DISTANCE AND BLENDED LEARNING

Part 1: An Overview and Introduction to Assessing Resources, Needs, and Capacities

MOMENTUM Knowledge Accelerator

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Suggested Citation

Blaber, Christine, and Victoria Neff. 2021. *Distance and Blended Learning: Part 1: An Overview and Introduction to Assessing Resources, Needs, and Capacities.* Washington, DC: USAID MOMENTUM Knowledge Accelerator.

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ACKNOWLEDGEMENTS

ABBREVIATIONS

CEUs	Continuing education units
CHW	Community health worker
IT	Information technology
JSI, Inc.	John Snow, Inc.
LMICs	Low- and middle-income countries
MNCH/FP/RH	Maternal, newborn, and child health services, family planning, and reproductive health
MOH	Ministry of Health
OTH	Online training hub
USAID	United States Agency for International Development
VMMC	Voluntary medical male circumcision

SUMMARY

The movement to deliver health provider in-service training via distance learning has been underway for several years. This trend is a result of many factors, including expanded access to the internet and technology, concerns about taking staff (especially health facility staff) away from their jobs to attend in-person training, and the significant cost of face-to-face training. The COVID-19 pandemic is accelerating the use of digital technologies in multiple ways in low- and middle-income countries (LMICs), including for COVID-19 surveillance, testing, quarantine, and health care, as well as for training and learning across the health care system.

This guide defines different types of distance learning and the advantages and challenges associated with each approach, and outlines key considerations and steps to transition in-person trainings to virtual ones. MOMENTUM projects can use these steps in planning for virtual training programs. This guide features assessment tools to help training programs to assess the digital learning resources, capacities, and needs of their training program, training participants, and trainers.

Part Two of this series provides guidance for assessing and selecting technology tools for creating and delivering training. It also discusses mechanisms and strategies for communicating with training participants before, during, and after training, includes an overview of assessment in distance and blended learning, and recommends assessment methods.

INTRODUCTION

The COVID-19 pandemic ranks as one of the most significant global public health crises in the last hundred years. In response, governments enacted policies and practices to reduce community transmission of the virus and individuals adopted behaviors such as mask wearing, frequent handwashing, and social distancing to reduce the risk of exposure to the virus.

One of the practical effects of the pandemic is that health systems were required to focus on enhancing the skills of health providers and community health workers at a time when traditional face-to-face, in-service trainings were not feasible. In the early months of the pandemic, some health programs across the globe began to move training content online, albeit with insufficient time to plan or pilot test approaches. Facing pressure to respond and adapt quickly, many trainers unquestionably felt unprepared, overwhelmed, or anxious.

TRANSITION TO REMOTE TRAINING

The movement to deliver health provider in-service training via distance learning has been underway for several years. This trend is a result of many factors, including expanded access to the internet and technology, concerns about taking staff (especially health facility staff) away from their jobs to attend in-person training, and the significant cost implications of face-to-face training (e.g., travel, food, and accommodation expenses for participants and trainers). The COVID-19 pandemic is accelerating the use of digital technologies in multiple ways in low- and middle-income countries (LMICs), including for COVID-19 surveillance, testing, quarantine, and health care, as well as for training and learning across the health care system.[1,2,3] As a result, many trainers need support to rapidly scale up their skills in using digital tools and adapting in-person training content for a distance or blended learning format.

The global investment by country governments, health sectors, and their partners in digital infrastructure and defeating the pandemic presents a prime opportunity to expand in-service virtual training of health workers in LMICs. In 2020, USAID released its first-ever _Digital Strategy_, demonstrating commitment to strengthening the use of technology in its programming to improve outcomes. USAID followed the release of this broad, multi-sectoral strategy with _A Vision for Action in Digital Health_, which outlines the agency's priorities related to digital technology in the health sector. USAID's goal is to support country-level capacity, national-level strategies, and architecture. Using technology to deliver distance and blended learning training in the health sector is a digital health intervention and, therefore, should be aligned with best practices in digital health, including donors' and country-level strategies.

