Creating stories for impact: Co-producing knowledge with young people through story mapping

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Abstract
This paper explores co-production of knowledge for impact with young people through the process of creating digital story maps, drawing on co-produced research from two projects: with homeless youth in African cities; and with youth refugees in Uganda and Jordan. It examines the process of creating three story maps with the intention of enabling young people to co-produce knowledge exchange and research impact. Participants were able to engage in the latter stages of research as part of research analysis, outcomes and outputs beyond the temporal and spatial confines of data collection. The story maps were therefore used not only to “bring life” to reports produced for stakeholders and funders, but also to take young people’s research stories beyond locally bound contexts to reach a variety of global audiences. The reflections in this paper also highlight that while the approach adopted was not without challenges, in all three story maps a knowledge exchange process was fostered that resulted in young people feeling they had been listened to; were able to contribute to debates that affect their own lives and to instil a desire to create change, influence policy and inform publics about their lives. The paper concludes that story mapping is a useful creative process for extending young people’s input into knowledge exchange and longer-term research impacts.

KEYWORDS
co-production, impact, knowledge exchange, story maps, young people

1 | INTRODUCTION

The production of knowledge for impact through research is a hotly debated topic within geography and particularly for those working with societal groups experiencing exclusion (see Holt et al., 2019). The discussion has moved beyond the need to involve participants more directly in research, to how they are involved and whether their voices are accurately represented in subsequent outputs and dissemination (Beebeejaun et al., 2015; Pain et al., 2011). This is especially the case for researchers working with young people, where representations of childhood and rights-based ethical dilemmas of protection versus participation can raise tensions around the nature of participation (Collins, 2017; Tisdall, 2017).
Indeed, the co-production of knowledge within children’s geographies and childhood studies more generally is embedded in the language of participation. Focusing on inclusivity and authenticity, enabling young people’s expert voices to be heard requires transcending the inequalities of power inherent to researcher–researched relationships. Research with young people is now framed within an ethos of co-production: researching with not on or for young people, the importance of learning from children and youth, hearing their voices and ideas and overcoming adult–youth power disparities (Ansell et al., 2014; Kellett et al., 2004).

However, the reification of young people’s “true voice” has been questioned and critiqued alongside the assumptions of autonomy, indicating that adult researchers still exert control in participatory research projects, shaping the inputs and outcomes (see Poretti, 2019). We sought to challenge such critiques by creating story maps for impact. Story maps are interactive web applications, using Esri ArcGIS StoryMaps software, that combine text, videos, sound, photographs and maps to enliven research findings and influence policy and public audiences beyond the academy. Additionally, the creation of digital content creates a basis for deep reflection by young people on the issues they are exploring and representing. In research using online story-mapping applications to illustrate refugee life stories, Caquard and Dimitrovas (2017) noted that story maps offer the possibility of illustrating multiple stories and creating maps collaboratively. Using and working with a variety of digital tools and formats can also stimulate young people’s creativity inspiring them to produce themes and narratives they want to share. This offers a variety of perspectives as young people need to bring together different media approaches to narrate their story line. This paper critically examines our attempt to go beyond co-produced research and enable space for youth involvement in meaningful and lasting impact beyond the academy, through the story-mapping process. This is important because story maps, as part of an expanded toolkit of participatory methodologies, enable young people to construct messages for global audiences that transcend space and time; offering new ways for geographers to facilitate youth-led knowledge exchange and impact.

2 | THE RESEARCH

This paper draws on two research projects sharing similar co-production philosophies. Both projects engaged youth living in contexts of poverty, displacement and crisis where their life experiences were difficult and prevented them realising their imagined futures. Growing up on the Streets worked with youth living on the streets in three African cities, while Youth Transitions in Protracted Crises worked with young refugees living in urban and camp settlements in Uganda and Jordan. These projects were designed to facilitate co-production of data and analysis across all stages of research and resulted in the application of novel story map methodologies for creating impact and influencing policy and practice.

