New technologies in monitoring and evaluation: can we push the boundaries?

Are we proponents or opponents of ICTs in M&E? When drafting this introduction I asked several INTRAC colleagues to jot down their thoughts. An interesting array of points came back, and when coupled with what emerges from the following articles, I draw out the following:

On the plus side we like the efficiency gains, better quality in the collection of quantitative data and mapping, the potential for stronger oversight and management, and that we can even reduce fraudulent completion of questionnaires because you can really tell when the enumerator is actually in the village they are supposed to be in. We also like the fun side of technology.

On the down side, nothing is more frustrating than when technology breaks down, weak IT security systems and staff capabilities affect the data, we end up tied to particular providers or software, or we end up reducing the data to meaningless numbers. If context is not well understood, nuance not recorded, or personal reflection not incorporated, then we lose a depth of comprehension that for years we have been developing through participatory, qualitative tools.

Most importantly – and obviously – technology is no good without human thought behind it. If the design of the M&E system or the questionnaire is weak in the first place, if it is poorly tested, or if the software design or training is rushed, then the technology will not be helpful. But my experience is that the prospect of using ICT to design surveys and reports can force more care...
and attention in the design process, reflection on what you really want to collect, how and why. If you can’t change the questionnaire as you go along, you might put more effort into getting it right in the first place. It seems a bit feeble to conclude that ICTs are great in some contexts, but not in others. So how can we provoke reflection as you read through these articles? I hope that they provide some food for thought about things to think about when taking the technology plunge. But they also bring out the possibilities for using ICT for voice, participation, accountability, and democratising the M&E process. And that is where I think we should be pushing the boundaries. The challenge to our sector is to push the technology further. The value seems pretty well proven (barring not insignificant hiccups) on the quantitative side. Now it is time to push the boundaries of what is feasible (and exciting) on the qualitative side.

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For many civil society organisations, the collection of meaningful data has become essential not just to achieve positive outcomes at the level of individual projects, but also to compete effectively in an increasingly crowded aid sector. This is why monitoring and evaluation (M&E) is gaining momentum within this sector, and programme implementers are coming under increasing pressure to generate baseline, mid-line and end-line data. Collecting meaningful and timely data is easier said than done. Historically, the collection of programmatic data has involved paper-based questionnaires and inputting data into an information management system. More recently, various actors have been looking to information and communication technology (ICT) to increase the efficiency, speed and accuracy of data collection, storage and analysis.

In Real World Evaluation, the authors make the point that one of the challenges which bedevils the field of M&E relates to data quality: “Evaluators often face constraints in the real world of practice resulting from the limited availability and accuracy of critical data” (Bamberger, Rugh, and Mabry 2012, 77). Every civil society actor can empathise with this. There have been moments in my professional career when the availability of the right data at the right time would have greatly improved my decision-making capabilities. This is one of the reasons Concern Worldwide decided a few years ago to explore the possibility of using ICT in its M&E practice.

The specific ICT tool that has been used is Digital Data Gathering (DDG). This refers to a plethora of electronic handheld devices such as smartphones and data pens that are used to record data in the field and transfer information back to a server. Whilst ICT tools such as DDG do not necessarily provide a silver bullet for addressing all real-world M&E challenges, I believe that real-time M&E is made possible by the impact of ICTs on data collection, storage and analysis. This belief is based on the following observations:

**Instantaneous data access**

ICTs can greatly reduce the time between survey completion and the availability of data to project implementers. With manual data entry of paper survey results, it can often take a minimum of four weeks from the actual survey to the delivery of a full and clean data set to the project team. Having access to accurate data in real-time accelerates evidence-based decision making.

When you use ICT devices, the physical computation of data is removed. This speeds up the process greatly and also removes one of the most error-prone stages. However, using ICT for M&E does not exempt us from following good practice when it comes to M&E survey design.

**Centralised information management**

The utilisation of ICT tools in monitoring and evaluation practice can facilitate the development of centralised information management systems. This is made possible by the fact that a uniform solution built within a required format ensures conformity in how data is approved or rejected, analysed and formatted, and thereby provides data integrity.

A centralised information management system ensures that project staff can readily access information through ‘cloud-based’ databases rather than having to trawl through stacks of paper surveys. There are clear efficiency gains to be made here.

