued that storytelling is a highly engaging tool to support digital literacy and skills development (Chan et al., 2017; Churchill, 2020).

Originally, DS was facilitated through in-person workshops often using equipment owned by the facilitating organisation (StoryCenter, 2023). Over time, DS methods have become increasingly adapted to the remote learning environment and to mobile technologies (Foumena Agnoung, 2019; Frohlich et al., 2009; Reitmaier et al., 2011; Şimşek, 2012), but relatively little has been published around how platforms for remote social messaging can be deployed and evaluated as a tool for supporting DII and DS processes (Alhonsuo et al., 2022; Marzi, 2021; Mateyisi, 2021; Patiño, 2018). In this paper we position remote DS via WhatsApp as a strategy for inclusion of hard-to-reach participants, which can support the development of digital competencies whilst also offering the potential to foster the storytelling-related benefits outlined above.

DS initiatives are often evaluated through surveys and follow-up interviews with participants and success is measured in relation to criteria such as satisfaction, engagement, achievement of learning outcomes, and quality of outputs (Gubrium et al., 2016; Hausknecht et al., 2017; Jun et al., 2022; Smeda et al., 2014). Aligning ourselves with a feminist approach, we sought to engage with the participants' reflections on what their experiences of the DII meant for/to them, whilst also providing useful insights to inform future initiatives. Below, we briefly review the literature on evaluation of DIIs and then unpack the feminist framework of empowerment that has informed our own strategy for assessment.

2.4. Evaluating digital inclusion initiatives

There are multiple ways in which DIIs have been framed, assessed and evaluated by practitioners and institutions (Carretero et al., 2017; Rhinesmith & Siefer, 2017; Smith, 2015; Wagg et al., 2019). As Bach et al. (2013) point out, because there are many contextual factors that contribute to digital exclusion in different places, this makes "the task of implementing workable digital inclusion solutions particularly challenging" (in Wagg et al., 2019, p.111). The European Commission's Digital Competence Framework integrates an outcomes-based model of

evaluation for DIIs based on core competencies.[2] Using quite different criteria, Rashid (2016) work on gender differences in ICT provision in Bangladesh, Brazil, Chile, Ghana and the Philippines developed a digital inclusion index based on the categories of skills, attitude, frequency of use, location of use, and breadth of use (p.123). While such criteria and metrics can provide useful indicators for communicating DII projects to funders (Rhinesmith & Siefer, 2017), Rashid (2016) argues for "a more nuanced understanding of the behavior and use of ICTs by women in meaningful ways to enable them to fulfil specific individual motivations and needs" (p. 327). Wagg et al. (2019) also argue that there is need for research "particularly in relation to the *experiences of women* who have benefitted from digital inclusion initiatives" (emphasis added, p.129). In this context, our study assesses a DII in relation to participants' reflections on their own experiences and with regard to the specific mandate of the initiative, which was to create an opportunity for a women's group (facing restrictions to movement and meetings) to enhance their communication and digital skills.

2.5. Viewing through an empowerment lens

Although definitions of empowerment vary across the literature, there is consensus that it is a multilevel concept involving different notions and dimensions of power (Gutiérrez, 1994; Joseph, 2020; Page & Czuba, 1999; Perkins & Zimmerman, 1995; Richardson-Ngwenya, Restrepo, Fernandez, & Kaufmann, 2019). Feminist scholars suggest that the idea of power can be divided into four inter-relational modalities: power-over, power-within, power-to and power-with (VeneKlasen & Miller, 2002, p.39). The most widely recognised form of power, 'power-over', refers to influence and domination (Rowlands, 1995, p.101). According to Swift and Levin (1987) this form automatically generates unequal power dynamics. Alternatively, the concept of 'power-within' considers self confidence. On the other hand, 'power-to' is often described in terms of the instrumental capacity for agency in a given situation; it relates to the idea that a person has the potential to shape their life. Swift and Levin suggest that skills-based, capacity-building education can support marginalised groups to develop their 'power-to' effect change. In recent years, more collaborative ways of exercising power have been emphasised in the literature, which are operationalised through participatory modes of governance. The presence of mutual support and collaboration at the community level may enable shared power, or 'power-with', to develop (Richardson-Ngwenya, Restrepo, Fernández, & Kaufmann, 2019).

Many feminists support the idea that empowerment involves shifting power dynamics across these different modalities and is not something that can simply be done for or to women. According to Malhotra, Schuler and Boender (2002), women's empowerment refers to their "ability to make decisions and affect outcomes of importance to themselves and their families" (Malhotra et al., p.5), but actions and decisions are shaped and constrained by social contexts. Feminist scholarship has long encompassed a conceptualisation of empowerment that includes the individual as well as broader society; when people (are able to) acknowledge the power within themselves and exercise that power *with* others, they can develop the power to collectively effect social change, which can culminate in democratic processes or social activism (Page & Czuba, 1999).

The literature on empowerment often differentiates between 'empowering processes' and 'empowering outcomes' (Christens, 2012; Perkins & Zimmerman, 1995), which is a distinction taken up in this paper. Empowering processes include actions, such as decision-making or participation, that enable individuals and groups to gain power (Perkins & Zimmerman, 1995). Despite the use of the term 'outcome', many empowerment theorists agree that there is no final state of empowerment (Carr, 2003; Gutiérrez, 1994). Rather, 'empowering outcomes' refer to ongoing operationalisations, or measurable results, that can serve as indicators and enable the consequences of 'empowering processes' to be observed (Carr, 2003; Perkins & Zimmerman, 1995). This is important to consider, given that many DII evaluations focus only on outcomes, when it is the underlying processes that can enable any outcome to be achieved.

