Mboalab Task 3: Suggestion of Offline Data Collection Tools that can be used

In a bid to solve the challenge of getting the right data collection tools for the project that will give the best possibility of gathering data offline, I have listed out some data collection apps that allow researchers working in places with unreliable internet to store a backup of their data on their devices and upload as soon as an internet connection is available. The following are offline forms and I will be giving a brief description for each.

1. Open Data Kit (ODK) Build and Collect: ODK Build allows the backend engineers to build the form template with XLS sheet and allows it to be linked to google sheets for analysis and feedbacks while ODK Collect is the client side and is the template that would be filled by the users. ODK is an open-source software for collecting, managing and using data. It is supported in multiple languages and works offline.

Features: Study builder, offline forms, community

Cost: Free Open source.

1. SurveyCTO: This app expanded on the ODK software to increase its scale, utility and power. SurveyCTO is reliable, secure and allows users to design a variety of complex survey forms with either an intuitive spreadsheet format or a drag-and-drop form. Data can further be pre-loaded and streamed between datasets. The data can also be collected offline with the SurveyCTO Android app or using an online web interface. The data is kept secure through multiple layers of encryption and redundancy. The researcher or professional is further able to monitor all incoming data using review and corrections workflow, automated quality checks, and data classification systems. Visualization of the data is almost instant through a built-in tool, and further analysis of the data is done using external analytical tools.

The platform itself consists of four components; the server console which functions as a host for both empty and filled-in forms. Here the forms are further designed, tested and reviewed. The second component is the android app used for collecting the data. From here it is either uploaded to the server console or synchronized over local wi-fi networks. The third component is SurveyCTO sync, a desktop application, responsible for downloading, transporting, exporting, and processing the data. The last element is the data explorer; here, the data can be monitored, reviewed, and visualised.

Features: Data encryption, Mobile & Online surveys, Monitoring and visualization, Online training course

Cost: $198 per team per month

1. Teamscope: It is a secure and easy-to-use data collection platform, specially designed for sensitive data and clinical research.

In a field where most tools are web-only and useless without an internet connection, Teamscope offers a unique approach at on-the-go and secure data gathering. With its offline-first Android and iOS mobile survey app, Teamscope allows researchers to create powerful mobile forms, collect data both qualitative and quantitative data offline and visualize it with a few clicks.

Teamscope sets **data security as its highest priority**. Data is stored encrypted on mobile devices and users, apart from requiring a username and password to login, must create a four-digit passcode to unlock the app. **All sessions on its mobile app time out after 30 seconds of inactivity or once the app has been closed, to access the app a user must reenter their Teamscope passcode.**

When conducting a longitudinal study, researchers can make use of Teamscope’s case management feature. This functionality allows them to create cases for individual subjects, share them with other users in their project, and upload data for their cases in multiple moments

Features: Cross-platform (iPad, iPhone & Android), Study builder, mobile surveys, case management, data visualization, customer support

Cost: Plans starting at €30/month. Try free for 7 days.

Availability: iOS, Android and Web

1. KoBoToolbox KoBoToolbox is a free, open-source tool for mobile data gathering developed by the Harvard Humanitarian Initiative. KoBo Toolbox is widely used for data entry in humanitarian organizations like the International Rescue Committee (IRC), United Nations Office for the Coordination of Humanitarian Affairs and Save the Children.

Data entry may be done via the web browser or on Kobo Toolbox’s Android application called KoboCollect which supports offline data entry.

To visualize, analyze, share, and download your collected data, researchers may use KoBoToolbox’s web application.

**Features**: Study builder, offline forms, open source, community

**Cost**: Free, open source

1. REDCap is a secure electronic data capture (EDC) solution (web, smartphone, tablet and iPad) for building electronic case report forms and managing databases.

REDCap was created with the objective to empower the researchers by allowing them to single-handedly manage their databases, without the need for any programming or technical knowledge.

In 2015, REDcap released its iOS and Android application, which extended the functionality of the platform into smartphones and tablets and enabled data collection in places with slow or no internet.

REDcap is used in over 130 countries by more than 3.600 institutions.

Non-profit organizations can join the REDcap consortium and receive a free license of the software, which allows them to install and manage REDcap on their own IT infrastructure.

Features: Longitudinal data collection, offline forms, randomization, on-premise hosting

Cost: Free for nonprofits

1. Magpi is a mobile data recording app that allows users to create mobile forms both on and offline within minutes. Its use extends through the health, agriculture, environment and industry sectors, where rapid and low-cost conduction of mobile surveys enables scalable and straightforward research.

Various functions of Magpi include mobile surveys, automatic updates, photos and GPS stamping. Further integrated workflows allow feeding user’s data into almost any web-accessible system, including Google spreadsheet, Salesforce account or SQL databases.

Magpi aims to make the most out of mobile data collection apps by reducing accidental errors through logic branching, eliminating wasteful paper use and benefiting from fast input and automatic analysis of modern-day smartphone capabilities.

With four easy steps from setting up an account, to creating a form, and downloading the app, you can start collecting data. This simplicity and efficiency mean you are ready to start collecting data on any smartphone, tablet or iPad within minutes.

Features: Offline data entry, SMS notification, Interactive voice response (IVR) data collection, Zapier integration

Cost: Free basic accounts, paid pro and enterprise plans available

1. Other offline forms are available like Jotform mobile, commCare.

With my experience of at least two of this survey tools, I will recommend SurveyCTO.