**Improved decision making**

Often, because of time constraints, project staff lack good data on which to make the point that one of the challenges which bedevils the field of M&E relates to data quality: “Evaluators often face constraints in the real world of practice resulting from the limited availability and accuracy of critical data” (Bamberger, Rugh, and Mabry 2012, 77). Every civil society actor can empathise with this. There have been moments in my professional career when the availability of the right data at the right time would have greatly improved my decision-making capabilities. This is one of the reasons Concern Worldwide decided a few years ago to explore the possibility of using ICT in its M&E practice.

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**Improved decision making**

Often, because of time constraints, project staff lack good data on which to
base their analysis. With the advance of ICT tools it is now possible to collect large data sets in a remarkably short time. For example, it took six days to collect baseline data from 493 households for our Food, Income and Governance Programme in Tanzania. This type of practice ensures that evaluations and routine monitoring decisions are driven by timely and accurate data.

**Better designed interventions**

Effective systems providing timely and accurate information are particularly critical for emergency response and humanitarian operations, where inaccurate information can have catastrophic consequences. These systems are essential for the entire humanitarian process – from early warning and preparedness, to emergency response and recovery activities. In the case of humanitarian catastrophes such as the Haiti earthquake, having access to real-time information often means the difference between life and death.

In conclusion, perhaps the primary motivation of ICT enthusiasts is their appreciation of the potential of ICT innovation to contribute to the improvement of the human condition through, for example, improved M&E practice. However, civil society actors must not remain blind to the perils of widely held deterministic and utopian expectations that ICT, by virtue of its technical properties, holds the key to development effectiveness. Having said this, the benefits that ICTs bring to the field of M&E clearly illustrate that ICT tools are essential to making real-time M&E a reality.

**References**


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Practical challenges and advantages of using digital devices for survey work

Over the last decade, Target Research, a Zimbabwe-based research organisation, has explored the use of Personal Digital Assistants (PDAs) — handheld digital devices — on a number of occasions to collect survey data. Up until two years ago, network coverage in Zimbabwe was poor, limiting the scope for electronic transmission of data from the field, especially from rural areas where much of our work has been concentrated.

We recently conducted a research study covering twenty locations in Zimbabwe, and had to make use of Digital Data Gathering in order to meet a tight deadline for completion of the research. Data collection was carried out using tablets, which captured data in offline mode and subsequently uploaded them to a server in Harare when connectivity was available. The data were then exported into statistical analysis software for further processing. Our experiences revealed the following benefits and challenges:

**Administrating the interview**

Enumerators found it less cumbersome to carry around a tablet instead of multiple copies of questionnaires. Using lightweight tablets or PDAs also allowed data to be collected while standing or sitting in less than comfortable circumstances, as is often the case in interviewing situations. As a result, researchers managed to establish and maintain a rapport with respondents more easily when digital devices, rather than paper questionnaires, were used.

**Data integrity**

Digital Data Gathering reduces the scope for data entry error, in part because it requires enumerators to adhere to the envisaged questionnaire and response structure, including any skip instructions. Moreover, errors can be corrected electronically rather than crossed out on paper, a common source of error with traditional questionnaires. On the other hand, turning back to an error and correcting an earlier answer on a paper questionnaire is easier compared to tablets, for example when respondents have changed their mind. Once uploaded and sent, data cannot be retrieved on the tablet, making it difficult to correct errors.

The rapid transmission of data from the field allows for early analysis and identification of problems at head office level, facilitating timely feedback to researchers in the field. Supervisors on the other hand face greater difficulty in checking enumerators’ work when Digital Data Gathering devices are used, without disrupting the enumerators’ work.

**Data security**

Based on our recent experience, 5-10% of tablets malfunctioned in the field during the course of any one project, and in some cases, data had to be retrieved at the expense of timely data analysis.

In politically sensitive environments, research of any nature may be disrupted by authorities and others, and the use of electronic devices tends to attract more attention and arouse more suspicion than does the use of paper questionnaires. Enumerators are more likely to be accused of being journalists when they use electronic recording; this is especially true because interrogators are usually unable to access and peruse the information on tablets whereas they are able to easily scrutinise paper.

We have had tablets and paper questionnaires confiscated (permanently or temporarily) on occasions. In such instances, when data is regularly transmitted from the field using digital devices, there is less chance of data loss than with paper-based questionnaires representing several days’ or weeks’ worth of work.

**Savings – time and cost**

There are obvious savings on time and costs through having data captured electronically by enumerators compared to engaging a cadre of data entry clerks, as well as savings on costs incurred by printing and delivering questionnaires from the field to a central location. In the Zimbabwean context, when surveying a sample of 5,000 people using a 25-page questionnaire, savings amount to roughly US$10,000.

