



Digital Technologies Use in Development Programme Design, Delivery and M&E in Fragile and Conflict-Affected Setting

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Question

How are digital technologies used to support development programme design, delivery and M&E in Fragile and Conflict Affected States (FCAS)? What positive and negative effects have been observed?

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1. Summary

This report covers the use of digital technologies for programmes and for M&E in FCAS. It shows how digital technologies have a wide range of potential uses in both peacebuilding programmes and in the reconstruction of postconflict states. These uses should be informed by key principles such as DFID's endorsement of the Principles for Digital Development, a commitment to understanding the digital context and a consideration of the privacy and security of the data of people caught up in conflict.

However, a review of the literature shows that there is little best practice yet for evaluating the effect of technology tools on peacebuilding. In terms of M&E, the literature consistently highlights the problems caused by lack of data in FCAS but there are also significant challenges in collecting and storing data in line with the goals of the Responsible Data movement. There are significant risks posed by humanitarian and development actors using data-intensive approaches without due consideration of the risks to beneficiaries that these approaches might involve.

2. Overall Approach

The overall approach to the incorporation of digital technologies for programmes in FCAS should be underpinned by key policy frameworks. These include DFID's own digital strategy, which shows both the Department's commitment to mainstreaming digital in the way it delivers, monitors and evaluates aid and development work, and also their role as a world leader in setting standards for others to follow in digital development practices (The Department for International Development 2018). DFID's endorsement of the Principles for Digital Development (Department for International Development 2015) is part of this process of standard setting. The Principles state, amongst other things, a commitment to understand the existing context and ecosystem – taking account of gender norms, political environment, economy, technology infrastructure structures and needs that exist in each country, region and community. The Principles also emphasise the importance of addressing privacy and security issues, as well as the need for user-centred design and co-creation. These three principles: of understanding the context, of the primacy of digital privacy and security and of user-centred design, underpin this paper. The urgency of considering the privacy and security of the data of people caught up in conflict is also particularly important when one considers the role of information in modern conflicts, as reflected in the work of Berman *et al.* (2018) which sees information asymmetry – the knowledge citizens possess about insurgent activities – as the key factor determining which side has the upper hand in an asymmetric conflict.

Other principles which are vital to incorporate are the Whole of Society approach: which sees that peacebuilding and conflict-prevention processes should be inclusive of a wide range of actors. In her work on ICTs and peacebuilding through a whole of society approach, Gaskell stresses both the normative and operational aspects of this approach and shows how digital technologies offer both the “*the opportunity to bridge the gap between grassroots/community and political processes; and the challenge of undertaking coherent implementation at the political and grassroots levels*” (2016: 13).

3. Development Programme Design and Delivery

Operationalising programme design can be understood from two angles: peacebuilding technologies and technology for post-conflict reconstruction. But first, we can see from the literature the importance of adapting to the particular context. In their work on 'New Technology and the Prevention of Violence and Conflict', Mancini and Riley demonstrate the need for different approaches in different contexts depending on political stability and information flows; *"the types of technology that link civil, governmental, and regional early-warning efforts in a relatively stable setting, such as Kenya, may have limited impact in an environment where governments act precisely to restrict such information flows, as happened in Kyrgyzstan"* (2013). The authors recommend that governments should make needs assessments and feasibility studies standard practice to prevent the supply of technology from outstripping the demand. They show the importance of complementing technological 'fixes' with offline strategies; *"when trying to integrate operational prevention (targeting a crisis at hand) and structural prevention (addressing root causes of conflict), new technologies should be accompanied by more traditional tools, such as preventive diplomacy, governance reforms, and economic initiatives"*.

3.1 Understanding the digital context

Given Mancini and Riley's emphasis on the need to understand the context, understanding the particular *digital* context in which a development intervention is taking place is vital. This means understanding patterns of connectivity in different regions and demographic groups, as well as the overall state of the free flow of information online in a particular context.

