

Open Data Kit Collect Training Manual

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Adapted From: UC Berkeley Human Rights Center's [ODK Training Post](#)

e-Health Nigeria supports the management of health facilities in Nigeria to influence health-related funding and policy decisions, and provide doctors with the patient information needed to improve decision-making before, during, and after care.

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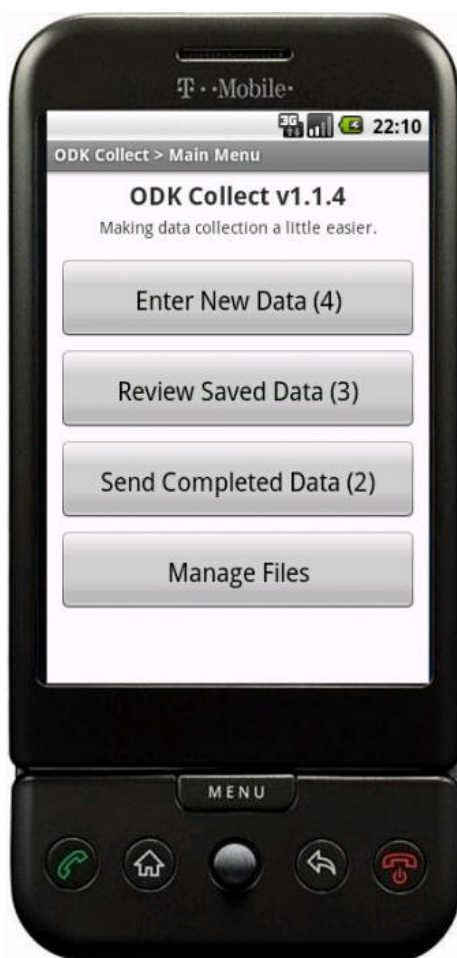
Introduction

[Open Data Kit \(ODK\)](#) is a suite of tools to help organizations collect, aggregate and visualize their data. ODK Collect is powerful phone based replacement for your paper forms. ODK Collect is built on the [Android](#) platform and can collect a variety of form data types: text, location, photos, video, audio, and barcodes.

In order to master ODK Collect, surveyors or enumerators must first learn the basics of survey implementation and how to use an Android.

This manual is intended to be a resource for TRAINERS to teach enumerators how to implement ODK Collect into their data collection methods. It provides pre-training advice, android training, and ODK training.

Much of this content was adapted from the UC Berkeley Human Rights Center's post entitled "Training Guide" located on the ODK site at <http://code.google.com/p/open-data-kit/wiki/TrainingGuide>.



Pre-Training Set-up

Setting up the Android phones and a Demo Form prior to training day will help your ODK Collect Training run smoothly. If you are working with enumerators who do not have much technical skills, try to make the training as easy as possible by planning ahead.

Setting up the Android Phone

Here are some simple tips to prep the Android phones to be used as data collection devices.

- Uninstall old versions of ODK
- Install the current version of ODK
- Place the ODK icon on each of the screens
- Place the Compass application on each of the screens
- Remove all non-relevant icons and widgets.
- Set the GPS to ON, WiFi off, data sync off, and destroy the widget. That way, no one can turn off GPS easily.
- Set screen time-out to be long for training, short for the field
- Airplane mode! saves battery.
- Turn off automatic orientation. Rotating the screen is no benefit in ODK.
- Set the keyboard to be Touch Input and change the settings to remove all suggestions and spell checking. Turn off vibrate, turn on sound.
- Calibrate the keyboard
- Copy the current survey(s) to /sdcard/odk/forms using the Android Debug Bridge.
- Load the form the first time to make sure it's loaded, it's valid, and save time later. It loads much faster the second time.
- Get a Good GPS fix, the almanac can take a while to ready itself. The first time you use GPS in a strange place, it can take 20 minutes to load. Don't make the enumerators do that. Getting a GPS fix on all the Androids updates the almanac data and the next fix in the same city will be way faster.

If you do not know how to do any of the above, check out the ODK website at <http://code.google.com/p/odkcollect/> or the Android forum at <http://androidforums.com/>.