Based on our team’s experience to date, we favour the use of digital data collection for large quantitative surveys with mainly closed questions. Though video and audio recording facilities can be used to record in-depth qualitative data for later, our experience to date indicates that less detail is typically recorded by enumerators where open-ended questions are incorporated into questionnaires designed for digital data collection, compared to paper-based ones.

It is critical that sufficient time be given to test the questionnaires using the software. Rushed development of the survey software and insufficient time to pilot it and iron out bugs can nullify the aforementioned gains. The same is true with regard to training the teams. Sufficient time should be built into the training to ensure all members of the research team are well versed in and have practised using the tablets.

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Participatory video for M&E: supporting bottom-up learning

In development work, it is not always easy to gauge and communicate what significance a programme has had in the lives of beneficiaries. Those best positioned to explore and convey messages about changes that have resulted from an intervention are the beneficiaries themselves – they speak first-hand about impacts and outcomes.

Participatory Video offers a way of strengthening participatory monitoring and evaluation processes and project delivery, through a set of facilitated techniques involving a group or community in creating and shaping their own video. The method values local knowledge, and aims to build bridges between communities and decision-makers, and enable people to develop greater control over the decisions affecting their lives. By adding to other M&E tools through the provision of rich qualitative information and opportunities for community mobilisation and advocacy, Participatory Video yields considerable return on investment.

In a recent end-of-programme evaluation, we supported Mercy Corps in Kenya in using Participatory Video combined with the Most Significant Change technique to engage community participants and other stakeholders in a conversation about their research programme on financial literacy, which aspired to build saving, borrowing, spending and investment skills of randomly selected youth groups.

The participatory video evaluation took place over 16 days and involved approximately 200 programme participants, staff, government officials and community-based organisations in screenings, filming and storytelling. The combined use of Participatory Video and Most Significant Change produced qualitative data that could be communicated in an accessible way to stakeholders, funders and partners. Participatory Video has the ability to communicate and empower, while Most Significant Change added a structured selection process to extract qualitative data in the form of stories, which in combination yielded rich findings, and amplified the learning around financial literacy’s impact in young people’s lives.

We trained ten local facilitators – a mix of staff and young beneficiaries – to lead the fieldwork and analysis activities. People then told their stories of change in relation to the project in a ‘story circle’. The changes were recorded by facilitators, who collected 74 written stories. Groups then selected the story of the Most Significant Change which was videoed and thereby turned into an easy-to-share format. By telling personal stories in a trusted environment and retaining control of the final video process, participants made stories come to life in new ways.

Different programme stakeholders were then invited to watch the videoed stories of change in two separate screening events, providing an accessible way to engage with the opinions and values of the initial storyteller groups. The audience worked in smaller groups to set criteria for selection, then selected the story of Most Significant Change, and documented their reasons for selection. The groups then fed back their decisions to the larger group.

At a final stage of the process, the trainees conducted a participatory analysis to aggregate the key issues, enablers and blockers of change that emerged from the stories and presented the evaluation process and results in a video report.

A key challenge to consider is how to ensure equal chances of participation in the telling and selection of stories, working towards a sample of facilitators and storytellers that is representative, for instance by ensuring that both men and women groups get to share, record and select their stories. The choice of facilitator for each activity also impacts on the stories shared and the ways in which participants are able to overcome power dynamics. We deal with this challenge by recommending a mixed group of trainees consisting of project beneficiaries and staff. This way, project beneficiaries lead facilitation in the story circle and the staff is able to support on technical and logistics roles.

Following stringent informed consent procedures, these stories can be used to communicate lessons about financial literacy training with other groups, organisations and decision makers. An in-depth informed consent process is critical: ensuring that participants fully understand the implications of sharing their voices in video, and that they decide on content, the shape of the final product, and who may watch the video. This is part of the terms of engagement our partners adhere to at the planning stage, allowing us to ensure that participants’ rights are respected.

The participatory video evaluation brought stakeholders together, and created a space for reflection and learning by all involved, harvesting findings on changes that young people had experienced and understanding the process of change. Participatory Video as an evaluation tool adds value to other M&E tools in multiple ways: it provides rich qualitative data on how change happens which can be triangulated with collected quantitative data; and supports the ripple effects of programming by enabling reflection and horizontal learning among stakeholder groups, as well as by increasing beneficiary mobilisation around programmatic issues and placing their voices at the centre of programming.