Indicators that are valuable for these purposes include those for global internet statistics from the ITU (International Telecommunication Union 2018) and mobile connectivity statistics from the GSMA (2019). When examining these indicators, it is important to understand who is, and is not connected. DFID research on Leaving No-One Behind in a Digital World (Hernandez and Roberts 2018) shows how new digital divides are leading to new exclusions which often reflect, reproduce and amplify gender, racial and caste/class divides: leaving the digitally disadvantaged to experience widening inequalities. The paper suggests that *'Development professionals require new diagnostic tools to analyse the digital access and everyday technology practices of those being left behind in their area of work'*. An example of this is the use of social media data for peacebuilding and conflict analysis; whilst social media data can reveal aspects of violent events that cannot be captured by traditional media (Roberts and Marchais 2018), use of this data risks excluding the voices of the digitally left behind since social media are not used by all classes and generations alike. Tellidis and Kapler warn of the risks of social media data as well as the built-in data biases of information databases and collection services which *'tend to be run and designed by expert-organisations'* (2016). Asymmetries in access to, and use of technologies impact on the approaches suggested by Berman *et al.* (2018) in the information-centric approach proposed in *'Small Wars, Big Data'*. They recommend the expansion of mobile phone coverage as a means to reduce insurgent violence – which they suggest makes it easier for citizens to inform. However, entrenched structural inequalities mean that issues such as gender norms are likely to limit access to technology, even when mobile phone coverage is made more generally available to the broader community (Hernandez and Roberts 2018).

Another significant dimension of the digital context is freedom of expression online which inevitably impacts on the free flow of information between governments and citizens. As governments worldwide increasingly use internet shut downs to suppress online debate at times

of conflict – with 188 shut downs recorded in 2018 (Access Now 2019) – issues of internet openness are becoming more important. Frameworks such as ‘Internet Universality’ provided by UNESCO (Souter and Van de Spuy 2019) cover issues such as internet rights and openness, cross-cutting indicators to address gender equality and the needs of children and young people, economic dimensions, trust and security, as well as legal and ethical aspects of the internet

3.2 Technology in peacebuilding

In recent years, interest has grown in the role that technology might play in peacebuilding. A report on peacebuilding in Syria by the British Council and Build Up outlined three functions technology might play (2016):

1. Peacebuilding initiatives: data (aggregation, gathering, analysis, visualisation);
2. Communication (more voices, alternative narratives, sharing information);
3. Networking and mobilisation (alternative spaces, engagement towards collective action).

Technology for peacebuilding or ‘peacetechnology’ is defined as *“an emerging body of peacebuilding practice which includes a technological component that is of strategic importance to its objective(s)”* (British Council/Build Up 2016: 2). In the Syrian context the authors outline three areas where there is extensive local capacity that could be supported with peacetechnology initiatives:

1. Local and smaller scale media initiatives that could benefit from strategic communications support;
2. Creative / artistic initiatives that could benefit from access to technology tools and processes;
3. Supporting local actors who want to learn other technology tools and processes to support their work.

The Whole of Society approach informs the approach to peacetechnology; *“This is also emphasised by the processes that are recommended to implement ‘peacetechnology’ initiatives: participatory, user-centred design, local ownership and sustainability, through infrastructure or by fostering local innovation, conflict sensitivity (doing no harm) and learning and adaptation from other contexts”* (Gaskell 2016).

The ‘affordances’ of technology can be used for both positive and negative purposes in peacebuilding; put simply, technology can be used for or against peace. Four affordances of technology have generally been used in peacebuilding contexts: data, communication, networking and mobilisation. This communicative affordance can be both positive and negative: *“...technologies used to spread messages of peace in volatile environments can also be used to spread inflammatory rumours. In order to have meaningful impact when introduced through external support, ICTs need to be both appropriate and sustainable in a given context.”* (Gaskell et al. 2015: 3). Tellidis and Kappler warn of how technology can reinforce existing imbalances but can also mobilise grassroots actors. They provide examples where this mobilisation has affected balances of power; showing how technology can *“decentralise and re-circulate the input of liberal peacebuilding (hegemonic power, or tendencies towards) with a different output (mobilisation towards more inclusionary peace)”*. They cite the examples of *“Kenya’s preventive violence network (Jorgic, 2013), Uganda’s election monitoring (Hellström and Karefelt, 2012), Sudan’s low*

tech adaptations for community communications (Puig Larrauri, 2013a), Cyprus' civil society empowerment (UNDP, 2008)" (2016: 9).

