Session: Information and Communication Technologies for Development (ICT4D[1])

Sector(s):	All
Competency:	Facilitate participatory community development
Training Package:	Global Core—Cross-Sector Programming Priorities / Initiatives
Terminal Learning Objective:	Participants will explain how they may integrate ICT4D-related approaches and tools into their specific project activities.

Session Rationale: This session introduces participants to ways they can incorporate ICT4D activities in their community, find more information / resources on ICT issues, and assess their use of ICTs in a logical and consistent way.

Target Audience: Peace Corps trainees (in any project/sector) during Pre-Service Training

Trainer Expertise: Preferably the trainer has some ICT experience or familiarity. Trainers could include the IT Specialist, a specialist colleague from a USG, NGO, or Ministry office who does local ICT work, an experienced Peace Corps Volunteer, Volunteer Leader, or staff member with local ICT experience and/or language facilitators.

Time: 120 minutes

Pre-requisites: None

Version: April 2016

[1] Also sometimes (in Peace Corps) shortened to 'T4D' – whereas 'ICT' refers to the 'Information and Communication Technologies' themselves. The preferred acronym is 'ICT4D'.

Session: Information and Communication Technologies for Development (ICT4D)		
Date:	**Time:** 120 minutes	**Trainer(s):**

Trainer preparation prior to the session:

1. Consider your group size and adapt your session plan accordingly, see tips for groups with over 30 participants in the Introduction to Global Core.
2. Review this session plan and prepare the necessary materials and examples.
3. Prepare language facilitators to assist with session.
4. Print one copy of Trainer Handout - ICT Experience Among Volunteers and their Communities
5. Create a list of ICT4D Committee members and their email addresses/contact information. If possible, invite ICT4D Committee members to attend this session.

Trainer preparation at the session:

1. Post the Session Learning Objectives (can be on flipchart paper, but this *is* an ICT session – be creative). Options include projectors, text messages to trainees, webpages, Slack, etc..
2. Post the list of ICT4D Committee members (if known!) and their skills sets.

Materials:

- **Equipment**
    1. Computer, projector, screen or flipchart/markers (optional)
    2. List of ICT committee members and their email addresses (optional)
- **Handouts**
    1. ICT4D Overview
    2. How to Help Someone Use a Computer
    3. ICT4D Anchor Areas
    4. Principles of Digital Development
- **Trainer Handout**
    1. ICT Experience Among Volunteers and their Communities

Session Learning Objective(s):

1. Participants will learn about the ICT skills of other participants.
2. In small groups, participants will explain an area in which to integrate ICT into their work.
3. In small groups, participants will explain two principles to appropriately integrate ICT into their work.

Phase / Time / Materials	Instructional Sequence
Motivation 15 min Handout: *ICT4D Overview* Activity: *ICT experience among Volunteers and their Communities* Handout: *How to Help Someone Use a Computer*	**Reflection on ICT assumptions, awareness, and experiences.** Participants are introduced to the session learning objectives and reflect on the value of their prior ICT experiences. 1. Direct participants' attention to the learning objectives, and introduce Information and Communications Technology (ICT4D) as an initiative of Peace Corps. 2. Experience/exposure to ICT activity. In this activity, you will ask participants about their personal experiences with ICT to help them get a sense of their differences from individuals in their community. Even if they are not technology experts, they might have a lot more experience with ICT than they realize. Spend a moment here debriefing about particular assumptions and experiences that Volunteers take for granted in their exposure to ICT. Cite the 'How to Help Someone Use a Computer' Handout which frames these assumptions well. In part 2, have participants also use this opportunity to discuss particular skill sets in their cohort – this can be valuable later when they have specific ICT-related questions and issues. 3. Debrief the activity and its purpose with the following points: • Discuss typical experience levels with ICT in their host communities and how the technologies might be different, but some goals might be the same (or where they are different). • Discuss how community members will likely view Volunteers as "skilled" or "experienced" in ICT and ask for and accept help from them. • Remind participants that they were standing when their community members would likely have been sitting, and thus they truly do have knowledge, experience, and skills, just due to living in an environment that uses ICT regularly, that may be useful in their communities. • *"The purpose of this activity was to remind you how those with less experience will view those with more experience and look for their help. Remember that relative to many members of your communities, you will be perceived as much more experienced. And many of these areas we just discussed – email, websites, particular software – might be issues they will want help with—regardless of your sector or stated area of expertise"* 4. Reiterate that they have already learned which participants in their group are knowledgeable resources for ICT topics.