MOMENTUM

The development of this guide was supported through MOMENTUM, a suite of innovative awards funded by the United States Agency for International Development to holistically improve maternal, newborn, and child health services, voluntary family planning, and reproductive healthcare in partner countries around the world. MOMENTUM awards support sustainable development in countries by strengthening the capacity and resilience of local institutions to provide high-quality health care for their populations.
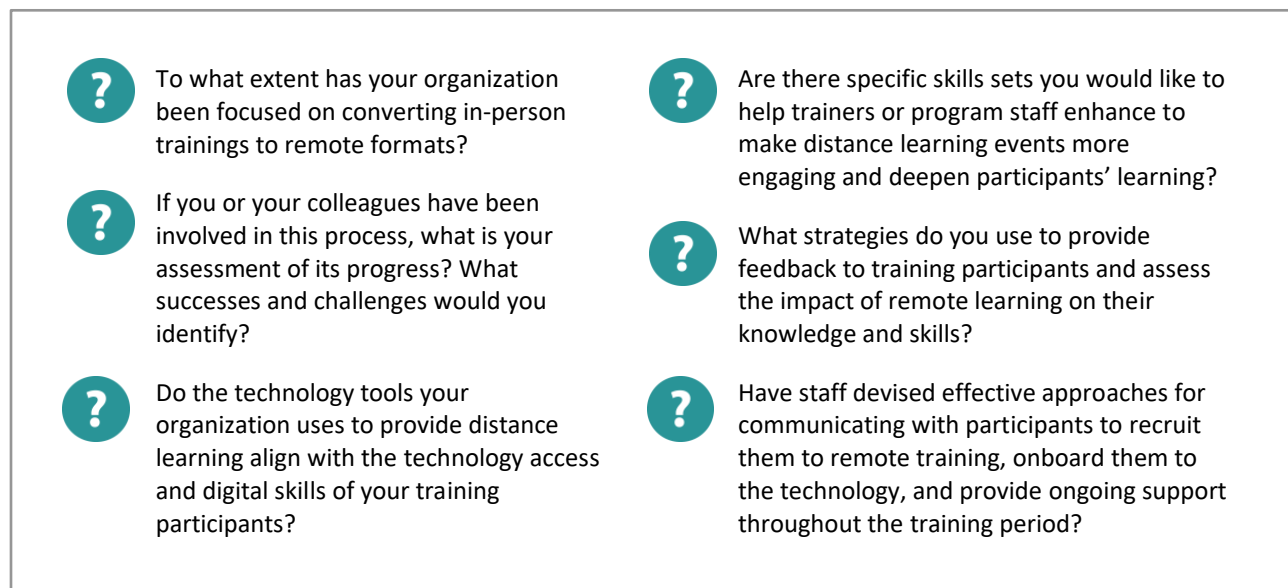
Given MOMENTUM's focus on strengthening the technical and organizational capacity of local organizations, the awards typically include training components, making the design and delivery of virtual training a priority across the MOMENTUM suite.

While significant research has been done on the effects of distance learning on students in primary, secondary, and higher education settings, there is little comparable research on distance and blended learning for health care professionals in LMICs. Anecdotally, trainers report observing the following impacts of distance learning training for health professionals in resource-limited settings:

- Greater access to training for a broader audience, especially for those who live far from the training location, have family responsibilities at home, or experience restricted mobility.
- Reduced training costs for participants and the organization sponsoring the training.
- Enhanced input from ministries of health on training infrastructure and content.
- Time saved from reduced traveling to training locations.
- Opportunity for training participants to revisit the training material later on for a refresher.
- Training content can be updated more readily and shared with previous and current participants.
- Increased familiarity among participants and trainers with a broader range of technologies.
- Participants in self-paced distance learning are able to access training content at a time and in a location convenient for them.

With the expansion of technologies and connectivity, it is likely that the push to transform in-person health provider trainings to remote delivery will intensify over time. Many organizations may never fully return to their former, in-person training models; therefore, this is an optimal moment to pause and reflect on your approach to developing and delivering distance learning for health workers. This is also a good time to consider longer-term questions, such as those presented in Figure 1.

FIGURE 1. LONGER-TERM QUESTIONS ABOUT DISTANCE AND BLENDED LEARNING

To what extent has your organization been focused on converting in-person trainings to remote formats?

If you or your colleagues have been involved in this process, what is your assessment of its progress? What successes and challenges would you identify?

Do the technology tools your organization uses to provide distance learning align with the technology access and digital skills of your training participants?

Are there specific skills sets you would like to help trainers or program staff enhance to make distance learning events more engaging and deepen participants' learning?

What strategies do you use to provide feedback to training participants and assess the impact of remote learning on their knowledge and skills?

Have staff devised effective approaches for communicating with participants to recruit them to remote training, onboard them to the technology, and provide ongoing support throughout the training period?

PURPOSE AND AUDIENCE

This guide outlines key considerations and steps in transitioning in-person trainings to virtual training. It offers:

- An overview of the definitions, benefits, and challenges of distance learning and blended learning.

- Suggested strategies for understanding your organization's training needs, resources, and priorities.

- Approaches to assess training participants' access, skills, and comfort levels with different technologies.

The guide was developed for the MOMENTUM suite of awards and is meant to be used by MOMENTUM-affiliated in-country staff who coordinate or deliver trainings to health workers in partnership with ministries of health (MOHs) and other entities. The guide can also be used by staff at MOHs, universities, private sector health care organizations, and other organizations engaged in training health workers in low-resource settings. While this guide provides an introduction to the process of transforming in-person training on maternal, newborn, and child health services, voluntary family planning, and reproductive health care (MNCH/FP/RH) into virtual training, much of the guidance here is relevant for those designing distance or blended learning trainings from scratch, regardless of the technical content.

OVERVIEW OF DISTANCE AND BLENDED LEARNING

This section defines types of learning involving remote approaches and describes their respective benefits and challenges.

DISTANCE LEARNING

In **distance learning**, the trainer and training participants, who are physically separate, use technology to cover the training content and communicate with each other. Depending on a wide range of factors, distance learning can occur either *synchronously* (participants learn at the same time) or *asynchronously* (participants learn at different times).

There are different ways in which distance learning can be implemented.

SYNCHRONOUS DISTANCE LEARNING

In **synchronous distance learning**, the trainer and training participants gather remotely at the same time (e.g., via live chat, live streamed videos, or interactive video conferences like Zoom).