Given how new the field is, it is unsurprising that there is, to date, little work looking at the overall impact of peacetech projects. What is more, the British Council/Build Up report warns that there is no best practice yet for evaluating the effect of technology tools on peacebuilding (British Council/Build Up 2016).

3.3 Case studies of technology visual documentation for peacebuilding and accountability

Two case studies of innovative approaches to visual documentation show the potential of new technologies to generate new insights and mechanisms for accountability and peacebuilding.

Case studies; The Syrian Archive and The Security Force Monitor

User-generated videos depicting first-hand accounts from the war in Syria were vanishing from the internet by the thousands. **The Syrian Archive** (<https://syrianarchive.org/en>) develops new open source tools as well as providing a transparent and replicable methodology for collecting, preserving, verifying and investigating visual documentation in conflict areas. Visual documentation of human rights violations that is transparent, detailed, and reliable are critical towards providing accountability and can positively contribute to post-conflict reconstruction and stability. Such documentation can humanise victims, reduce the space for dispute over numbers killed, help societies understand the true human costs of war, and support truth and reconciliation efforts.

The Security Force Monitor (<https://securityforcemonitor.org/about/>) works to make police, military and other security forces around the world more transparent and accountable. There is a vast amount of public information on security forces around the world, but it is unstructured and scattered among a wide variety of sources, making it prohibitively costly for those engaged in public interest work to understand the security forces of a particular country. The Security Force Monitor aims to solve this problem and aid those working to make police, military and other security forces accountable

3.4 Post-conflict reconstruction

In the field of inclusive, post-conflict peacebuilding and statebuilding, Tellidis and Kapler warn of the danger that governments and international agencies will use digital technology merely as a promotional tool: "*...if they try to promote pre-determined understandings of peace and are operated in a top-down manner, they will most likely fail, backfire or even become dangerous for the populations they attempt to support*" (2016). A World Bank study from 2014 explored the 'The role of information and communication technologies in postconflict reconstruction' (Souter and Kelly 2014) and outlined four key areas where technology might contribute:

1. Stabilisation: coordinating government departments and other agencies involved in peacemaking and planning for the future

2. Infrastructure: But communications infrastructure on its own is not enough. Communications networks need complementary infrastructure, especially electric power.
3. Reconciliation, media and public engagement: Rebuilding public engagement in politics and national development.
4. Public engagement: Widen access to such public fora can help promote diversity of voice, and protect anonymity.

In a blog post from 2017, one of the reports' authors reflects on the importance of adapting to different contexts and the importance of avoiding 'one size fits all' approaches; "*What worked in Liberia or Bosnia fifteen or twenty years ago won't necessarily (or even probably) work in South Sudan or Syria tomorrow – though looking at past experience may well be useful, particularly concerning how displaced communities learnt to gain confidence from one another in returning to their former lives*" (Souter 2017).

4. Unique risks from digital technologies in conflict and humanitarian settings

The sheer amount of data being collected on beneficiaries of humanitarian assistance has led to what has been described as a 'dataholic' environment in the sector: with an urgent need to increase understanding of how these data-intensive systems and the use of technology is affecting individuals and communities (Pirlot de Corbion 2019).

The risks posed by manipulation of ordinary citizens' social media data were highlighted by the involvement of the firm Cambridge Analytica aiming to skew the results of the Kenyan election (Madowo 2018). Earlier this year there was widespread concern at the proposed partnership between the CIA-linked software firm Palantir with the UN's World Food Programme (WFP) (Parker 2019) which led to an open letter accusing the WFP of 'Undermining the humanitarian principles' and of a lack of transparency and accountability (Responsible Data Community 2019). A recent article in Nature demonstrated the very real risks of 'data for good' programmes in conflict settings; satellite images of a new road in Sudan that could be used to transport tanks and weapons were posted online; two days later, a Sudanese rebel group ambushed a construction crew near an intersection in one of the photos, and took 29 people hostage. The article reflects on the use of mobile phone data for humanitarian purposes; showing how 95% of 1.5 million callers in an anonymised mobile-phone data set can be identified with just four data points per person (Maxmen 2019).

The overall challenges faced by the development and humanitarian sector in "Doing no harm" in the digital age were summarised by Privacy International.