Looking specifically at empowerment and DS, previous studies suggest that DS has the potential to be empowering in a variety of ways that we can position here in relation to the four modalities of power. The process of creating a digital story supports power-to, in terms of the development of digital skills. Rouhani (2019) describes how DS also encourages self-determination, offering participants the opportunity to explore issues of importance to themselves. This echoes Kindon's 2003 paper, which suggested that participatory video-making can offer a "feminist practice of looking" (p.142), particularly given that in mainstream media, women and girls are often the objects of the camera's gaze. Video-making in particular, argues Plush (2013), gives participants power-to contest the dominant gaze and represent the world from their own viewpoint. More broadly, DS has been recommended as a tool for supporting women's empowerment and advocacy as it creates opportunities for social contexts to be represented and re-imagined "through the eyes of women" (Moletsane et al., 2009, p.317). Moletsane et al. (2009) suggest that a sense of empowerment can be experienced when those most affected by issues such as gender-based violence are re-positioned as the protagonists of their own stories, gaining power-over their narratives and a resulting sense of power-within. Further, stories can be influential: by sharing with each other and the wider community, people can raise awareness around issues and build important 'power-with' relationships though (Mwaba et al., 2021; Rappaport, 1995).

3. Case study and methodology

3.1. The 'Women Are Medicine' Digital Storycircle

Throughout 2020–2022, a Knowledge Exchange project called 'Make It Grow' (MIG) led by Author 1 worked with non-profit and community-based organisations in Zimbabwe, delivering a series of online video production courses. Following one of these courses, a conversation began between the Author and one of the participating organisations, who were leading a women's capacity-building programme called 'Women Are Medicine' (WAM). The organisation brought women together from across the country for training events, but due to restrictions during the Covid-19 pandemic, the project facilitators and participants were unable to meet or travel. Having completed a recent online programme with MIG, the WAM organisers had the idea that providing a similar capacity-building programme could be helpful for their programme.

The collaboration between MIG and WAM provided the opportunity to operationalise a DII within the existing social network of a local organisation, which had already established relationships with the participants. In their work on basic digital skills training in non-formal educational settings, Berger and Croll (2012) highlight the importance of building trust and describe how an all-female learning group in Germany helped to create an "open learning atmosphere where any question could be raised without embarrassment" (Wagg et al., 2019., p. 125; cf. Rizzi et al., 2020). Madon et al. (2009) research also confirms the importance of trust, discussing how a project in rural South Africa failed when the trainers "were outsiders whose motives were often suspected" (Wagg et al., 2019, p. 125). Likewise, working with female migrants from Hong Kong, Hung (2012) found that identifying similarities between group members served to build solidarities. In keeping with these findings, an all-female facilitation team was convened

[2] The European Commission's Digital Competence Framework for Citizens 2.1 includes five competence areas for project design and evaluation: information and data literacy, communication and collaboration, digital content creation, safety, and problem solving.

involving four women with different roles and skill sets; two of whom were Zimbabwean with one already familiar to the participants through WAM.

In order for basic participation to be possible (see Section 2.1 and 2.2) the programme was designed with smartphones in mind. The majority of previous MIG workshop participants were reliant on mobile phones and using pay-as-you-go data to attend the workshops. Given the need for maximising the accessibility of the workshops for the most hard-to-reach participants (especially those from remote rural areas with limited connectivity and bandwidth), WhatsApp was selected as the primary communication platform for both the WAM workshops and the research. This decision was taken based on previous research and experience, which had found that joining video calls was more difficult (financially and logistically) than accessing WhatsApp messages. WhatsApp was reported as being the easiest and most familiar communication platform for those in rural areas of Zimbabwe (Gelhaus, 2021). Moreover, credit vouchers for using WhatsApp are sold in the country, with people accessing the platform at a discounted rate compared to other online applications.

Following an informed consent process, a private WhatsApp group was created, connecting 23 female participants from across Zimbabwe and four facilitators (based in the UK, Portugal and Zimbabwe). Administered through the local NGO, the participants received monthly bundles to cover the cost of data for participating in the course. The resulting digital storycircle involved more than eight weeks of video-making and storytelling activities, structured by eight (three-hour) live workshops, with tasks to complete and asynchronous interactions taking place between the sessions. The goal of facilitators was to support intra-group communication between the women at a time when in-person meetings and travelling outside the local area was prohibited. More specifically, the programme aimed to enhance the effectiveness of online communication in the women's group through building digital communication competencies. For the reasons outlined, DS was selected to support the above goals and a story prompt framed the video-making tasks from the third session onwards. A process of story-sharing, content creation, group feedback and learning was facilitated over the following weeks, with participants learning about audio recording, camera handling, shot types, storytelling, video editing and more, whilst also getting to know each other through sharing their stories.

3.2. Research method

As mentioned, having worked with the WAM facilitators recently in a similar capacity, one co-author of this paper (who was based at a university in the UK) had been invited to coordinate the DII and was able to integrate activities into an existing funded project. The second co-author, a student in the same university department, came on board initially as an intern and then as a research student interested in studying the women's digital storycircle for her dissertation. While both British and UK-based, the first author had long-term collaborative relationships with the Zimbabwean partner organisation and co-facilitators, and had several years of lived experience in Zimbabwe. Although all participants spoke English as a second language, the two Zimbabwean facilitators provided translated voice notes during the workshops and also translation of a couple of the interview questions/answers on occasion, whenever a participant requested a chiShona translation. As with any research process, the different positionalities shaped our interactions (Acker, 2000; England, 1994). It should be noted that as the collaborations were largely voluntary and coalesced around a feminist ethic of solidarity, this meant that by the time the interviews took place, the participant group and the facilitation group were receptive to a process of interactive, reflective inquiry. In order to learn about the participants' experiences of the online workshop programme, the researcher invited all 23 to take part in a semi-structured interview. Ultimately, 13[3] interviews were undertaken by Author 2, using audio message exchange on WhatsApp.[4] The interviews consisted of 16 predetermined open questions about their experience and perceptions of the workshop programme, but the semi-structured approach ensured that questions were flexible and responsive (Longhurst, 2009).