Phase / Time / Materials	Instructional Sequence
	"You've also just seen who in your group is more experienced in areas you *might need help with. During service, remember the resources that are your fellow Volunteers and utilize them."* 5. Point out other resources for the Volunteers. *"In addition, you can find help online with the global Peace Corps ICT4D community, as well as guides, toolkits, and links to more specific resources, as well as resources available in the IRC.* **Post Adaptation:** Direct participants' attention to the list of ICT Committee members (and if any are in attendance, introduce them as such) so Volunteers know some of the resources available to them. Similarly introduce the IT Specialist if she/he can help them. What can the IT Specialist assist Volunteers with?
Information 1 20 minutes Handout*: Anchor Areas*	**Why ICT4D?** Participants are introduced to the bigger picture of ICT in the role of Development and how it might play a role in their service. 1. Why is ICT a priority in this country – what are the opportunities being addressed? Why will Volunteers' ICT experience benefit community members, community organizations, and the community as a whole? *"The Peace Corps will strengthen host country KSAs with ICT. As a result, host country community members will have greater opportunity and capacity to learn, communicate, participate in local, regional, national and global discussions, get a job, expand businesses, and access resources, etc…"* 2. Distribute one copy of Anchor Areas to each participant. 3. Present the Anchor Areas individually, briefly discussing the description. 4. Highlight some of the ICT areas of work (i.e., radio, cellphones, mapping and GIS, computer education, web development, etc) and some of the better examples of how to integrate ICT into Volunteer activities or offer ICT assistance.
Practice 30 minutes	1. In pairs or groups, have them develop a scenario where they would use the ICT4D Anchor Areas in a project in their site. 2. Have participants work together to develop their scenario (20 minutes). Emphasize that it doesn't have to be realistic or detailed, just that they are thinking about integration of ICT. Move around the room to provide assistance as needed.

Phase / Time / Materials	Instructional Sequence
	3. When participants have finished, have them report to the group briefly their scenario. Remind the participants to be brief; they will have an opportunity to expand on their scenario to the group. This is just to get a summary idea of what each group is working on.
Information 2 10 minutes Handout*: Principles of Digital Development*	**Principles of Digital Development** Participants are introduced to the broad Principles of digital development and ICT for Development. This acts both as a framework for project management and also a checklist for new project development. 5. Call on participants to read out the principles and then in their own words to suggest why it might be important and appropriate in their work as a Peace Corps Volunteer. 6. Discuss any specific issues that arise – items that are missing from the list, what makes them particularly suited to digital projects, etc.

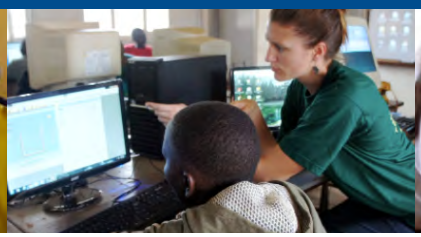
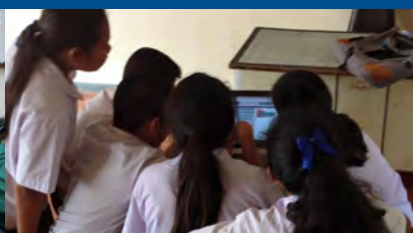
Application
 	
40 minutes
	Integrating ICT into Peace Corps projects
	In the same small groups, participants use the Principles as a checklist for their ICT activity scenario.
	
	1. Ask groups to respond to each principle as if it were a checklist for their scenario. How might they respond to each principle for their scenario.
	
