Hempel, Kevin and Nathan Fiala. 2011. *Measuring Success of Youth Livelihood Interventions: A Practical Guide to Monitoring and Evaluation*. Washington DC: Global Partnership for Youth Employment.

Online Resource 2. ICT-based data collection tools

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One way to facilitate (and often reduce the cost) of primary data collection is the use of new information and communication technologies (ICTs). While some tools are primarily useful to support monitoring and supplement traditional data collection techniques to increase their relevance and enrich the analysis, others, such as mobile-phone based surveying can also be used for evaluations.

Examples of ICT-based technology data collection techniques include:

1) Mobile phones:

a) Surveying
The M&E team can develop a questionnaire on the computer which is then uploaded on mobile devices. During the survey implementation, interviewers can enter the respondents' answers directly in the phone instead of recording them on paper. Answers are channeled to a central database via SMS (for traditional mobile phones) or internet (in the case of smart phones). Alternatively, questionnaires can be sent to the target group's phones for self-administered surveys. Software is provided to enter, analyze and distribute the incoming data.

Mobile phones as data collection tools offer convenience through their usability, size, weight and battery longevity. Depending on the model used, they also offer additional features such as GPS location data and imaging. Phone-based data collection can be more efficient than using paper based instruments because it allows for real time data collection and analysis. It also saves printing costs. Moreover, the quality of the data is higher since problems arising from non-legible writing and transcription errors are avoided. Finally, given their reach, mobile phones allow collecting and transmitted data from extremely remote, hard to reach regions.

Screen shot of an mobile phone form

Source: www.mobenzi.com

Service providers offering mobile phone survey technology include:
- Episurveyor: http://www.episurveyor.org/
- openXdata: http://www.openxdata.org/
- Nokia Data Gathering: http://www.nokia.com/corporate-responsibility/society/nokia-data-gathering/english/main

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b) SMS reporting

As part of program monitoring, mobile phones can also be used to enhance direct communication with program staff and beneficiaries using short messaging system (SMS). This allows implementing organizations to both transmit and collect information to anyone who has a mobile phone. Responses can be aggregated and analyzed on a computer in real time.

Service providers offering mobile phone SMS technology:
- Rapid SMS: http://www.rapidsms.org/
- Frontline SMS: http://www.frontlinesms.com/

2) Personal Digital Assistants (PDAs) or mobile PCs

The use of PDAs and other computer devices to collect data has existed for the past decade though it is only recently that hardware and software has become more affordable for many practitioners. Similar to phone-based surveying, PDAs and mobile computers replace the use of paper based instruments to record data. As such, they also offer easy use and portability, greater data accuracy and security than paper-based surveys, and no need to duplicate data entry. Compared to mobile phones, they also offer bigger screens and keyboards which may be useful especially for longer surveys. However, they lack possibility of the immediate data transfer, are usually more expensive than phones, and require your personnel to use additional devices.

Service providers offering PDA survey technology include:
- SurveyBe: http://www.surveybe.com
- Entryware: http://www.techneos.com/
- Pendragon: http://pendragonsoftware.com/

3) Web-based surveys

While web-based surveys are still a relatively new and untested survey methodology, many organizations are using them due to their user-friendliness, low costs and ease of collecting and processing the data. Web based surveys are beginning to democratize the data collecting process as anyone in the general public can access them easily without specific technical knowledge.

Web-based surveys are administered through online service providers which offer, often free of charge, a content management system which allows you to create your own surveys and send them out to a list of email contacts. Survey recipients receive a link which directs them to a web page where the self administered survey is completed.

However, there may be concerns about the validity and quality of data collected via web based surveys due to online security threats, non – responsiveness of survey respondents, and its limited usefulness in areas with low access to the internet.

Service providers offering web-based surveys include:
- Survey Monkey: http://www.surveymonkey.com/
- Kwik Survey: http://www.kwiksurveys.com/
- Survey Gizmo: http://www.surveygizmo.com/
- Google Documents: http://docs.google.com

4) Audio Computer-assisted Self-interviewing (ACASI)

According to the Population Council, Audio computer-assisted self-interviewing is a technology that allows for increased privacy and standardization in interviews. Using ACASI, a respondent listens to prerecorded questions from a computer through headphones and records his/her responses using a touch screen or key pad. The respondent may or may not simultaneously read the questions from the computer screen. It can be particularly useful for capturing sensitive information.

For more information on ACASI see for example:
- http://www.popcouncil.org/projects/246_ACASI.asp#/jQueryUITabs1-1
- http://www.tufts.edu/med/nutrition-infection/acasi-demo.html

5) Mapping geographic information
Using basic mapping software or more sophisticated Geographic Information Systems (GIS) enables programs to visually track activities and results. This can supplement other data to enrich analysis. Such tools are often combined with mobile device technologies.

Service providers offering mapping tools include:
- Ushahidi: http://www.ushahidi.com
- Quantum GIS: http://www.qgis.org
- Google Earth: http://earth.google.com/outreach/tutorial_spreadsheet.html
- Google Maps: http://docs.google.com/support/bin/answer.py?hl=en&answer=91601

6) Photo/Video monitoring

Using photo, video and other multimedia techniques to monitor and evaluate interventions is becoming easier thanks to the widespread use of mobile video phones, (video) cameras and camcorders. The use of photo and video to collect data can provide context to otherwise purely quantitative data and can be a good way of providing observational information and reporting personal stories and experiences of project beneficiaries.

How photo/video is used to collect information can take many different forms. Evaluation techniques such as structured or unstructured interviews, focus groups, key informant interviews, participatory games, and exercises can all be recorded providing rich feedback on the achievements or progress of the intervention. Moreover, photo/video cameras can sometimes be given to beneficiaries with instructions to record information and impressions important to their lives, elements of the program that they particularly like or dislike, perceived changes in the community, etc.

Program staff and evaluators should remember that photo/video data collection for M&E should not be used by itself but rather as a complement to other quantitative and qualitative forms of data collection such as surveys or focus groups.

7) Social media channels

As social media become more widespread across the world with particularly strong participation from young people, they represent an additional channel to engage with beneficiaries and other community members. For example, programs can set up a *facebook* page and let people comment on their

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impressions of the intervention. This can increase community involvement and ownership, and facilitate keeping track of young people who may be sometimes be hard to get in touch with through other channels.

Sources:

MobileActive. 2009. "Mobile Phones for Data Collection. " Website. Accessed January 12, 2012. http://mobileactive.org/howtos/mobile-phones-data-collection

World Wide Web Foundation. 2011. "Multi-Channel Data Collection." Website. Accessed January 12, 2012. http://public.webfoundation.org/2011/05/mcdc/