The benefits of synchronous distance learning include:

- Communication between the trainer and participants occurs in real time (no delay). This can reduce participants' isolation and enhance their feelings of connection and community.
- It can be more engaging for participants.
- It enables the trainer or facilitator to provide participants with feedback and clarification on the spot, which can reduce confusion and misunderstanding.

The challenges of synchronous distance learning include:

- Scheduling a common time when the trainer and participants are all available to engage remotely.
- If participants do not have a reliable, stable internet connection and are expected to access training using a personal data plan, the cost can be a significant hindrance to participation.
- The technology tools used to host and deliver synchronous trainings often do not operate well in settings with low bandwidth.
- Time that the trainer would otherwise spend on training content may be spent helping participants resolve technology issues.

⟳ ASYNCHRONOUS DISTANCE LEARNING

In **asynchronous distance learning**, the trainer prepares training content before participants access it, for example, through pre-recorded presentations or screencasts (a digital recording of a computer screen output, often containing audio narration).

The benefits of asynchronous distance learning include:

- Participants have more flexibility to engage in training content at a time and place that is convenient for them, which may result in more participants completing the training.
- Participants work at their own pace and have more time to digest the content.
- Participants can review the training content on-demand as frequently as they like.
- It can increase consistency when delivering training to many participants.

The challenges associated with asynchronous distance learning include:

- Because participants have fewer interactions with the trainer and each other, they may be less likely to fully engage with the training content.
- When participants find training content confusing or encounter challenges, they cannot ask the trainer questions at that moment and receive immediate clarification or assistance.
- Participants must hold themselves accountable for setting aside time to engage with the training content, which can result in fewer individuals absorbing the content or completing training.

When health care providers in the private sector travel off-site to attend in-person training, it typically means that their facility is able to see fewer patients that day, which results in revenue loss. Thus, asynchronous distance learning can be especially important for private sector health care professionals.

◐ BLENDED LEARNING

Blended learning is a training model that includes a face-to-face component and a remote learning component. In blended learning, the in-person and virtual learning elements of the training are designed to complement one another.

Blended learning enables participants to have:

- Enhanced opportunities to learn with and from their peers.
- More time to interact with the training content.
- More opportunities between in-person sessions to apply new knowledge and skills in their work.

- More occasion to receive support for learning over time.
- Access to video and audio files, which can be important for individuals with different learning styles.

Blended learning training can give rise to many of the obstacles associated with synchronous and asynchronous distance learning (e.g., problems with internet access and data plans, participants dropping out because of the off-the-job hours it requires). The following are challenges specific to blended learning training:

- Because this approach may be new to many, the trainer needs to provide—and regularly restate— clear expectations of training participants.
- Developers of trainings that use blended learning need to determine which components of their training content are best delivered face to face and which are best delivered remotely.

Certain in-service trainings do not lend themselves to remote delivery, especially those that involve teaching clinical skills. Some trainers have determined that in these situations it is best to use a blended learning approach, with the didactic components of the training delivered virtually and the hands-on and skill-building portions held in person.

At this stage, it is best not to draw conclusions about whether synchronous or asynchronous distance learning or blended learning is the most appropriate instructional approach for your training program. Ultimately, you will choose a design that aligns with your program's goals and content, as well as the assets and needs of your organization and the professionals who participate in the training. Regardless of how your training is delivered, it is critical to ensure that it aligns with research findings demonstrating that effective training emphasizes developing competencies rather than simply imparting knowledge, is interactive, and includes skills demonstration and practice.[6,7]

The remainder of this guide describes the process of assessing your training program's capacity and resources and gathering information about your trainers' and training participants' technology skills and access. Part Two of this series explores how to use the information you gather to select technology tools for training, identify strategies for communicating with training participants, and assess distance and blended learning trainings.

Training Programs

A review of training programs for community health workers (CHWs) in sub-Saharan Africa concluded that blended learning is a promising, cost-effective, and sustainable approach to training CHWs.[4] Additionally, prospective modeling comparing the costs of a traditional face-to-face training with a blended learning training determined that the blended approach would reduce total training costs by 42 percent.[5]

EXAMPLES OF DISTANCE AND BLENDED IN-SERVICE TRAINING FOR HEALTH PROVIDERS

Asynchronous Learning:
DMPA-SC TRAINING

PATH, an international health organization, has developed a ten-session asynchronous online training course on DMPA-SC, an injectable subcutaneous contraceptive for women. Targeting health workers who provide family planning services, the course is based on an in-person training curriculum that was implemented for many years. Available in English and French, the course can be accessed using a computer, tablet, or mobile phone with internet access.

Interactive exercises, resources, and job aids are included in the course, along with short quizzes throughout and a pretest and final quiz. Participants are required to pass all quizzes to receive a certificate of completion. To supplement the online course, PATH and JSI, Inc. have developed short training videos in French and English to teach patients and health workers to administer DMPA-SC.

Blended Learning:
VOLUNTARY MEDICAL MALE CIRCUMCISION TRAINING

The Reaching Impact, Saturation, and Epidemic Control project, funded by USAID and the U.S. President's Emergency Plan for AIDS Relief, operates the Voluntary Medical Male Circumcision (VMMC) Online Training Hub (OTH). The Hub is a VMMC e-learning platform with training, resources, and communities of practice for clinicians in East and Southern Africa. Providers participate in an in-person surgical training once they have completed the online training.