	2. When everyone has finished, have each group present their scenario to the larger group.
	
	Ensure that all groups address the following:
	• **Description** of the project. For example,
	  ○ who (a role or a specific person) they would work with,
	  ○ what type of project it would be,
	  ○ what benefits should come from the project,
	  ○ who would benefit from the project, and
	  ○ how this project fulfills the goals of Peace Corps.
	• **Overall objective** of the project/activity (*without* using technology – remember that it's not about using phone, it's about communication. It's not about using a computer, it's about learning English, etc.)
	• **Specific advantage of ICT** in which this ICT intervention is a tool (a more efficient way) of achieving that objective that what is currently done.
	• **Challenges** in implementing the scenario (lack of Internet, lack of electricity, local know-how, basic digital literacy, time, etc.)

Phase / Time / Materials	Instructional Sequence
	• **Two principles** that should be addressed as high-priority when planning to carry out this intervention (privacy and security, sustainability, etc.) 3. Finally, if possible, provide examples of how Volunteers incorporated ICT into diverse project areas, especially examples that overcame the challenges mentioned and addressed the principles discussed from above. If Volunteer members of the ICT4D Committee are in attendance, ask them to share real-life vignettes; otherwise, recount stories of Volunteer projects, either from Volunteers directly or from the VRT.
Assessment 5 minutes	Session Learning Objectives 1, 2, and 3 were assessed observationally during the session. **LO1**: assessed during the Motivation section, in which participants learn about the ICT skills of other participants. **LO2**: assessed during the Practice section, in which participants explain an area in which to integrate ICT into their work. **LO3**: assessed during the Application, in which participants explain two principles to appropriately integrate ICT into their work.
Trainer Notes for Future Improvement	Date & Trainer Name: [What went well? What would you do differently? Did you need more/less time for certain activities?]

OVERVIEW

ICT4D

Information and Communication Technologies for Development

What is ICT4D?

"Technology is an amplifier of human intentions"

— Kentaro Toyama

ICT4D (or Informationan and Communication Technologies for Development) is a sector in international development focused on improving social and economic wellbeing by leveraging ICTs.

It draws from several disciplines both as a field of practice and academically so as to offer a more holistic approach towards technology for social good.

Anchor areas

Volunteers in all sectors in all regions in all posts use ICTs as a way to empower their communities in a variety of creative,

- Digital Literacy
- ICTs for Education
- Design Thinking
- Girls and STEM Education
- Radio and Mass Media
- Mobile Communications
- GIS and Mapping
- Technology for M&E
- Media Production
- Libraries and Maker Spaces

Why ICT4D?

In the past two decades alone, advances in mobile technology and digital connectivity have completely revolutionized how we interact with the world around us.

There are four intersecting trends and opportunities that guide Volunteer problem-solving to ICT solutions:

1. Improve the quality of the services Volunteers provide.
2. Improve Volunteer's ability to serve more people.
3. Help people to use information to manage better.
4. Leverage experience from one project, sector, and Volunteer to the next more effectively.

Principles

These Digital Principles of Development (digitalprinciples.org) inform and guide Peace Corps to make strategic investments in programs in digitally supported development work.

1. Design with the User
2. Understand the Existing Ecosystem
3. Design for Scale
4. Build for Sustainability
5. Be Data Driven
6. Use Open Standards, Open Data, Open Source, and Open Innovation
7. Reuse and Improve
8. Address Privacy & Security
9. Be Collaborative

Strategy

Get involved

peacecorpsict4d.org ict4d@peacecorps.gov @peacecorpsict4d

UPDATED MARCH 15, 2016 BY G.KRIESHOK

Trainer Material 1: ICT Experience among Volunteers and their Communities

Part 1: "Have you ever…"

For each ICT experience listed below, ask participants to raise their hand if the statement is **true** about them.

As appropriate to the local environment, comment on the number who raise their hand; mention how many people would likely *not* be raising their hand in their communities.

Read through the items one at a time.