The research viewed the DII and DS process through the lens of empowerment to explore the ways in which participants experienced processes and outcomes, and also to better understand the benefits and challenges of using WhatsApp as a new platform for facilitating DS and DIIs during the digital (and Covid-19) era. Following the interviews, the audio recordings were played back and the interview transcripts were developed with the assistance of transcription software. Thematic content analysis allowed the authors to examine the transcripts for "commonalities, relationships and differences" in the women's experiences (Gibson & Brown, 2009, p.2). An inductive approach was applied and the data was explored through open coding, which enabled empirical codes to develop (Gibson & Brown, 2009) within and beyond the four overarching modalities of empowerment. The coding process was non-linear and iterative, therefore codes were constantly generated, discarded and modified (Maguire & Delahunt, 2017). Firstly, a colour-coding system was designed to differentiate between the processes and outcomes related to empowerment. Then, NVivo software was used to group codes within these two main themes and create sub-themes around the participants' experiences. As part of the theme-building process, NVivo supported us to draw comparisons and make connections between different observations and quotations (Cope & Kurtz, 2016). This method enabled us to integrate women's own reflections on their context-specific experiences of the DII in relation to the different modalities of empowerment, as we discuss below.

4. Results and discussion: evaluating a women's digital storytelling initiative through the lens of empowerment

The following section presents our findings with regard to empowerment, identifying firstly, the processes (4.1) and secondly, the outcomes (4.2) of the DII case study. Fig. 2 provides a visual summary of our key findings in relation to the four modalities of power.

4.1. Empowering processes

Through coding and analysis of the interview transcripts, four main processes were identified as empowering for the majority of interviewees: accessing an all-female virtual space; connecting with other women; developing digital skills, and; sharing personal stories. Although these processes are presented and discussed in a specific order below, they took place simultaneously and worked to complement one

[3] Each participant received a detailed, clear and accessible information sheet which was adapted in a format depending on the needs of each person (e.g. could be sent via WhatsApp or as a Google Form). This built on existing consent processes established before and during their participation in the workshop program. Informed consent was obtained from each interviewee before interviews began. In the interests of maintaining confidentiality, the participants' names have been anonymised.

[4] All of the 23 storycircle participants were invited to take part in an interview; however, due to work commitments, childcare responsibilities and technological challenges, only 13 women were available during the 4 weeks of "fieldwork" time.

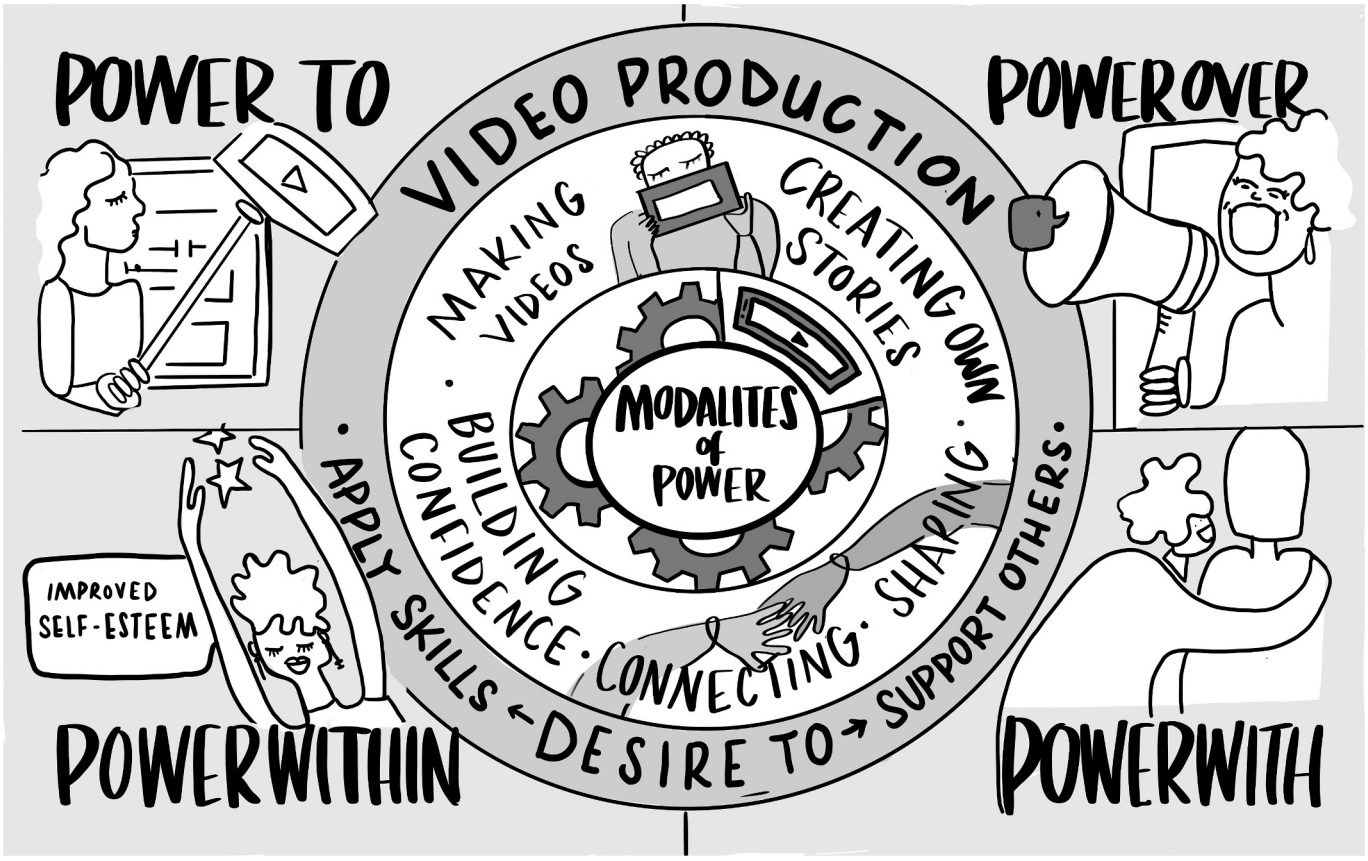

Fig. 2. A visual summary of our evaluative framework and key findings on empowerment of women through participation in the women's online digital storytelling programme. The drawing illustrates our research findings relating to empowering processes (depicted in the inner ring) and empowering outcomes (outer ring), and is organised by a framework that distinguishes between four modalities of power. Illustration by Alexandra Plummer, 2023.

another.