The VMMC online course covers didactic information previously delivered through in-person workshops. Health providers can use mobile phones, tablets, or laptops to access the course and are able to download training components when they are in a location with internet access and review them offline when they do not have access. The course includes animations, multimedia elements, quizzes, and links to supplemental resources. Participants are required to pass the course before proceeding to hands-on, in-person surgical training. They connect with each other and course moderators through OTH's social collaboration feature.

INITIAL STEPS FOR PLANNING A DISTANCE OR BLENDED LEARNING TRAINING PROGRAM

Just like designing any public health program, planning a distance or blended learning training program should include gathering essential information and evaluating options and approaches based on program

goals and evidence-based practices. When transforming or creating a distance or blended learning training, you should consider the *Principles for Digital Development*, a set of nine guidelines for integrating best practices into technology-enabled development programs. The principles are listed in Figure 2.

FIGURE 2: PRINCIPLES FOR DIGITAL DEVELOPMENT

- Design with the User
- Understand the Existing Ecosystem
- Design for Scale
- Build for Sustainability
- Be Data Driven
- Use Open Standards, Open Data, Open Source, and Open Innovation
- Reuse and Improve
- Address Privacy and Security
- Be Collaborative

The next section is focused on your organization: its training needs, resources, and priorities. The subsequent section examines your participants' distance learning needs. These sections provide strategies for assessing your trainers' and training participants' digital literacy and their access to digital devices and a reliable, affordable internet connection.

UNDERSTAND YOUR ORGANIZATION'S TRAINING NEEDS, RESOURCES, AND PRIORITIES

The first step in designing any training program is assessing your organization's capacity and resources and aligning them with your programmatic goals.

REFLECT AND CONSIDER

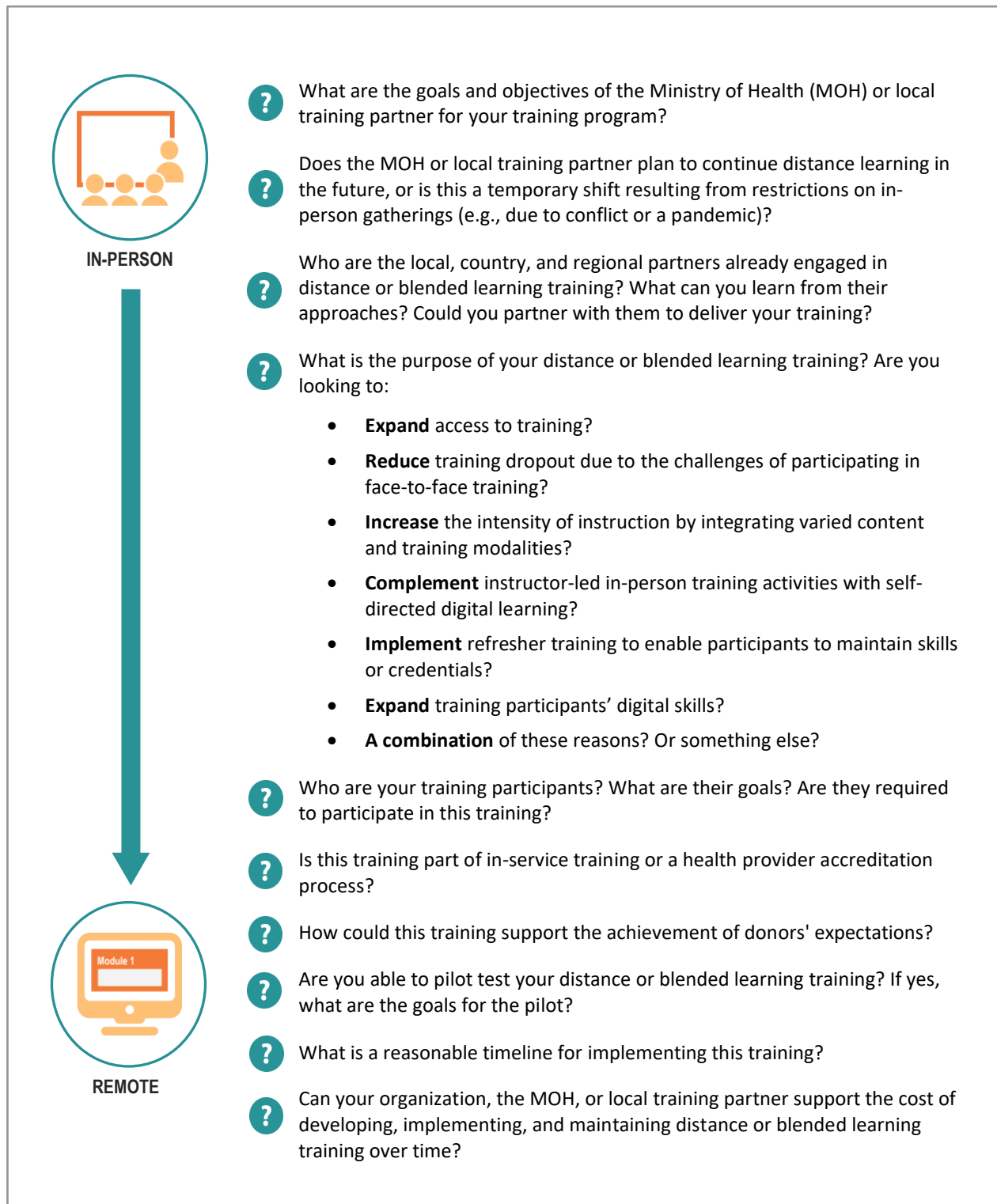Before selecting a program delivery model or technology tools for your remote training, you need clarity about why you are transitioning in-person training to a virtual format and what a sustainable training model would look like. At this early stage in your assessment and design process, you should review relevant digital standards, including the *Principles for Digital Development* mentioned earlier.