Growing up on the Streets was a longitudinal participatory project seeking to understand experiences of homeless youth living in diverse settings. Primarily funded by Backstage Trust, a UK charity, it received additional knowledge exchange funding from the ESRC and the University of Dundee Stephen Fry Award for a story map. The research responded to calls for greater understanding of children’s experiences as they transition towards adulthood, and involved young people aged 15–24 in Accra (Ghana), Bukavu (Democratic Republic of Congo) and Harare (Zimbabwe) in data collection between 2012 and 2016. The research focused on young people’s capabilities on the streets and explored their lives as they battled issues such as health, shelter, food, work and livelihoods, violence and safety. Six (street-living) youth researchers worked with groups of their peers living on the streets in each of the three cities. The youth researchers received an allowance to cover travel costs and lost earnings while engaged in research activities. At the inception stage, young people participated in designing the research focus and undertook training over several months in preparation for their project roles and how to use their unique skills for undertaking research (van Blerk et al., 2015). The youth researchers were therefore embedded in research design, collecting data and undertaking analysis. Knowledge exchange took place in policy workshops, bringing youth researchers together with stakeholders from government and NGOs in each city and at a workshop for practitioners from across Africa, building active street citizenship (van Blerk et al., 2020). Two story maps were produced looking at life and capabilities on the streets of Accra, Ghana (Growing up on the Streets: A story map by Accra’s street youth, https://bit.ly/22W1fne), and the impacts of COVID-19 on youth in Harare, Zimbabwe (In the Shadow of a Pandemic, https://arcg.is/1o4WvH) (Growing up on the Streets, 2017, 2020).

Youth Transitions in Protracted Crises was a 12-month project in Jordan and Uganda with refugee youth living in urban and camp settlements. With funding from the UK Department for International Development, the project used youth-led participatory methods to gain insights into the experiences of young refugees, across a variety of contexts, transitioning to adulthood. Following researcher training, workshops were held to ensure their participation through critique and discussion of the project’s aims and objectives, and by defining the methods and areas for investigation. Youth
researchers received an allowance for their time engaged in research activities. The research explored the transition issues facing young refugees in relation to education, employment, marriage and family life through youth-led surveys and in-depth interviews. Co-led knowledge exchange workshops were also held in both countries with relevant stakeholders, with youth researchers engaging and leading their own sessions. The story map (Youth Transitions in Protracted Crises: A participatory research project with young refugees, https://bit.ly/3vC0MHA) formed part of knowledge exchange, and youth researchers supported a team of participants in designing and creating stories for inclusion (Youth Transitions in Protracted Crises, 2017).

3 | CO-PRODUCTION OF KNOWLEDGE FOR IMPACT?

In seeking to extend debates regarding co-produced research, we accept that while the participatory language used in research with young people can be value-laden and obscure less-than-participatory actions, the underlying aim is altruistic: seeking to empower young people through the research process for transformational impact in practice, policy and public attitudes (Pain et al., 2011). We also acknowledge the inadequacies of participatory approaches with young people and are mindful of the need to embed their involvement at all stages, including in designing research processes that enable participation, listening to young people throughout, and actioning their feedback. Therefore, we argue that participatory engagement is vital for highlighting young people’s capacities and expertise while creating opportunities for them to engage on an equal platform.

Tisdall (2017) notes the importance of going beyond participation through co-production to challenge issues of power that are often the basis of critiques in research with young people. Rather than focus on young people’s vulnerable situations (in this case homelessness and refugee status), researchers should seek to understand and highlight the structural constraints and contexts that impact young people when co-creating solutions. Facilitating participation through co-production can enable young people to co-create research and analysis and engage the voices of their peers (Wickenden & Kembhavi-Tam, 2014).