"Raise your hand if you…"

1. ***"…have ever owned your own cell phone."***
2. ***"…have ever sent a text message."***
3. ***"…have ever owned your own computer or laptop."***
4. ***"…learned to type in school."***
5. ***"…know how to use a computer mouse or trackpad."***
6. ***"…have ever written an email."***
7. ***"…know how to search for information on the Internet."***
8. ***"…have ever used a computer to help you get a job (email, search, resume creation, apply, etc."***
9. ***"…have ever created a blog or a website."***
10. ***"…have ever used social media."***

Part 2: Volunteer Skill sets

Ask participants to raise their hand if they have experience in the areas below.

Raise your hand if you have an interest or background in…"

1. ***"…setting up computer equipment, connecting to the Internet, etc."***
2. **"…setting up software, debugging and troubleshooting, virus protection, etc."**
3. ***"…managing multiple and/or international SIM cards and mobile phones."***
4. ***"…helping with media production, digital photography, video editing."***
5. ***"…STEM education and/or Digital and Computer Literacy education."***
6. ***"…GIS, mapping, GPS, and geospatial data."***
7. **"…radio programming, podcasts, audio editing."**
8. **"…anything else?"**

How to Help Someone Use a Computer

Adapted with permission from "The Network Observer" by Phil Agre[1]

First you have to tell yourself some things

Nobody is born knowing this stuff.

You've forgotten what it's like to be a beginner.

If it's not obvious to them, it's not obvious.

A computer is a means to an end. The person you're helping probably cares mostly about the end. This is reasonable.

The best way to learn is through apprenticeship—that is, by doing some real task together with someone who has skills that you don't have.

Your goal is not to solve their problem. Your goal is to help them become one notch more capable of solving their problem on their own.

Knowledge lives in communities, not individuals. A computer user who's not part of a community of computer users is going to have a harder time of it than one who is.

By the time they ask you for help, they've probably tried several different things. As a result, their computer might be in a strange state. That's not their fault.

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[1] http://dlis.gseis.ucla.edu/pagre/

HAVING CONVINCED YOURSELF OF THESE THINGS, YOU WILL FIND YOURSELF MUCH MORE WILLING TO DO THE FOLLOWING

Never do something for someone that they are capable of doing for themselves.

Don't take the keyboard. Let them do all the typing, even if it's slower that way, and even if you have to point them to each and every key they need to type. That's the only way they're going to learn from the interaction.

Be aware of how abstract your language is. For example, "Get into the editor" is abstract and "press this key" is concrete. Don't say anything unless you intend for them to understand it. Keep adjusting your language downward towards concrete units until they start to get it, and then slowly adjust back up towards greater abstraction so long as they're following you. When formulating a take-home lesson ("when it does this and that, you should check such-and-such"), check once again that you're using language of the right degree of abstraction for this user right now.

Attend to the symbolism of the interaction. In particular, try not to tower over them. If at all possible, squat down so your eyes are just below the level of theirs. When they're looking at the computer, look at the computer. When they're looking at you, look back at them.

Find out what they're really trying to do. Is there another way to go about it?

Don't say "it's in the manuals". (You probably knew that.)

ANCHOR AREAS

ICT4D

Information and Communication Technologies for Development

Volunteers in all sectors in all regions in all posts use ICTs as a way to empower their communities in a variety of creative,

At Peace Corps, we use the tools available to use in order to have the greatest impact. ICTs in development separate yesterday from tomorrow.

*Help to **empower**, **amplify**, and **support** Peace Corps' global mission.*

peacecorpsict4d.org

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Digital Literacy

Volunteers educate their communities and counterparts on the use of digital tools, mobile phones, and computers.

ICTs for Education

Volunteers use ICTs to contribute to education universally and to ensure it is accessible, equitable, impactful, and sustainable.

Radio and Mass Media

Volunteers amplify the reach of their programs through broadcast media such as radio, television, and the Internet.

Design Thinking

Volunteers use design thinking and promote creative capacity-building to respond to the challenges of their host communities and counterparts.

Technology for Monitoring & Evaluation

Volunteers use mobile technologies to monitor their project activities, collect feedback, evaluate their work, and scale their successes.