Figure 3 highlights questions to consider at this stage in the process.

Figure 3. Questions to Consider Before Transitioning In-Person Training to Remote

? What are the goals and objectives of the Ministry of Health (MOH) or local training partner for your training program?

? Does the MOH or local training partner plan to continue distance learning in the future, or is this a temporary shift resulting from restrictions on in-person gatherings (e.g., due to conflict or a pandemic)?

? Who are the local, country, and regional partners already engaged in distance or blended learning training? What can you learn from their approaches? Could you partner with them to deliver your training?

? What is the purpose of your distance or blended learning training? Are you looking to:

- **Expand** access to training?
- **Reduce** training dropout due to the challenges of participating in face-to-face training?
- **Increase** the intensity of instruction by integrating varied content and training modalities?
- **Complement** instructor-led in-person training activities with self-directed digital learning?
- **Implement** refresher training to enable participants to maintain skills or credentials?
- **Expand** training participants' digital skills?
- **A combination** of these reasons? Or something else?

? Who are your training participants? What are their goals? Are they required to participate in this training?

? Is this training part of in-service training or a health provider accreditation process?

? How could this training support the achievement of donors' expectations?

? Are you able to pilot test your distance or blended learning training? If yes, what are the goals for the pilot?

? What is a reasonable timeline for implementing this training?

? Can your organization, the MOH, or local training partner support the cost of developing, implementing, and maintaining distance or blended learning training over time?

ASSESS PROGRAM CAPACITY AND RESOURCES

The next step is to assess your program's capacity: the technology tools that can be used in training and trainers' knowledge, skills, and comfort using the training technologies. If you are partnering with a local organization to deliver training, you will need this information to understand what is feasible for the organization and trainers.

Some questions to consider at this stage:

- **What digital learning platforms and distance or blended learning training programs are already in place in this area or country?** Connect with the organizations that support these platforms and programs to learn about their accomplishments, challenges, and strategic approaches. Are there tools, technologies, or connections that they can help you to leverage for your training? For sustainability, it is important to select a digital learning platform that can be managed locally by the host organization.

- **What technology resources does your program (or your local training partner) have or have access to?** This may include software licenses for tools to host training content or deliver instruction, online products, or devices your organization is able to lend. Conduct a survey of these technologies to create an inventory of technology assets. **Appendix A** contains a sample inventory tool that you can adapt to suit your needs.

- **Do the trainers experience barriers to technology access? What can your organization do to reduce the barriers?** For example, if trainers are expected to deliver training from their homes, do they have stable, affordable internet access? Explore whether your organization can provide trainers with SIM cards for their cell phones. (SIM cards contain a chip enabling users to access a local mobile network.) Alternatively, your organization might provide compensation for trainers' mobile data usage.

- **What skills and comfort levels do your trainers have related to technology?** It's important not to assume that trainers have the digital skills they will need to deliver a distance or blended learning training. Additionally, the rapid pace of change in digital technologies means that trainers will need to be lifelong learners, continually enhancing their technology skills. This guide includes two sample assessment tools and links to a third tool to gauge the skills trainers may need to transition to a distance or blended learning approach.

  - **Appendix B** is a six-page tool for assessing trainers' knowledge of and comfort using technology to deliver training. It explores trainers' use of different types of software, online resources, communication tools, and video technologies, their technology professional development goals, and their interest in learning about new technologies and using them in training. This tool is especially useful for those who want a detailed understanding of trainers' familiarity and comfort with a wide range of technologies. It is also helpful for those developing a training that requires trainers to have specific technology skills or a capacity-building training to enhance trainers' technology skills.

- **Appendix C** contains a simpler, three-page technology self-assessment tool for trainers that explores the devices that trainers can access, their internet access, cell phone plan, and use of essential apps (e.g., email, Excel, Google Docs). This tool is useful for those who need a basic understanding of trainers' digital literacy skills. You can adapt either of these tools for your training program.

- The Digital Literacy Self-Assessment is a free, self-guided tool used around the world to assess digital literacy skills. You may want to give trainers and training participants the link to the tool so they can assess their basic computer skills, software skills, and use of technology to accomplish tasks. Once an individual completes one of the assessments, they are able to access resources for building specific skills. This tool is useful for those who are seeking to help trainers advance their technology skills on their own time.

- **Are there relevant free or low-cost resources or training content you can leverage in your training?** There is a wide array of free and low-cost resources and courses online for health professionals, some of which you may want to consider integrating into your distance or blended learning training. Table 1 below lists several distance learning resources for health professionals; additional distance learning resources can be found on the MOMENTUM Hub (knowledge management platform). If you identify online training content that is relevant for your training program, ask yourself: Is the information accurate, up-to-date, and relevant for my audience? Is the content presented in a way that meets the objectives of my training? Do I have permission to use or adapt the content? If unsure about permissions, reach out to the organization or individual who developed the content.