Often research findings are disseminated in ways that do not leave a lasting legacy nor enable impact to occur beyond the bounds of the academy or professional practice. Policy materials, high-level discussions with key stakeholders and academic publications can be co-produced with young people so they can become part of the impact legacy. This means creating engaged research that does more than meet short-term goals of current policy discourse, measured by impact agendas such as the UK Research Excellence Framework (Srinivasan & Kasturirangan, 2014). Further, some authors (e.g., Lancione, 2016) point out that this may still not evoke the emotive or public responses required for action and actual political change in approach or policy. Alternative approaches are required to enable equity for young people as co-producers of knowledge exchange and impact beyond the narrow confines of their local research contexts, spaces and temporalities for a longer-lasting, global (digital) impact.

Research processes designed to include a variety of potential contributors to the co-production of knowledge must also recognise the different forms of impact generated. At an individual level, knowledge co-production provides spaces for reflection, confidence building and strengthening efficacy for decision making and action. At a policy level, impact is achieved where the viewpoints and needs of young people are included to improve systems of protection and support. Where research leads to new information and understanding, it provides the basis for more inclusive and deliberative policy formation. Looking beyond the academy, the co-production of knowledge provides a broader frame and potential for impact on societal norms and behaviours (Mitlin et al., 2019).

It is well known that young people constitute a significant proportion of global populations, with the majority living in challenging contexts of poverty, in the global South. The African continent has the largest “youth bulge” with the 15–24-year-old age group expected to account for 30 per cent of the population by 2050 (UNDESA, 2020). Over half of refugee populations are under 18, and 13 per cent are aged 18–24 years (UNHCR, 2021), with young people constituting two-thirds of the refugee population (currently 79.5 million). Due to the increasingly protracted nature of global conflicts, with average periods of displacement exceeding 20 years, there are significant implications for young people’s futures. With poor prospects for adult life, many young people face economic difficulties, contextualised by situations of civil war, political tensions, environmental crises and protracted conditions of poverty (UNDESA, 2020; UNHCR, 2021). There is a continuing need to understand and respond to their realities. New tools are essential for facilitating the types of impact that they want in response to their experiences of social exclusion, duress and displacement (Staeheli & Hammett, 2013; Wickenden & Kembhavi-Tam, 2014).
Creative methodologies are emerging as novel pathways towards activism and impact. As Lancione (2016) notes through his ethnographic novel on homelessness in Turin, research may not always reach the audiences necessary for change to happen, and creative processes are essential to both reach a broader public and give something back to participants. Research activism through alternative knowledge production was also explored by Christensen (2012) through storytelling and participatory research, acknowledging the mismatch between participants' emotional stories and less emotive forms of academic dissemination. Dowling et al. (2018) note that creative methodologies can open knowledge production to the “more-than-rational”, responding to concerns by Turner (2016) that traditional qualitative data does not demonstrate the non-verbal and collective experiences of the situations they emerge from. The combining of stories into vignettes through amalgamations of qualitative findings can purposefully re-package words and actions into emotive stories, thereby enlivening the research. Going beyond what Dowling et al. (2018) indicate to be a reliance in autoethnography in such creative impact approaches, the participatory engagement in story mapping across our projects sought to counter this through young people's own compilation of story map vignettes.

In the remainder of the paper the story map methodologies are discussed, reflecting upon the aim of rectifying inequalities in the co-production of research impact. This is particularly important when working with young people, whose circumstances prevent access to spaces and platforms for voicing their opinions, explaining their realities and needs.

### 4 | STORY MAPPING

Prior to engaging participants in story mapping, young people trained in research were involved in data analysis. Given the scale of the data (a single focus group topic represented around 120,000 words), academic researchers used NVivo to qualitatively code thematic priorities as they emerged from the data. Themes were represented visually (many participants could not read or write), and then discussed and debated with youth researchers in analysis workshops, using strategies such as order ranking of issues, similar to concept mapping used with children (see Dare & Nowicki, 2019). However, this process felt unsatisfactory for the co-production philosophy we had worked hard to embed.