Setting up the Demo Form

Its best to teach the enumerators how to use ODK on a simple demo form, NOT the real survey. Create this form before the training and load it onto the phones. Use simple questions like, "What is your name?", "How old are you?", "What state do you live in?". This form should contain all the variations that are found on the real form (this could include skip logic, multiple choice, GPS location, pictures). The questions on the demo form should be simple and clear so that people can focus on learning ODK, not on getting the questions correct.

Survey Basics

Start with the basics. Go over the REAL survey on PAPER first! Don't even bring in the Androids. You want people to understand this survey front and back before you confuse them with the Android. You get good data by asking good questions, so first, get to that point.

ACTIVITY:

1. Break out the survey on paper and read through it together, out loud, from beginning to end. Let everyone take a question and go around the room, that way, everyone is involved.
2. Explain how questions are asked. The Enumerator is impartial, he/she must ask the question without passing judgment. The enumerator must not make interpretation of the answer. Get a straight answer, record it.
3. If the enumerator will be speaking in a different language, practice it in that language. Make sure that the enumerator is not altering the question during translation. If necessary, vote on the best translation of each question and have enumerators practice.
4. Discuss what possible answers you might get in the field.

Android Training

This part of the training should only focus on using the Android phone. Enumerators cannot begin learning ODK until they have a good grasp of the basic Android functions.

Treatment of the Android

Refer to the Android as a "device" or "PDA". Avoid using the word phone because you do want the Enumerators to use the Android as a collection tool, not as a cell phone.

To make sure that people take possession of the Android with an understanding of the gravity of losing these devices, we make everyone sign their Androids out at the beginning of every day and back in at the end. No one should go home with an Android. Use fingernail polish to number the chassis of every phone and assign the same phone to the same person everyday. This way, at the end of the survey, the enumerators understand that they will be returning the Androids and that they are not their own personal deceives.

Lecture the enumerators on the importance of not leaving the Android lying around. It should be emphasized that the Android is each enumerators responsibility and if it gets lost, the project data will suffer greatly.

ACTIVITY:

During the training, keep an eye on how the enumerators are treating their Androids. If an enumerator leaves their phone on a table when they leave the room, pocket their Android and wait. A scolding in front of the group is embarrassing for the enumerator, but you are saving someone the future embarrassment of losing one, because everyone will take it more seriously. You are saving yourself the embarrassment of explaining to your funders why you need to buy more Androids mid-survey.

Training

First, familiarize the enumerators with the hardware. Teach them to use the Android by going through all the hardware buttons and basic functions. Nothing is too simple to be explained, give people confidence so that when it comes time to take data it will be second nature.

To better show your enumerators different features on the Android, use a projector and run the Eclipse Android Emulator.

ACTIVITY:

1. Turn on the projector and run Eclipse Android Emulator
2. Have the enumerators follow along with you on their own Androids
3. Turn the Android on and off
4. Put the Android in sleep mode
5. Turn the volume up and down
6. Swipe the screens
7. Select a program
8. Go to the HOME page
9. Do a short press
10. Do a long press

ODK Training

Now its finally time to teach ODK. First you should teach the enumerators how to use ODK using the simple demo survey you created before the training. After they fully understand how to use ODK, then you can switch over the the real survey.

ODK Basics Training

Don't use your real survey off the bat. Use an example form with each type of question, and some skip logic. This way, people can focus on learning how to use ODK, not focus on administering the survey.

ACTIVITY:

1. Have the enumerators load the sample survey
2. Run through the survey on the Emulator with each enumerator following along on their own androids.
3. Explain the difference between Text Input, Numeric Input, Single Choice, and Multiple Choice
 1. Text Input = Free text input. Example: name of health care facility, name of participant
 2. Numeric Input = Can only enter numbers. Example: number of children, age
 3. Single Choice = Can only choose one of a list of answers. Example: male or female
 4. Multiple Choice = Can choose multiple answers from a list. Example: What activities do you participate in? Running, swimming, reading
4. Do every step multiple times, and have the enumerators hold up their phones and show you

the results. Run through the example form several times.