- **Are there existing free or low-cost tools you can use?** Do some digging to find out if there are relevant technology or training resources you can leverage in your training. For example:

  - Are there other training providers, such as pre-service health institutions, offering distance or blended learning training for health providers in your country or region? What tools, content, or resources do they use?

  - If you need technology tutorials in a local language, are there any local organizations that have such tutorials to share? Consider posting questions like this on the Global Digital Health Network listserv. If your project is part of the USAID MOMENTUM suite, you may post questions to the Momentum Knowledge Management Discussion Forum Community Chat page.

  - Can you leverage open educational technology resources like the GCF Free platform, Google's Applied Digital Skills curriculum, or GSMA's Mobile Internet Skills Training Toolkit to enhance trainers' and staff's digital capacities?

With information about the capacity of your program, trainers, and staff to plan and implement distance and blended learning trainings, you'll have a clearer sense of the support that will be needed to implement training. Your leadership, communication, and modelling of key behaviors can support trainers and training participants to embrace new ways of working digitally.

TABLE 1. DISTANCE LEARNING HEALTH RESOURCES AND COURSES FOR HEALTH PROFESSIONALS

Title	Developer/ Host	Description	Topics	Link
Global Health eLearning Center	USAID	Courses on a variety of public health technical areas	Broad range of health and programmatic issues	https://www.globalhealthlearning.org/about
ORB Platform	mPowering Frontline Health Workers	Openly licensed tools, courses, job aids, and videos for mobile devices	Maternal and child health (including nutrition and water, sanitation, and hygiene)	http://www.health-orb.org/
Hesperian Health Guides and Digital Tools	Hesperian Health Guides	Health promotion guides and digital resources	Broad range of health issues	https://hesperian.org/books-and-resources/digital-commons
Knowledge for Health Toolkits	Hosted by Knowledge SUCCESS	Collections of resources chosen by experts	Family planning, reproductive health	https://knowledgesuccess.org/resources/k4health-toolkits/
OpenWHO	World Health Organization	Basic, intermediate, and advanced courses on responding to health emergencies	Disease outbreak, interventions, humanitarian response, preparing for pandemics	https://openwho.org/
Training Resource Package for Family Planning	Hosted by Knowledge SUCCESS	Training components and tools for designing, implementing, and evaluating training	Family planning, reproductive health	https://www.fptraining.org/
OppiaMobile Digital Campus	Digital Campus Program, University of Alcalá Foundation	Mobile-ready content for pre-service and in-service training of health workers	Broad range of health issues	https://digital-campus.org/courses/

UNDERSTAND TRAINING PARTICIPANTS' DIGITAL ACCESS, SKILLS, AND NEEDS

Delivering training using distance or blended learning is much more than polishing PowerPoint slides and sending participants a videoconference link. You will need to consider the experience of the learner at every step to ensure that what they are asked to learn and do is aligned with their skills and needs.

WHO ARE YOUR TRAINING PARTICIPANTS?

It is important to understand who your training participants are. Anticipating the barriers they may face in accessing or fully participating in remote training will help you to design a program that meets their needs and expectations. Figure 4 offers some questions to reflect on.

FIGURE 4. QUESTIONS ABOUT PARTICIPANTS' TRAINING PRIORITIES, REQUIREMENTS, AND EXPERIENCES

What competing priorities may impact individuals' interest in participating or availability to participate in training? For example, what is their workload or work schedule? Does it vary day to day or week to week?

What are their incentives for participating? For example, are they motivated by financial incentives, career mobility, receiving recognition, mastering new skills, or developing new work relationships?

What are their requirements for continuing professional development, and how can these be used as an incentive to complete the training?

How often and on what topics do they regularly receive training? What has been their experience of previous in-person trainings?

Have they participated in blended or distance learning training? What was their response to the format?

Are there behaviors, attitudes, or skills they might need to participate meaningfully? For example, readiness to learn a new skill, or time management, organizational, or goal-setting skills?

Perhaps most importantly, is the training content you are developing or adapting relevant for participants' job responsibilities?

WHAT LEVELS OF TECHNOLOGY ACCESS, SKILLS, AND COMFORT DO PARTICIPANTS HAVE?

The flexibility of distance and blended learning training and training participants' ability to adjust the pace of learning to their environment and needs make it possible for more health providers and others working in the health sector to engage in training offerings. However, as with trainers and program staff, you will need to understand training participants' technology access, skills, and comfort levels. Rather than making assumptions, survey participants as you are developing your training approach—or before—to understand how they are feeling and the support they may need. (If the group is large, consider surveying a random sample.)

See **Appendix D** and **Appendix E** for simple, one-page technology surveys that can be used to assess the kind of support participants may need for distance or blended learning training. In addition, you can adapt any of the trainer assessments in the previous section to assess training participants' technology access and use.