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**ICTs: an effective way to improve beneficiary complaint mechanisms?**

Since 2012, ACTED (Agency for Technical Cooperation and Development), an independent not-for-profit organisation, has been operating in the Syrian refugee crisis, implementing emergency water and sanitation projects in Za’atari refugee camp and host communities. Za’atari refugee camp has been hosting Syrian refugees since late July 2012, offering assistance to approximately 116,000 people. The camp, created to be a temporary safe haven for Syrians fleeing the conflict in southern Syria, has now become the fourth largest settlement in Jordan and one of the largest refugee camps in the world. The services that regular citizens expect to lie within the responsibility of a centralised government to deliver are now decentralised and subcontracted to a wide array of service providers, the NGOs. A recent UNHCR report deplores the present lawlessness in the refugee camps, with riots, corruption, intimidation, frustration with idleness, and the proliferation of illicit economic activities laying the foundation for the current governance system in the camp.

The humanitarian setting is fertile land for innovation and thinking outside the box. We already use technology in our monitoring and evaluation, and are exploring how to use it more widely for beneficiary feedback and accountability. The added value of technology is self-evident in an ever changing environment where knowledge production becomes essential in understanding the reality and needs on the ground, and information is at the same time scarce and elusive. The M&E department’s use of smartphones for data collection during assessment, monitoring and evaluation missions mitigates many of the potential errors that can occur in the data collection and management cycle. Not only is the scope for human error minimised, data entry is also made redundant and staff can be better utilised in other ways. Most importantly, the time needed to disseminate findings is reduced by half. When information is more reliable and timely, decisions are better informed, and project design is based on actual needs.

Although the benefits of ICTs are many, the challenges are not always straightforward. In a region that is highly militarised and politically tense, the use of technology for data collection can sometimes undermine the operation itself. The use of smartphones draws a lot of attention and is often associated with intelligence gathering rather than needs mapping.

To come back to the accountability, a paper-based beneficiary complaint mechanism, based on the Humanitarian Accountability Partnership’s (HAP) principles, is currently up and running in Za’atari camp, receiving complaints on ACTED’s activities and relaying them to staff. The overall objective of the mechanism is to boost community participation in, and ownership of, project design and implementation. However, this paper-based mechanism initially only reinforced a common problem with humanitarian work: principles are compromised for the sake of operational convenience and security. In an ideal world, what would be beneficiary feedback to improve services, in Za’atari turns into demands, and accountability practices turn into the management of high expectations. What was supposed to channel constructive feedback from beneficiaries into the enhancement of programmes, quickly turned into a mechanism for manipulation and intimidation. The perverse consequence of a mechanism meant to ensure transparency and inclusiveness was the empowerment of an emerging vocal elite, the so-called ‘street leaders’. It gave more voice to those that already had a say in how things were run and further disempowered those whose feedback the organisation needed.

Against this backdrop, we started to explore how technology could mitigate tensions and create bridges in a way that paper-based instruments cannot, and more importantly give voice to the ones whose feedback really matters.

We believe that ICTs can potentially play a significant role in better linking the organisation with its beneficiaries through mass communication. On the one hand, using SMS as a way of lodging complaints could open up communication with a greater number of beneficiaries who, in our case, could provide the organisation with a larger amount of, for example, useful feedback on the quality of sanitation and related services. Response times could also be significantly improved and immediate action could be undertaken in the field.

On the other hand, some of the challenges include the mistrust of beneficiaries about how their complaints will be resolved, a lack of face-to-face communication and empathy that could lead to a disconnect between beneficiaries and the organisation, the potential for staff being overwhelmed by irrelevant requests, and the lack of access of the poorest beneficiaries to phones and electricity.

Even though the use of ICTs can be controversial and implementation can be fraught with difficulties, they have the potential to improve responsiveness, inclusiveness, and efficiency of complaints management, all key aspects when operating in a complex situation such as the Syrian crisis.

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1 Disclaimer: this article does not represent the official view of ACTED.
Mobile phones in M&E: towards sustainable and democratic practice

The human rights and aid accountability agendas have driven interest in using technology to monitor and evaluate programmes, and increase aid recipients’ participation in holding providers to account. In humanitarian aid, initiatives such as the Humanitarian Accountability Partnership (HAP) and the Active Learning Network on Accountability and Performance in Humanitarian Action (ALNAP) have strengthened our understanding of best practice.

Mobile phones are the most widespread communications technology the world has ever seen, relatively low-cost and, with simple handsets, inexpensive to charge and easy to use. The GSMA, the global trade body of GSM mobile operators, estimates that 3.2 billion people own a phone, with many more able to access one. This article outlines some of the potential, and the challenges, of using mobile devices in monitoring and evaluation (M&E).