Mobile Communications

Volunteers use mobile messaging platforms such as SMS or (short-message texting services) to be more inclusive, and to communicate in real-time.

GIS and Mapping

Volunteers use geospatial information systems (GIS) and mapping approaches to assist in community assessments, participatory analysis, and sector-specific projects.

Girls and STEM Education

Volunteers engage and girls in STE(A)M to teach students critical thinking, creative capacity-building, and the value of education.

Media Production

Volunteers use digital audio photography and videography in order to act as storytellers and to engage the Third Goal of Peace Corps.

Libraries and Maker Spaces

Volunteers help to promote, build, renovate, and support local learning in their communities.

UPDATED MARCH 15, 2016 BY G.KRIESHOK

PRINCIPLES FOR DIGITAL DEVELOPMENT

The following set of principles represents a concerted effort by donors to capture the most important lessons learned by the development community in the implementation of technology-enabled programs. Having evolved from a previous set of implementer precepts endorsed by over 300 organizations, these principles seek to serve as a set of living guidelines that are meant to inform, but not dictate, the design of technology-enabled development programs.

ONE: DESIGN WITH THE USER

- Develop context-appropriate solutions informed by user needs.
- Include all user groups in planning, development, implementation, and assessment.
- Develop projects in an incremental and iterative manner.
- Design solutions that learn from and enhance existing workflows, and plan for organizational adaptation.
- Ensure solutions are sensitive to, and useful for, the most marginalized populations: women, children, those with disabilities, and those affected by conflict and disaster.

TWO: UNDERSTAND THE ECOSYSTEM

- Participate in networks and communities of like-minded practitioners.
- Align to existing technological, legal, and regulatory policies.

THREE: DESIGN FOR SCALE

- Design for scale from the start, and assess and mitigate dependencies that might limit ability to scale.
- Employ a "systems" approach to design, considering implications of design beyond an immediate project.
- Be replicable and customizable in other countries and contexts.
- Demonstrate impact before scaling a solution.
- Analyze all technology choices through the lens of national and regional scale.
- Factor in partnerships from the beginning, and start early negotiations.

FOUR: BUILD FOR SUSTAINABILITY

- Plan for sustainability from the start, including planning for long-term financial health, e.g. , assessing total cost of ownership.
- Utilize and invest in local communities and developers by default, and help catalyze their growth.
- Engage with local governments to ensure integration into national strategy, and identify high-level government advocates.

FIVE: BE DATA DRIVEN

- Design projects so that impact can be measured at discrete milestones with a focus on outcomes rather than outputs.
- Evaluate innovative solutions and areas where there are gaps in data and evidence.
- Use real-time information to monitor and inform management decisions at all levels.
- When possible, leverage data as a by-product of user actions and transactions for assessments.

SIX: USE OPEN DATA, OPEN STANDARDS, OPEN SOURCE, OPEN INNOVATION

- Adopt and expand existing open standards.
- Open data and functionalities, and expose them in documented APIs (Application Programming Interfaces) where use by a larger community is possible.
- Invest in software as a public good.
- Develop software to be open source by default with the code made available in public repositories and supported through developer communities.

SEVEN: REUSE AND IMPROVE

- Use, modify, and extend existing tools, platforms, and frameworks when possible.
- Develop in modular ways favoring approaches that are interoperable over those that are monolithic by design.

EIGHT: ADDRESS PRIVACY & SECURITY

- Assess and mitigate risks to the security of users and their data.
- Consider the context and needs for privacy of personally identifiable information when designing solutions and mitigate accordingly.
- Ensure equity and fairness in co-creation, and protect the best interests of the end-users.

NINE: BE COLLABORATIVE

- Engage diverse expertise across disciplines and industries at all stages.
- Work across sector silos to create coordinated and more holistic approaches.
- Document work, results, processes, and best practices, and share them widely.
- Publish materials under a Creative Commons license by default, with strong rationale if another licensing approach is taken.

For more information, visit DIGITALPRINCIPLES.ORG