Gender can play a role in access to technology. In some regions, women do not have access to mobile devices, rendering training delivered via feature phones, smartphones, or tablets unfeasible. The assessment tools in Appendixes D and E ask participants to indicate their gender. When you analyze participant responses to either tool, you can do so by gender to identify any gender access gaps. The second guide in this series explores gender and other disparities and contains suggestions for enhancing training participants' access to digital devices and the internet.

Once you have determined the supports that training participants need to access, participate in, and succeed in a blended or distance learning program, you are ready to make decisions about how to marshal and deliver those supports. You will use what you learn about these issues as you get ready to select technology tool(s) to deliver training. The next guide in this series covers how to use this information to make decisions about technology tools.

TRAINING INCENTIVES AND ACCREDITATION

For many training participants, offering a compelling incentive or continuing education units (CEUs) can be a powerful motivator to participate in face-to-face, distance, or blended learning training. Some strategies employed by distance and blended learning training programs in LMICs to create incentives for participants include:

- Working with a local regulatory body to grant participants CEUs or a certificate of completion.

- Providing food at mealtime when several participants join a synchronous training session from their place of work.

- Reimbursing individuals for their data plan costs (or providing stipends) for accessing the virtual components of a training (e.g., to join a synchronous session or to complete an assignment). This incentive also addresses the obstacle of participants having no or limited internet access.

- Providing participants with digital credentials or badges they can use to verify the competencies they have built through training.

Consider how your training program might integrate such incentives into your distance and blended learning trainings.

WHAT LIES AHEAD?

In this guide you have learned about the distinctions between distance and blended learning and the benefits and challenges of each, as well as the steps to assessing the technology capacity and resources of your organization or training program as you plan distance or blended learning training. You have also been

introduced to a range of adaptable tools for assessing the technology access, skills, and comfort levels of your trainers and training participants. MOMENTUM projects can use these steps in planning for virtual training programs.

Part Two of this series provides guidance for assessing and selecting technology tools for creating and delivering training. It also discusses mechanisms and strategies for communicating with training participants before, during, and after training, includes an overview of assessment in distance and blended learning, and recommends assessment methods.

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APPENDIX A: TECHNOLOGY INVENTORY TOOL

The tool was adapted from the Chicago Citywide Literacy Coalition. It can be used to identify technology assets and needs associated with your training program. It is meant to be completed by a staff member who oversees training or a lead trainer.

YOUR ORGANIZATION AND YOU	
Organization Name:	Phone:
Date:	
Address:	
City: State: Country:	
Primary Contact Person:	Primary Contact Phone:
Primary Contact Email:	
Organization's Mission/Purpose:	

TECHNOLOGY INVENTORY
What is your annual technology budget?
Do you have an up-to-date inventory of devices owned by your organization? *(If yes, please attach to this tool)*   ☐ Yes   ☐ No
How many of the following types of computers does your organization have? Windows-based: Number of desktops: _____   Number of laptops: _____ Mac-based: Number of desktops: _____   Number of laptops: _____ Linux-based: Number of desktops: _____   Number of laptops: _____ Other (e.g., tablets, Chromebooks) Please describe and provide quantities:
How many of the following servers does your organization have? Windows 2000/2003: _____ (#)   Windows 2008: _____ (#)   Windows 2012: _____ (#) Other (please insert # and describe):

Which of the following does your organization have?
(Please check all that apply and provide quantity in the space that follows.)

☐ Printers **____**(#)   ☐ LCD Projectors ____(#)   ☐ Interactive Whiteboards ____(#)

☐ Other *(Please describe.)*

INTERNET ACCESS

What percentage of computers/devices in your organization have internet access?   **____** %

What type of internet access does your facility have?

How many rooms in your facility have internet access?

Who is your internet access provider?

How would you describe internet access in your facility?

Internet Speed *(Please check only one.)*

Fast speeds				**Average speeds**			**Slow speeds**		
☐ 10	☐ 9	☐ 8	☐ 7	☐ 6	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1

Internet Consistency *(Please check only one.)*

Nearly always works				**Sometimes does not work**			**Frequently down**		
☐ 10	☐ 9	☐ 8	☐ 7	☐ 6	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1

Please share other information/comments regarding your facility's internet access here:

TECHNOLOGY PLAN/SUPPORT STRUCTURE

IT support contact name:	Phone:
IT support contact email:	

Do you have an up-to-date written technology plan?   ☐ Yes   ☐ No

Who provides information technology (IT) support for your organization? *(Check all that apply.)*

☐ Full-time in-house support

☐ Part-time in-house support

☐ Centralized (organization-wide) IT support

☐ Outsourced IT support (Please specify who/what organization): _____

When there are IT issues in your facility, how quickly do these tend to be resolved?

☐ Very quickly   ☐ Reasonably quickly   ☐ Somewhat slowly   ☐ Very slowly

Please share additional information about your organization's technology supports here:

_____

STAFF TECHNOLOGY USE

Number of staff in your organization: _____	Percentage of staff who use computers regularly: _____ **%**

Please list all software that staff use on a regular basis:

_____

TRAINING PARTICIPANTS' USE OF AND ACCESS TO TECHNOLOGY

How many training participants does your organization serve?   _____

How many computers does your organization have that are accessible to training participants? _____

How many hours per week do training participants have access to computers within your facility?