4.1.1. Accessing an all-female space

The DII brought women together from across many remote areas of Zimbabwe and the ability to interact with each other in a private, virtual space for women was valued. Despite the geographical distance, the participants and facilitators were able to be present in one virtual space at the same time during the weekly workshops. *Participant 3* commented that, although it took place online, the exclusively female character of the workshop meant that it was an energising experience: *"It was nice to hear other females. There is a certain energy that is brought up when women meet. And regardless that it was online, this energy was just there."* Key subthemes that emerged with regard to the female space were freedom of expression and freedom from fear of 'judgement'. One interviewee reflected, *"The experience was amazing… being in our own female space, where we could express ourselves freely without fear of being judged (*Participant 2). Likewise, another participant commented that *"I was very comfortable sharing my story because I knew people would accept things as they are. They were not to judge you"* (Participant 8). *"It was liberating because I could express the story without judgement or inhibition"* (Participant 12). These comments demonstrate the perceived importance of having a women's group, in that participants felt the group was a safe space for them to share their opinions and experiences.

Rouhani (2019) highlights that in patriarchal contexts, where it is considered taboo for women to speak publicly about gender-related issues, women can feel intimidated to share stories in a group with men. Similarly in the context of Zimbabwe, as a patriarchal society, most participants valued the opportunity to access a female environment: *"Most males would not have listened. Their listening with empathy would have been missing and make others feel self-conscious. It would have been a bit difficult if there were males, especially if they were domineering"* (Participant 12). Another participant commented that *"Participating in all female online storytelling and, you know, talking woman to woman, getting rid of all the barriers, no patriarchy, nothing. You know you're talking to a sister. That sisterhood brings you together"* (Participant 1). Similarly, in a study of women-only Facebook groups in Pakistan, Younas et al. (2020) found that these digital spaces play a vital role in empowering marginalised women in a patriarchal context. The results from our study are consistent; the feminised nature of the WhatsApp group was necessary to ensure that participants could bond and express themselves, without experiencing fears related to judgement and/of men. When participants felt free to express themselves, this allowed a greater sense of self-confidence, which can be understood as 'power-within'.

4.1.2. Connection

Beyond just being online and present in an all-female digital space, workshop participants expressed a sense of empowerment through emotionally "connecting" with the other women in the group. This sense of connection related to feelings of trust, empathy and solidarity. Participants connected through the workshop activities, bonding over similar experiences. Several participants, including Participant 4, commented on the relationship between hearing the voices of others and feeling connected to them: *"I felt very connected. Each and every voice was heard through WhatsApp. I think the WhatsApp audios made me closer to the facilitators and to the other women"*. Emotional connection was developed iteratively over the weeks via facilitated activities that encouraged active sharing and listening. For example, at the start of each weekly session, facilitators asked the participants to share a short voice message in response to a prompt, such as, "*Where are you joining this workshop from? Please describe what you can see around you"*. Reflecting on this

experience, interviewees commented, *"I was connected […] The voice notes […] brought character to the discussion"* (Participant 12) and *"The connection was there, especially on the check-in when other people would tell us about their surroundings. You can imagine you being with them. And there was a sense… there was a sense of that connectivity through that. You could actually see somebody in their workspace, sitting outside… the connection was just there"* (Participant 3). At the beginning of the workshop series, facilitators referred to the importance of paying attention to how one can listen with the whole body in ways that can articulate curiosity, compassion and courage (referred to later as the "3 Cs"). This emphasis on embodied listening translated into a heightened sense of connection for participants: *"I felt so good that I could […] tell someone who could listen to me… someone who could take me seriously"* (Participant 11).

As well as connecting through the interactive group tasks, the participants bonded with one another through sharing their experiences and finding common ground: *"Although we are from different parts of the country, different areas, different races… for what? I feel like we, as women, we all share the same challenges. So I have this feeling of oneness"* (Participant 8). The theme of unity was prevalent across the interviews; eight of the 13 women made very similar comments to the statement of Participant 8 above. In an analysis of empowerment groups for female migrants from Hong Kong, Hung (2012) proposed that identifying similarities between group members served to foster a sense of "being in the same boat" (p.11). Reflections from the storycircle participants evoked a similar sentiment. For example, one participant remarked that *"At first I thought I was the only person in my community who could feel the plight of poverty and all that was taking place in our community. [After hearing from others] I felt there were women out there too, who were having problems in their communities. I learned a lot when they were saying how they would overcome their problems"* (Participant 1). Through the workshops, the participants developed a sense of being in solidarity with others, or having 'power-with'. Participant 1 conveyed that she felt less isolated and more capable of tackling challenges after listening to others in the group. Feminist empowerment theory suggests that through building such relationships, people can gain a deeper critical understanding of the external factors affecting their lives (Crescenzi & Rodríguez-Pose, 2011; Gutiérrez, 1994).