Story mapping was therefore employed and to some extent follows Turner's (2016) fictional vignettes where findings could be re-worked by young people in story creation beyond the specifics of the data, but as illustrative of the wider realities of growing up in their contexts. Although not completely resolving the issue of co-produced analysis, this did offer opportunity for co-produced impact. As Bediako states in the opening section of the story map: “This story map will improve the image of street children – we are not as bad as you think. We are living in harsh conditions, but we are just trying to make a living” (Growing up on the Streets, 2017). Christensen (2012) notes that their involvement in such story-creation can influence participants in the way they look at their lives and decision-making. For Bediako, creating content opened his eyes to how he could share experiences widely; in turn, our eyes are opened by the stories he and other participants created and shared. Therefore, in a similar way to Lancione's novel, story maps as web applications go beyond the academy and localised spaces of policy workshops to new spaces where young people might be seen and heard on a global stage.

#### 4.1 | Story-mapping process

Participants and youth researchers worked together to plan, create and write up their “stories”. This was about a single theme such as education, discrimination, work or shelter but also about wider experiences of being a refugee or living on the streets during a COVID-19 lockdown. After planning a map of the spatial, temporal and relational narrative they wished to illustrate, the participants could draw, write, record, photograph and video material to represent each story. The GIS-based story-mapping platform also facilitated the use of maps to locate places of importance in their lives.

The diverse forms of planning and representing stories meant that the findings could be collated from several participants to create vignettes that were also personal and reached to the heart of their experiences. Stories were biographical, but also collective: unique, but not attributed to any one individual, at the same time still using emotive experiences to construct lived realities.

Although the story map content was created entirely between youth researchers and participants, the creative process of story mapping was undertaken with the support of an experienced academic researcher. The creative process varied in each of the two projects due to the longer-term working relationships and knowledge of the youth researchers, both
in-person and online (latterly due to travel restrictions during the COVID-19 lockdowns). Each story map builds up the elements of the narrative into an integrated package through use of the Esri ArcGIS StoryMaps software by the core team researcher, who had received Esri training. From a producer perspective, Esri ArcGIS StoryMaps offer a variety of templates to illustrate and narrate a story, with access to geographical data (satellite imagery, maps) which can be incorporated as visual material. From an end-user perspective, the story maps are interactive interfaces, which users scroll through. The textual and visual content is ordered thematically and geographically, illustrating individual or collective stories. The maps are then available open access to exchange knowledge created by young people regarding their experiences.

Growing up on the Streets: A story map by Accra’s street youth (Growing up on the Streets, 2017) was created with street youth who were project researchers and participants. They were familiar with the “ten capabilities”, which represented the key aspects of street life and formed the framework for the research and story map. Participants identified the aspects of street life they wanted to feature for each section, using flipcharts and images, as many cannot read or write. Over four days on the streets they recorded short videos, interviewed their peers, filmed them at work, and took hundreds of photographs. They returned each evening and provided context for the text of the story map to the researcher (Hunter).

Youth Transitions in Protracted Crises: A participatory research project with young refugees (a story map) (Youth Transitions in Protracted Crises, 2017) was created with refugee youth in camp and urban settings in Uganda and Jordan. It examined the impacts of displacement, barriers and challenges of transitions to adulthood, focusing on specific examples expressed by refugees in their own voices. The researcher (Prazeres) worked with groups of refugee youth to create storyboards visually and textually depicting their stories; unlike the Accra street youth, many of the refugees were educated and therefore the adopted approach reflected this. The finished story map uses some of these storyboard illustrations to depict stories of displacement and violence, alongside photographs and videos of refugees’ everyday life.

In In the Shadow of a Pandemic: Harare’s Street Youth Experience COVID-19 (A story map) (Growing up on the Streets, 2020), the context of COVID-19 provided a means to show the lives and coping strategies of street youth under lockdown conditions. Through the story map, young people were able to reveal and reflect upon their struggles to survive as the public health response to the pandemic cut off their livelihoods and limited their movement around the city. As restrictions on movement were implemented, the content and methods of data collection were altered. The Harare project partner collaborated with six street youth who became filmmakers and data collectors. The co-production process became multi-layered with exchanges between the Harare participants and project partner, and then also with the researcher (Hunter) through the sharing of data and context via email, YouTube and WhatsApp to create the story map (for more details on this story-mapping process, see Hunter et al., 2020).