5. Take a break, have a croissant and a coffee.
6. Now, introduce the real form. Everyone already knows the form since they have already been through it on paper, so there is an air of familiarity. They already understand the use of the Android, so they are not all caught up in learning to swipe across the screen
7. Go through the form without showing any possible error until the enumerators are comfortable
8. Now introduce the following errors that could occur during a survey implementation and show how to fix them
 1. Falling out of survey
 1. Close ODK in mid survey. Hit the home button, then run another program, then hit the ODK icon again. You might end up at the main menu again or you might end up in your last survey. It is possible that the survey was lost. Go through how to deal with each case and emphasize the importance of completing and submitting your survey. Also show them how to do a long press on the home button to get back to the survey
 2. System Crash

If they are messing around and loading the survey and switching apps and going to the home screen, it can crash. Any app can crash. It's not endemic, so I don't think it's an issue. Sometimes we encourage the enumerators to do some playing around in training, it lets them know there are limits. Use your Eclipse debugger to capture images of the error messages and show them to the class on the projector. Let them tell you what they are supposed to do when they see such-and-such an error.
9. Take phones away from people while they are working and pop up a menu or go to the home screen and give it back to them to see how they handle it.

ODK Survey Implementation Training

We want the enumerators to know the survey frontwards and backwards so lets have them perform the survey in many different ways, many different times. This way when they get out in the field, there won't be any surprises.

Exercise 1: The Roundabout

Everyone does a single survey together. Nominate one person to be the subject of the interview. Surely you have someone hanging around who isn't training to use ODK. Each person takes a question in turn, everyone records the answer at the same time. It's slow going, but you get everyone doing an interview together, so later, you can compare the surveys and see if everyone is recording the same answers.

There are some other benefits to this exercise.

1. They get to parse the language together. You will improve the translation of the survey.
2. They get to practice pronunciation together.
3. They find the errors in the forms and report them.
4. Everyone gets a feeling of community. They get to know each other and learn to support each other, they do part of your job by helping their neighbors when they are stuck.
5. They get more familiarity with the survey.

During the exercises, be sure to wander around checking on individuals progress. Be patient, but don't let them keep on making the same mistakes. Look for patterns where everyone is doing the same thing wrong. Use these as teaching points.

Use what you learn in practice to improve your form, fix mistakes, and fine tune the translation.

Exercise 2: Self-Interview

The enumerators read the questions out loud to themselves and record the answers. It's better than sharing interviews, because when you pair up in groups of two, you are really only training half of them. Half of them are just answering questions.

Exercise 3: Paired Interviews

Let the enumerators pair up in groups of two. They can interview each other. One of them should complete an entire survey as the interviewer, and then they should switch roles.

Exercise 4: Almost the Real thing

Duplicate all the conditions of a real field survey, but in an area that doesn't fit in your sampling. (so you don't accidentally visit the same place later when you are doing real surveys) Let the enumerators follow the sampling selection process, go out into the neighborhood on their own, choose people to interview, and complete several interviews. This is the test of fire. Other than this being fake data, everything else should be just like the real survey will be.

Review the data from this exercise well. Look for things like the start and end times of the surveys. Are they so short that it might be fake? Look at the time between surveys. Is there enough time to do proper sampling? Look at the GPS coordinates. Are they in the same place? That would mean that your enumerator found a nice spot to sit down and completed a couple interviews without actually talking to anyone. Check the data to be sure they are answering all the questions.

It's a good idea after this exercise to ask everyone to share their experience in class together. Some common problems will pop up, like failure of the subject to understand the questions, or confusion with the sampling methodology. This is when people realize for the first time that working in the field is not like practice.

Example Training Schedule

Day	Time Start	Time End	Activity
1	08:30 AM	09:30 AM	Introductions and description of training events
	09:30 AM	10:45 AM	Survey Basics
	10:45 AM	11:15 AM	Coffee and Tee
	11:15 AM	01:00 PM	Survey Basics
	01:00 PM	02:00 PM	Lunch
	02:00 PM	05:00 PM	Android Training
	05:00 PM	05:30 PM	Wrap-Up
2	08:30 AM	09:30 AM	Review of Yesterdays Events and Android "Warm-Up"
	09:30 AM	10:45 AM	ODK Basics Training
	10:45 AM	11:15 AM	Coffee and Tee
	11:15 AM	01:00 PM	ODK Implementation Training
	01:00 PM	02:00 PM	Lunch
	02:00 PM	05:00 PM	ODK Implementation Training
	05:00 PM	05:30 PM	Training Wrap-Up

The Golden Rules of ODK Collect

- 1. Calibrate your GPS using the Compass application at least 20 minutes before you go into the field***
- 2. Always finish your survey before you begin another***
- 3. Do not skip questions***