4.1.3. Developing skills

Power-to was also experienced through learning a range of new digital skills, including competency to produce videos. The interviewees reflected positively when asked about their new storytelling and video-making skills. Through engaging with the tasks and resources, the participants gained a range of transferable skills. Some participants expressed that, as a result, they felt more empowered and capable: *"I know what I'm doing now, I don't need a journalist to come and tell the story for me in my village. I can do it myself"* (Participant 1). According to Swift and Levin (1987), skills-based education is an important resource for empowerment, as it enables marginalised groups to build capacity and effect change. Knowledges that are not typically heard in the public sphere can be shared more effectively when marginalised people gain the 'power-to' produce media and take 'power-over' their own stories. Moreover, interviewees expressed that the DII improved their confidence in their own abilities, supporting the findings of East (2000) whose study found that when women felt that they were gaining knowledge and taking control of their own actions, they felt more powerful. Through supporting the participants to learn how to effectively use their phones, cameras, stories, platforms and apps, the DII thus also contributed to a sense of 'power-within' for the participants.

4.1.4. Sharing stories

After the initial few workshops, a story prompt was shared so that all participants would share experiences around a common theme and begin the process of learning how to turn a story into an engaging piece of digital media. The prompt for the group was, *"tell a story about a positive change you have personally observed or experienced in your community, as a result of women coming together"*. The process of story-sharing that unfolded was identified as a valuable and empowering exercise by the interviewees. Storytelling using WhatsApp in particular allowed each participant to record and share stories from their own experience and communities.

Before producing their final video stories, participants shared content (short audio recordings, photos of storyboards, video clips) and received feedback from the group on each stage of their creative process (Fig. 3). The specific functions of WhatsApp enabled the media files to be shared easily. It was not only the experience of building capacity to craft and express one's own story that generated positive feelings; just as important was the feeling of being listened to. The participants valued having an understanding audience to share their stories with: *"I felt that my voice had been heard. I was talking about my community and what was happening in my community to people who were listening, to people who would notice"* (Participant 13). Feeling that their stories were appreciated by empathetic listeners cultivated a sense of solidarity and 'power-with'.

Furthermore, the collective story-sharing experience resulted in a strong sense of motivation and inspiration, perhaps due to the overarching theme of the stories (i.e. *positive* changes as a result of women coming together). One participant commented that *"Hearing about the lady who harvested the bees [honey] and all that was inspiring, you know? So it moves you as a person. I thought 'Wow! there's so much that's happening out there' "* (Participant 3). This motivational quality of the stories corroborates the work of Yoder-Wise and Kowalski (2003) whose research with nurses showed that stories can inform and inspire listeners to take action.

4.2. Empowering outcomes

Analysis of the interviews revealed four common outcomes for workshop participants, which were felt to be empowering in some way: production of a video story; improved self-esteem; the desire to apply new skills and knowledge; and, the desire to support others.

4.2.1. Video productions

Eight participants produced a complete, edited video story by the end of the workshop process. The video stories provide evidence that some participants developed their digital skills and the 'power-to' apply them to a significant extent. Production of videos involves comprehensive learning and skills development around multiple topics. As the participants created their video stories independently, they gained the 'power-over' their narrating and sharing their own stories using audio-visual media which, as Rappaport (1995) and Plush (2013) have argued elsewhere, can be an empowering outcome in itself.

In the final workshop, the participants viewed and reflected upon the videos. The manifestation of their collective learning contributed to a sense of 'power-with'. The participants were comfortable in sharing

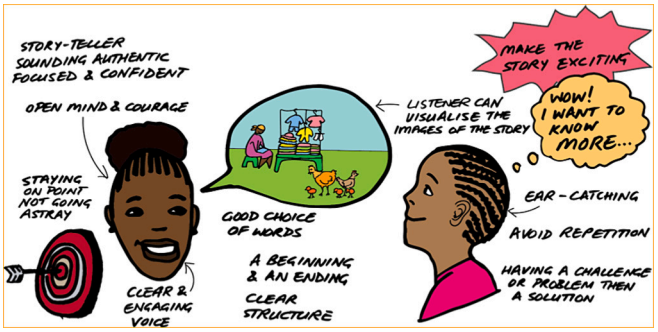

Fig. 3. Graphic notes from the online story-telling workshop session where we discussed the power of stories and asked participants to respond to the question of "what makes a good story"? Notes created by Rudo Chakanyuka, 2021.

constructive feedback with one another, which greatly assisted the learning process: *"When the constructive criticism came in… wow. That's where I grasped a lot"* (Participant 3). The provision and reception of constructive feedback in a positive and supportive manner was only possible due to the trust and unity established by the all-female environment as detailed above. The feedback and gratitude expressed when viewing the final videos conveyed and consolidated a sense of solidarity in the group.

4.2.2. Improved self-esteem

When asked about beneficial outcomes of the programme, participants' often spoke of improved self-esteem and hopefulness. Many acknowledged that they felt energised and more self-confident as a direct result of participating in the DS process: *"I am going to fulfil my dreams about making videos" (*Participant 6) and *"I feel motivated to become a better me"* (Participant 13). In reference to connecting with others in the virtual space, Participant 1 stated, *"It was so positive. It raised my spirits. It gave me […] hope [for] tomorrow."* These statements signify a shift in the participants' levels of self-worth and perceived agency. Rowlands (1995) suggests that when people gain belief in their own capacity to produce social change, this can awaken their 'power-within'. The combination of the various empowering processes, explored above, enabled this sense of 'power-within' to develop for these participants.

4.2.3. Desire to apply new skills and knowledge

During the interviews, many participants expressed a desire to continue to apply their new skills and knowledge. This outcome affirms that the workshop activities were viewed as educational and valuable by the participants. Some participants mentioned sharing their audio and video stories with other people. Şimşek (2012) research with Amagi women also highlighted that when women discover new functions for their digital stories, this can enable them to find new routes of action, beyond the workshop setting. For example, digital stories can be used for online activism, consciousness-raising (Tokgöz-Şahoğlu, 1996). One participant talked about creating video proposals for fundraising as a potential next step after the workshop experience. In relation to empowerment, these desires and actions reflect the 'power-to' stimulate change through utilising digital stories (Plush, 2013). As well as the video-making elements of the workshop, the participants mentioned that they had developed other skills, including listening, communication and empathy. One participant valued these aspects in particular, recognising them as transferable: *"What I've learned, and what I'll always take away with me, are the 3 C's. Because even when you're not doing the video workshop, you always need curiosity, compassion and courage"* (Participant 3). The apparent eagerness of the participants to put their learnings into practice indicated a strong sense of enhanced confidence or 'power-within'.