While the contexts, methods, participants and focus varied, the experiences of the participants co-producing the story maps, as shared with researchers or project partner, were positive. The process helped them to develop and apply skills and provided a space to consider and compare experiences with their peers. As Bediako implies, story maps humanise their participants. Similarly, Harare participants described this as the ability to tell their story directly to the viewer (Hunter et al., 2020).

5 | BENEFITS FOR YOUTH-LED IMPACT

Dickinson and Telford (2020) articulate that digital story mapping produces multiple visualities through engagement with qualitative data, stimulating different kinds of reflection among viewers. Our story maps were not only used to “bring life” to reports produced for stakeholders and funders not necessarily present in national workshops where youth researchers played a key role, but also to take young people’s research stories beyond the confines of their localities. Story maps offer educational and informative insights into young people’s lives, enhancing public engagement with key policy issues, as well as influencing professional practice and policy-making through representation of the complex issues in their daily lives. While there is no consistent data on the reach of the story maps, each produced additional impactful knowledge exchange opportunities. For example, the maps were shown in UK workshops with stakeholders including NGOs and donors working beyond the specific countries in which the research was carried out, enabling the voices and images of young people to reach into these spaces. An article on In the Shadow of a Pandemic in The Conversation UK (van Blerk et al., 2020) led to a further commissioning of an academic article on the educational value of the story map process in Environment and Urbanisation (Hunter et al., 2020); a photo taken by street youth was used for the front cover; and a podcast exploring the issues of COVID-19 for street youth
in Zimbabwe during lockdown for Pasha88, part of The Conversation Africa. This story map was featured in three international blogs and has been shared with the Consortium for Street Children’s global network of over 150 street work organisations.

From an educational perspective, the story maps on refugees in Jordan and Uganda and the Accra street youth have been used as resources in several undergraduate and postgraduate courses and by partnership NGOs for sharing with organisations globally, including HAQQI, a key site for information on Jordanian issues and human rights. At an international policy level, the Youth Transitions in Protracted Crises story map is hosted on the UK Government Research for Development website and was also picked up by UNICEF and the Norwegian Refugee Council for inclusion in the IASC (Inter-Agency Standing Committee) Guidelines of theCompact for Young People in Humanitarian Crises (IASC, 2020) as a case study on inclusive practice.

However, story mapping is a particular way of constructing reality, like any other form of knowledge exchange (Christensen, 2012), and in many of these additional impacts, it is the core research teams who have collated the written content. There are therefore also learnings from the process that speak to the challenges of youth-led impact beyond the local scale.

6 | LEARNINGS FOR YOUTH-LED IMPACT

The research was successful in terms of partnership working, its co-produced format, and the quality of the data and engagement processes. Yet four aspects are worthy of reflection.

6.1 | Process of co-production

The inputs for co-production should flow from a process of negotiation that takes account of the context and abilities of diverse participants to contribute. For the Youth Transitions in Protracted Crises story map, exploratory youth researcher training involved trialling and creating their own storyboards before inviting participants with diverse stories to map aspects of their own transition journeys. Contributors to the story map by Accra’s street youth used visual prompts and discussion around an established framework of capabilities and collaborated to visually represent these in chapters. Similarly, in Harare, participants making In the Shadow of a Pandemic discussed collective experiences of lockdown as the overarching theme. All forms of participation are valid but have subtle methodological differences depending on context and skills of participants (see Mistry & Berardi, 2012). This diversity highlights a vital learning point of ensuring co-production is flexible but remains a central focus.