Privacy International: Doing no harm in the digital age

Weak problem analysis: In a 'dataholic' environment there are internal and external drivers pushing the development and humanitarian sectors to adopt data-intensive, tech solutions without a clear understanding of the problem they are attempting to solve;

Unpreparedness in the sector: The awareness of the need to protect an individual and their information/identity has been a core element of development and humanitarian programmes since their inception, and yet few realise what this means in a digital age. This poor knowledge means that whatever assessments are currently undertaken, if at all, are insufficient to understand the consequences of the solutions proposed, and therefore fail to flag the negative consequences which must be offset and the risks which should be considered;

Increasing number of intermediaries: As they are not building the devices, networks and software on which they are becoming increasingly reliant, humanitarian and development actors have to engage with an increasing number of intermediaries, primarily from the private sector. This means that they are subject to the business models of these companies and have little or no control over the data they process;

Lack of transparency of the surveillance ecosystem: There continues to be little or no transparency of the surveillance ecosystem in the countries in which development and humanitarian programmes are being deployed. (Privacy International 2019)

The risks incurred by the introduction of new biometric technologies led OXFAM to declare a moratorium on the use of these technologies. Yet a report on the issues (Rahman, Verhaert and Nyst 2018) shows how there is increased pressure by international donors to integrate biometrics into aid delivery.

4.1 Responsible data and ‘do no harm’

The challenges caused by the increased volume of data gathered on the beneficiaries of humanitarian and development assistance, have met with a robust response from civil society organisations and some donors who have mobilised to support the principles of ‘responsible data’: which is “*a concept outlining our collective duty to prioritise and respond to the ethical, legal, social and privacy-related challenges that come from using data in new and different ways in advocacy and social change*” (‘What is Responsible Data?’ n.d.). Key donors and stakeholders such as the International Committee of the Red Cross (‘Responsible Data - Data Playbook (Beta)’ 2019) and USAID (USAID 2019) have released their own guidance and advice. A recent blog on the topic called for donors to put increased efforts into gaining a nuanced and localised understanding of people’s relations to data (Raftree 2019).

5. M&E in Fragile and Conflict-Affected States (FCAS)

It can be seen from the discussion above on responsible data that collecting data in conflict settings poses particular challenges. The literature consistently highlights the problems caused by lack of data in FCAS. Data is key for decision-making; lack of baseline data makes it difficult to track progress and identify changes (Idris 2019). A report on ‘ICTs for Monitoring & Evaluation of Peacebuilding Programmes’ (Corlazzoli and White 2014) found that ‘*the sector struggles on*

how best to overcome key conceptual and practical challenges'. The report highlighted the tension between the need to identify, collect, and process key data to inform immediate decision making, whilst responding to complex and entrenched issues. The report outlines a series of questions to ask before introducing technology to an M&E system.

Introducing a new technology to a monitoring and evaluation system: questions to ask

- Will the new technology/technologies that I have chosen help or hinder the data collection process?
- Is the new technology that I am applying culturally and contextually appropriate?
- Are the necessary infrastructure systems in place in the implementation area to support the new technologies?
- Will the new technology cause harm to staff, data-sources, or the overall contextual situation?
- Will the time and resources needed to create or adapt the new technology and learn how to implement it outweigh other benefits?
- Does the staff have the professional capacity or technological literacy to apply the new technology? If not, are additional resources required? Have these been included in the programme budget?
- Will the new technology introduce bias? If so, how can bias be reduced or tested for?
- What training and technological considerations are required to ensure the safety and security of staff, data-source, and data in the short and long term?
- Will the technology help make monitoring and evaluation processes more efficient? Will it enable better sharing of results with all key stakeholders, including programme participants? Will it enable for quicker evidence-based decisions? (Corlazzoli and White 2014: 10)

A similar approach is taken by Scharbatke-Church and Patel in their guide to 'Technology for Evaluation in Fragile and Conflict Affected States' (2016). They offer a five-point decision filter for evaluators using technology in their work.

1. Does the evaluation scenario meet the preconditions necessary for using any form of technology?
2. Is technology the right fit for the evaluation context?
3. Will using technology in the evaluation do harm?
4. What is the existing organizational technology?
5. Do the practicalities of the evaluation allow for using technology?

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