4.2.4. Desire to create social impact

Impressively, all 13 of the interviewees expressed a desire to use the experiences and skills developed through the DII to support others in their community. Some participants discussed using their knowledge to teach practical skills to community members, whereas others said that they hoped to use their awareness of particular issues to conscientise others. A prominent theme that appeared across the interviews was a focus on supporting other women and young girls, with Participant 1 declaring, *"I'm going to start a small group with the girl child, to capacitate them, to let them know they are very important in our lives and in the community"*. Another said, *"I shall use this knowledge in the future to show and teach other women how to be self-reliant and to make use of their skills and gifts"* (Participant 10). In discussing their wishes to help others, Participant 1 and Participant 10 emphasised the importance of capacitating young women to be self-sufficient. Participant 1 also added that *"I have the hope of doing a video that will… open somebody's eyes, to see what really was happening."* These comments articulate feminist ethics of care and consciousness-raising (Carr, 2003). They also confirm that participants recognised digital inclusion and video story-telling in particular as tools for social change (Askanius, 2014). When participants apply their video-making skills to support other women this enhances 'power-with', in terms of building solidarity for collective action.

4.3. Challenges to achieving empowering processes and outcomes

The findings discussed above show that the DII was experienced as empowering in a variety of ways. However, some participants faced challenges that prevented them from being able to fully participate. Therefore, some women were not able to experience empowerment in the same ways, or to the same extent, as others. The main challenges expressed by interviewees concerned: work and childcare, and; access to technological infrastructure.

4.3.1. Work and childcare responsibilities

Work and childcare responsibilities impacted the participation of several women in the group. In relation to her job as a social worker, Participant 7 reported that, *"Sometimes work was very demanding that I had to catch up on sessions later."* Unfortunately, due to her work, this participant missed out on some of the live story sharing sessions. Whilst she was able to *"catch up"*, by downloading the videos and digesting the messages at a later time, she missed the opportunity to interact in real-time. As the live story sharing sessions were important in enhancing the participants' sense of connection to each other, those who missed the live sessions were less engaged and emotionally committed to the group than others.

Similarly, those with childcare responsibilities reported that they sometimes struggled to attend the live sessions. As well as having an infant to care for, Participant 1 did not have internet access at her home and therefore had to travel to join the live sessions. She reflected on the difficulties of this: *"When there's no one at home, I can't leave… I miss attending my session. Or I have to carry the baby with me to find network"* (Participant 1). Due to gender norms and the inequitable division of unpaid domestic work, women generally have little discretionary time. As a result of time poverty (Kes & Swaminathan, 2006), it can often be hard for women to find time to participate in projects and activities for their own benefit. This was especially the case for the participants with childcare commitments, who were likely to have benefitted from the DII to a lesser degree than others.

4.3.2. Technological challenges

Issues with technology caused the majority of frustrations for participants. All 13 interviewees mentioned that an unreliable internet connection had hindered their ability to access WhatsApp at some point. Participant 10 expressed frustration: *"It was really frustrating to only be able to catch up on what the others had learnt in the last session several days later, which meant you couldn't easily ask any questions that you may have had"*. Many participants stressed that mobile data costs in Zimbabwe are particularly high, and accessing a more reliable or faster internet connection was unaffordable for them. Whereas WhatsApp required relatively low amounts of data and enjoys a preferential rate in Zimbabwe, the editing apps required to produce a video required faster, higher volume and higher cost internet access. To an extent, this explains why several of the group participants stopped engaging with workshop tasks at the point where video editing apps were required. A few participants also found that their mobile devices were incompatible with the recommended editing application, or had limited storage capacity remaining on their smartphones. In these cases, technological challenges were intertwined with deficits in knowledge or finance, restricting participants' capacity to complete some tasks, including producing a final video story. In total, only eight of the 23 participants managed to achieve this. Some women expressed that they felt *"disappointed"*, *"limited"* and *"left behind"* as a direct result of internet connectivity problems and their devices. For several participants, the

setbacks were disheartening and they expressed feelings of disempowerment. Following the workshop, the participants were offered additional support with making a final video; however, very few participants took up this opportunity, suggesting that these access-related challenges negatively affected participants' levels of motivation.

4.4. Wider relevance of remote/online DS for hard-to-reach groups

While the majority of DS literature addresses traditional, in-person workshops, this paper has reported on a process that operated through participant's own smartphones and was facilitated remotely via WhatsApp. The approach supported the majority of participants to develop their communication skills and digital competencies. WhatsApp allowed participants to record videos and stories from their own experience and share them with other participants across remote communities. The platform allowed for easy and relatively low-cost sharing of multiple media files. In particular, WhatsApp allowed participants to catch up later and to continually share and interact asynchronously in the digital space. The possibility to "catch up" afforded by the platform was advantageous in terms of supporting inclusion of those who, for reasons outlined in the section above, struggled to join a live online workshop. Working on familiar devices and platforms was beneficial in that it allowed participants to integrate and develop their new skills independently, and to apply them well beyond the workshop initiative.