6.2 | Emotions

Discussing distressing issues was likely given the research topics, so consideration was given to emotion. Local partners trained youth researchers to prepare through practising listening skills, talking about their own experiences and providing support to overcome emotional distress. Youth researchers making the Youth Transitions in Protracted Crises story map gave detailed descriptions sharing emotive experiences, particularly when drawing storyboards (see Kearney & Hyle, 2004). Yet, youth researchers confirmed that participation was a helpful, cathartic process. They related to participants’ stories and the empathetic way they conducted activities reassured participants and created an atmosphere of the story maps as meaningful.

6.3 | Ethics

Given the online nature of outputs and the precarity in which many youth lived, best practice for ethical working with young people experiencing vulnerable living situations was followed (see Dickens & Butcher, 2016). The story maps had to be crafted to ensure that no individuals could be linked to their story through map points, photography or video, while still enabling young people to share their stories globally with policy-makers, practitioners and publics. Care was taken in terms of the data young people collected and editing during the final production stage.
6.4 | Access challenges

Using Esri ArcGIS StoryMaps software and the need for site licences meant co-production principles could not be integrated into the creation of the online product. This raises issues for researchers wishing to engage in co-produced research using geospatial tools in academic institutions (see Davidson, 2017). During production of the first story map, we discussed the possibility of involving Accra youth researchers in final production. One youth researcher was technically gifted, but lack of access to facilities, software and reliable internet connections in Accra made this option unworkable. Co-production therefore involved design, analysis and creative data collection, rather than technical production. However, more time and access to site licences in each country, supported by technology training, would render young people's involvement possible.

7 | CONCLUSION

Our reflections on the process of making story maps with youth researchers suggest that story mapping is a valuable creative process for extending young people's input into knowledge exchange and longer-term research impact. It provides opportunities for young people's analysis of their stories to go beyond locally bound contexts and reach various global audiences. Co-produced story mapping also allows ideas to emerge as the process is tailored to individual or group needs and the important messages emerging from research for them. Our reflections also highlight that while the approach was not without challenges, in all three story maps a knowledge exchange process was fostered that resulted in young people feeling they had been listened to, were able to contribute to debates that affect their lives and to instil a desire to create change, influence policy and inform publics. Feedback from participants was positive about both personal impacts of story mapping in terms of the immediate enjoyment in collecting data and the empowerment they felt to share their stories to audiences unknown to them. For our own academic practice, it has shifted our approach to consider legacy impacts as a primary concern when thinking about future plans for projects or participatory research opportunities. Such an approach can mitigate criticisms of current impact agendas, often centred on short-term policy discourse (Srinivasan & Kasturirangan, 2014).

Reflecting on three story maps highlights the need to be mindful of ethical challenges of co-production and the balance of power between academics and young people throughout story map inception and creation, to publication and dissemination. At various stages, the power shifted dynamically between young people and researchers, with young people having full control at points, such as data collection, with more technical aspects led by academic researchers. Ethical implications of co-producing impact should be considered, and efforts made to overcome this flux in power dynamics.

However, a greater challenge is ensuring young people remain connected to the impact of their work. The nature of medium- to long-term impact means that project leads, not participants, have the power to propagate and document uptake. Responsibility then rests with academics and practitioners to ensure young people know the ripple effects of their work as it occurs. This raises questions about the relationships between academics, partners and youth researchers. Growing up on the Streets as a longitudinal project means that strong relationships developed, and academics remain in touch with youth researchers. This is not always possible for shorter projects so local partners can become instrumental in keeping youth researchers informed. Maintaining relationships in this way can support the impact not just through knowledge exchange, but also in the lives of young people themselves. In conclusion, story maps provided excellent opportunities to meaningfully involve young people in analysis, knowledge exchange and impact beyond the temporal and spatial limits of research projects.

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DATA AVAILABILITY STATEMENT
The data from the Youth Transitions in Protracted Crises project that support the findings of this study are available from the corresponding author upon reasonable request. The data from the Growing up on the Streets project are openly available in ReShare at https://reshare.ukdataservice.ac.uk/854123/

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