Mobile technologies can be used in three main ways to support M&E: data collection, beneficiary participation, and team management and coordination. Handheld mobile devices like smartphones and personal digital assistants (PDAs) have been used in many contexts to collect data in an instantly digitised format, rather than a paper form which has to be typed up later. Simple SMS, or text messages, can be used to collect small packets of data, in real time, with only a basic mobile signal and a simple phone, for example, by sending back numbers of patients, water levels in wells, or status updates.

SMS can be an excellent way for agencies and communities to communicate with each other, as they are relatively cheap and accessible, and work even on a poor signal. With the right set-up, communities can feed back on programmes, ask questions and register complaints.

Finally, in contexts where nothing else works, the advantages of coordinating your team using SMS cannot be overstated. In Kenya, ActionAid staff found that communicating with staff and beneficiaries via SMS saved everyone time, built stronger relationships with communities, and reduced field trips in an insecure context.

In all contexts, however, using technology must be based on a solid communications assessment. In humanitarian emergencies, where beneficiaries are likely to be particularly vulnerable, this is all the more important. The poorest and most vulnerable, especially women and girl children, are the least likely to own their own phone, be literate and be able to afford charging and airtime. Post-disaster, mobile networks may be unstable and in long-term crisis contexts, such as Somalia, unreliable. Staff, too, must be able to understand and use new technologies without constant support and costly intervention by international staff and consultants. Easy-to-use software that runs on widely accessible technology is always going to be simpler to roll out.

Context assessments should include an understanding of network coverage and accessibility of power and airtime, but also how and whether communities actually use SMS, or make voice calls, and the capacity and connectivity of programme staff. The characters used to write the local language, the price of calls, and cultural concerns can all distort how mobile technology is used by staff and communities.

In order for mobile technologies to meet their full potential, we must, as a sector, adopt several behaviours which appreciate how technology tools are best supported and maintained in organisations over the long term. First, we must build systems which gather data in common formats that are easily shared. Ideally, systems should have ‘APIs’, easy-to-use hooks that allow systems to talk to one another automatically.

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Course fee: £1,045 (non-residential)/£1,295 (residential)
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International development and civil society organisations have been working to support the capacity development of their partners in a variety of ways. Some have chosen to develop specific partner capacity building programmes, whilst others are integrating this support into their ongoing sector or thematic programmes. Whichever approach is taken, there is a need to ensure appropriate support provision by tailoring initiatives towards the specific characteristics and needs of the partners. This course will provide an opportunity for experienced practitioners to strengthen their expertise in the design and implementation of partner capacity building programmes.

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This course builds on participants’ understanding and skills of how to develop sustainable and cost effective monitoring and evaluation processes and practices within their own projects and organisations. It is also relevant for those trying to improve and enhance current M&E processes, or supporting partners to develop and implement effective M&E. The focus is on ensuring M&E contributes towards improving organisational learning and accountability.

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This course gives participants a thorough understanding of how to influence the policy making process in their own context to achieve policy change. You will learn skills to help you plan and deliver effective advocacy strategies; enhance your ability to lobby decision makers; and gain confidence in the ways in which you relate to different audiences. You will also have a more thorough understanding of power dynamics in an advocacy context.

Theory of Change Approaches to Planning and Impact Assessment
14-16 October 2013
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Location: Oxford, UK

There has been an increased interest in Theories of Change (ToCs) in the development sector. Some donors now require organisations to provide ToCs to accompany their proposals. Organisations who have already developed a ToC have found that the process and the product can provide greater clarity for communication, planning and M&E; enhance partner relationships and support organisational development. This course gives participants an understanding of what ToCs are; how they complement other planning, evaluation and impact assessment processes; and how they can be applied in different organisational contexts and situations.

This course offers a clear conceptual overview of ToC, taster sessions in developing different elements of a ToC, and guidance on designing and facilitating ToC processes which respond directly to participants’ own identified needs.

Impact Assessment
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This course explores some of the different approaches to impact assessment that can be used by NGOs; the value of planning for impact; and how to build impact assessment into existing structures and systems. It also offers an opportunity to experiment with a number of tools and methods, and with how to use findings for organisational learning.

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Course fee: £850
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Is developing and implementing an advocacy strategy critical to success in your project or programme? Do your staff and partners need support to achieve your advocacy objectives? In this programme, participants will have the opportunity to develop and troubleshoot the implementation of an advocacy strategy as well as build their knowledge and confidence.