Due to constraints (including finances, Covid-19 regulations, internet connectivity issues and data costs), the participants would not have been able to join in workshops via video calls, or in-person. Thus, using a social messaging app provided an enabling environment for empowerment processes and outcomes to be operationalised and experienced by women who were otherwise "hard to reach". Whilst not without its challenges, WhatsApp enabled access to a shared digital space that supported both digital skills development and community-building to take place. Removing the need to travel or to introduce new equipment, this form of communication for DIIs requires less resources than hosting in-person or video-conferencing workshops. The remote facilitation medium can also have carbon-emission reduction benefits and can connect participants who are remote from each other. We therefore suggest that the DII and DS process described in this paper have valuable practical applications in diverse "hard-to-reach" contexts. The method is relevant to situations where low bandwidth internet connectivity is possible, where participants' capacity to travel or gather is compromised and where resources are limited.

DIIs are more likely to be successful when they are experienced as engaging and inclusive. The success of this remote digital storycircle was dependent on the active engagement of participants; our results show that those who were not able to fully participate did not experience empowerment to the same extent. This recalls Cornwall's seminal work on empowerment, as something that cannot simply be done for or to women (Cornwall, 2016), but rather requires active labour and self-determination. In our case study, applying a storytelling method promoted relationship-building, 'connection' and a sense of solidarity to develop between participants. This echoes observations in the wider DS literature around the power of storytelling as a medium for conveying meaning, disseminating information and inspiring action (Yoder-Wise & Kowalski, 2003). Our research findings from this digital, WhatsApp storycircle also echo findings from research on in-person digital storytelling initiatives (Bove & Tryon, 2018; Mwaba et al., 2021; Nichols, 2021; Rizzi et al., 2020), in terms of how sharing stories allowed participants to feel appreciated and validated, to learn about themselves, and to gain self-confidence. These social and emotional qualities of the process were a strong incentive for the women to engage. In other words, using DS as a method for building digital skills was effective largely because it made the learning process interesting for the participants, motivating them to develop their skills as part of a remote community (cf. Chan et al., 2017; Churchill, 2020). The DS process described here should therefore be of interest to practitioners developing digital capacity-building projects in other contexts, where engagement levels are low.

We note that an underlying factor in the success of this programme was the participants' trust in the facilitators and in each other to maintain group protocols to create a 'safe space'. Having a small group and embedding the digital storycircle in the existing network of a local organisation enabled trust to be quickly established. Interviews conveyed that the women-only nature of the programme provided a sense of safety for the participants and formal processes, such as informed consent and clear guidelines of interaction, also assisted with establishing trust. These contextual aspects of the DII are important and corroborate findings elsewhere in the literature pertaining to the success of DIIs for women (Berger & Croll, 2012; Hung, 2012; Madon et al., 2009). Having a small number (in this case study, 23) and a group formed around a shared interest, we suggest, supports the achievement of empowering outcomes, but also significantly limits the reach of such initiatives.

Based on our findings, we are optimistic that using WhatsApp for DS workshops will create opportunities beyond Covid-19 for other "hard to reach" or marginalised groups to experience similar empowering processes and outcomes as the women in rural Zimbabwe. As many women in the Global South experience time poverty (Kes & Swaminathan, 2006), the asynchronous nature of WhatsApp-based DS could enable more women in the Global South to develop their digital competencies and share their stories. As long as there is trust and a sense of connection within the group, this approach could have empowering benefits for people across a diverse range of geographical contexts, ages and genders.

4.5. Evaluation through the lens of empowerment

Whilst acknowledging the limitations, we suggest that applying the empowerment framework outlined in this paper offers valuable insights and potential as an evaluative tool for DS and DIIs. Whilst not capturing standard DII evaluation metrics, our research engaged with participants' own reflections and analysed these in relation to a feminist framework of empowerment. This approach speaks to Wagg et al. (2019) call for research on DIIs that goes beyond evaluation metrics and builds on DS work taking place with women in marginalised communities (Rouhani, 2019; Vacchelli & Peyrefitte, 2018). We found that open questioning around the topic of empowerment allowed us to explore a wide range of different themes with participants, going beyond the usual issues of concern to DII (namely, digital competencies and access) to explore issues that had meaning and value for participants. Employing the framework of empowerment to synthesise and analyse the responses in relation to the four modalities of power (Fig. 1) allowed us to explicitly align this evaluation with a broader feminist and social justice agenda. DIIs are never just about digital access/skills; they are more often concerned with fostering social justice and transformation processes (Mervyn et al., 2014; Tapia et al., 2011; Thompson & Paul, 2016). Assessing DIIs on the basis of tick-box criteria ignores the stories that participants wish to tell about their own experience of such initiatives. For example, we found that participants valued the capacity to listen, share and connect meaningfully in digital space as much, if not more, than the capacity to edit digital content, for example. Evaluating through the lens of empowerment allows us to understand what "digital inclusion" might mean in terms of the intersecting power relations that shape our different lived experiences.

Our attention to practices and processes (as well as outcomes) in this research opened up space for considering the DII methodology; to look at how particular outcomes were achieved. Supporting meaningful interaction within the digital storycircle allowed for a sense of connection to develop, and encouraged participants to continue to interact and develop their digital skills/stories, in their own ways, beyond the eight weeks of the workshop process. The desire expressed by interviewees to continue to develop their skills, to support other women and to create

positive changes in society (in relation to women's empowerment and digital inclusion), prompts us to think about the longer-term unanticipated outcomes of this DII. As such, applying the empowerment framework for evaluation – with open interview questions geared around supporting a reflective process – can be helpful in terms of co-planning next steps and fostering a sense of community agency.

Nevertheless, the reliability, validity and limitations of our specific case study findings should be considered. In terms of the research design, there is possible bias in that the authors were also involved in the facilitation of the DS process. Recruiting an external evaluator could have avoided this issue, yet, we found that having longer term interaction with the participants in the months preceding the interviews made it (socially) easier to conduct interviews, especially given that there was no compensation offered and that the interviews had to take place remotely (often taking more than an hour to complete, with voice messages being shared back and forth over several days in some cases). Another benefit of integrating the research into the workshop process was that the interviewer could immediately understand the activities and tasks that interviewees referred to, as she had listened along with the group for more than eight weeks, knew everyone's names and had been an active audience for their many different stories and videos. Despite the possibility that interviewees may have been less critical about the workshops, we follow other feminist geographers (Acker, 2000; England, 1994; Longhurst, 2009) in arguing that research processes and interviews are always subject to forms of bias and answers are influenced by social relations and expectations, whether these are reported in the findings or not.

A key limitation of the research design as far as wider applicability is concerned, is that one-to-one interviews with open questions are time-consuming. In more time-pressured circumstances, focus group discussions with group members could be organised but these are more difficult to manage online, particularly when participants do not have access to reliable internet and connectivity cannot support live video conferencing, as was the case with the women in rural Zimbabwe. In terms of the analysis, coding and thematising interview responses in terms of outcomes and processes and in relation to the four modalities of power, this was also time-consuming and open to some interpretation by the researcher. Some responses fit into multiple themes. We attempted to validate our analysis by sending follow-up questions to participants when necessary and also by sharing presentations of findings with the group for comment. A danger of the analytical framework itself is that positive, empowering, aspects could become exaggerated while disempowering or ineffective aspects could be neglected. To counteract this, we included interview questions specifically about the limitations and challenges and suggest that giving attention to these aspects and feeding back to DII process designers can enable important learning to take place.[5]

5. Conclusion: a framework supporting the design and evaluation of DIIs with hard-to-reach communities

This paper has shared empirical insights from an online DII and DS activity, which involved collaboration between a small group of female researchers, video-makers and women from community-based organisations in Zimbabwe. Applying a feminist evaluative framework, this paper has brought the voices of a group of Zimbabwean women to the foreground, by integrating their reflections on the DII experience. We have presented the benefits and challenges of remote, WhatsApp-based DS workshops from the perspectives of those who are, in general terms, considered to be hard-to-reach and often digitally excluded.[6] Through applying a lens of empowerment to explore if, how and why an online DII was perceived as successful by participants, the paper has contributed both practical and conceptual tools for enhancing engagement in such initiatives. Furthermore, the framework and approach elaborated in the paper could be re-deployed as a tool for both co-designing and evaluating DIIs with hard-to-reach communities.

The literature review highlighted how the pandemic served to amplify the experience and awareness of digital exclusions faced by women, particularly in rural areas of Zimbabwe (Chigevenga et al., 2020). Under these circumstances, the DII was designed to enhance the quality of communication and build digital competencies with the group of women. In evaluating the initiative, the research integrated a feminist approach to empowerment that distinguishes between four modalities of power: 'power-over', 'power-to', 'power-within', and 'power-with'. Our focus on evaluating the project in relation to subjective experiences and descriptions of empowerment allowed us to explore a range of different topics with participants, including emotions, relationships and desires. Follow-on activities and initiatives were then able to integrate these findings. Themes (e.g. connection, listening, self esteem) that emerged could also inform the design of other DIIs with similar groups. Better still, applying the evaluative framework to other DIIs would reveal different, context-specific themes that could support the collaborative planning of projects to maximise engagement and empowerment for participants. The "empowerment lens" makes it clear that processes of digital inclusion and social inclusion are codependent, and that processes of engagement in DIIs are central to the outcomes that can be accomplished.

Research found that the digital storycircle encouraged a sense of community and emotional connection to develop. This emotional aspect of the process proved to be a strong incentive for the women to participate in the DII and to continue to engage and interact well beyond the eight week programme. DS was effective, in that it rendered the learning process interesting and engaging for participants, motivating them to develop their digital skills. While the vast majority of DS literature addresses traditional, in-person workshops, this paper has described a process that was facilitated via WhatsApp, charting the opportunities afforded and the challenges involved. Using personal smartphone devices and a familiar social messaging app provided an enabling environment for empowerment processes and outcomes to be operationalised; WhatsApp allowed for us to co-create an interactive digital space for community-building, sharing multimedia content, and skills development. Based on our findings and heeding other recent research on remote methodologies (Bhanye et al., 2023; Marzi, 2021; Mateyisi, 2021; Patiño, 2018) we can infer that using WhatsApp for DS workshops has empowerment potential for other "hard to reach" groups, beyond the circumstances of the pandemic. Further research is required on the possibilities of more comprehensive low-cost apps that could also support the video editing aspect of the DS process, which – as it involved accessing external apps – caused most problems for participants in the case study.

Using WhatsApp enabled the project to reach 23 participants through this initiative, but there were many more who could not benefit from the opportunity due to social and digital access issues. Our results therefore only reflect women who already had at least intermittent access to the internet and a smartphone. More broadly, this leads us to acknowledge that the underlying problems of social inequality and

[5] After this DII and associated interviews, another women's workshop programme in partnership with two Zimbabwean organisations was convened, with some of the WAM participants taking part. An exhibition and podcast was co-created and shared with participants, which encouraged further reflective discussion on the topics. This ongoing work falls beyond the scope of analysis offered in this paper, but built on what was learned about empowering processes and outcomes.

[6] The podcast produced in 2023 (https://player.sheffield.ac.uk/events/womens-digital-storycircles), which weaves together voices of four women from a WhatsApp Women's Digital Storycircle, is undoubtedly more effective than this paper in terms of bringing participants' voices to bear on the issues and being accessible to a wider audience for greater impact.

digital access require further research and intervention at the policy level. It is important that issues of unequal opportunity and resources are addressed, so that those most marginalised by digital exclusions are able to access capacity-building opportunities and benefit from the empowering aspects of technology and DIIs in the future.

CRediT authorship contribution statement

Pamela Ellen Richardson: Writing – review & editing, Writing – original draft, Validation, Supervision, Resources, Project administration, Methodology, Conceptualization. **Sarah Wilson:** Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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