_____

Does your facility have a computer lab? ☐ Yes ☐ No   If "yes," how many computers?   _____

Please indicate your estimate of the percentages of training participants who have regular access to each of the following:

Computers at home: ____%

Internet access at home:

Smartphones: ____%

Other: ____%   Please describe:

       ____%

SOFTWARE/APPLICATIONS
Does your facility have custom-developed platforms/websites/learning management systems that training participants use? ☐ Yes ☐ No If "yes," please describe: _____

APPENDIX B: DIGITAL SKILLS ASSESSMENT FOR TRAINING STAFF

This tool helps to assess trainers' knowledge of and comfort with a range of technologies, as well as the technology supports trainers may need. It is meant to be used by individuals who oversee training to identify capacity-building needs. Trainers may also elect to fill out the assessment for themselves to develop a clear sense of their technology competencies and the skills they may want to build. You may adapt the tool to focus on the specific technology skills required in your training program.

SOME OVERARCHING QUESTIONS ABOUT YOUR ACCESS TO TECHNOLOGY:

1. Do you have access to a computer or a tablet for training instruction at the organization that sponsors this training and/or at home (if needed)?

2. Do you have access to reliable, stable internet at the organization that sponsors this training and/or at home (if needed)?

3. Do you have access to other technology needed for this training (e.g., a smartphone, tablet, software, applications)?

HOW TO USE THIS TOOL

For each of the categories in the survey below, please write a number from 1 to 4 in Column A that corresponds with your skill level integrating these tools/skills into training activities. In Column B, write a number from 1 to 4 that corresponds with your interest in participating in professional development (to enhance your knowledge and skills) on this topic.

The following table defines each number in the scale of 1 to 4 for use in Columns A and B beginning on the next page.

	Column A: My skill level integrating these tools/skills into training activities.	Column B: My interest in professional development on this topic.
1	I have no experience with this tool or skill and/or I do not feel comfortable with it.	Not interested.
2	I have used this tool or skill a few times and/or I am somewhat comfortable with it.	Somewhat interested.
3	I use this tool or skill fairly regularly and/or I feel comfortable with it.	Interested.
4	I use this tool or skill regularly and/or I feel very comfortable with it.	Very interested.

This tool was adapted from digital literacy self-assessments developed by IDEAL Consortium members, including the SABES Program Support Professional Development Center and the Outreach and Technical Assistance Network.

BASIC COMPUTER OPERATION

You and your training participants will need to have some basic skills and knowledge. This can include skills such as starting up a laptop or using a keyboard and mouse.

	Column A: My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	Column B: My interest in professional development on this topic. *(Fill in a number 1-4)*
Performing basic computer operations, such as managing files, using the toolbar, keyboarding, opening and closing programs, moving between programs, printing, and uploading and downloading files.		
Fixing minor computer problems, such as the computer freezing, not printing, or no sound coming from the speakers.		

PRODUCTIVITY SOFTWARE

These tools allow people to perform tasks, such as creating written documents and presentations. Some examples of productivity software include Microsoft 365 (Word, Excel, PowerPoint, Publisher) and Google applications (Docs, Sheets, Slides).

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Using a word processing program (e.g., Microsoft Word, Google Docs) to create a variety of documents.		
Using presentation software (e.g., PowerPoint, Google Slides) to create presentations.		
Using a spreadsheet (e.g., Excel, Google Sheets) for personal use and to automate administrative tasks, such as keeping track of training attendance.		
Locating, scanning, and/or manipulating graphics and saving them in a variety of formats for training or related purposes.		

TRAINING DELIVERY AND INSTRUCTIONAL SOFTWARE

These resources include software to deliver instruction (e.g., Zoom, WhatsApp), host training content (e.g., Moodle, YouTube, web platform), complete online training curricula (e.g., online courses such as World Health Organization open online courses), or develop specific skills or program protocols (e.g., DHIS2 data entry).

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Evaluating and using a variety of content-specific training and instructional software programs.		
Regularly tracking and supporting the progress of training participants.		
Using a learning management system or content management system where participants access training content and complete assessments.		
Delivering training virtually (e.g., via webinars, video chats).		

ASSISTIVE TECHNOLOGY

These tools include assistive, adaptive, and rehabilitative devices that enable people with disabilities to perform tasks that they were formerly unable to complete or had great difficulty with.

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Creating training resources that are accessible for training participants with disabilities.		
Making written training content more accessible (e.g., slowing the cursor speed, increasing font size, using text-to-speech software).		
Using software and/or assistive devices (e.g., graphic organizers, closed captioning, adaptive keyboards).		

USING ONLINE RESOURCES

Many programs require trainers and training participants to use the internet to access and engage with the training content (for example, using open education resources).

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Using online resources on a regular basis; moving easily between websites for purposes such as research and communication.		
Evaluating the content of websites for validity and appropriateness.		
Creating and maintaining a website for information and communication.		
Uploading and downloading documents; saving and sharing documents, bookmarks, and other materials online.		

COMMUNICATION TOOLS

People communicate using a variety of online technology tools, including email, shared online documents, blogs, and social networking sites.

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Setting up an email account and communicating via email, including sending attachments.		
Creating or contributing to online discussions (e.g., via a blog, discussion forum, podcast, instant messaging, or other social media application).		
Joining and participating in an online meeting (e.g., webinar, videoconference, video broadcast).		

VIDEO TECHNOLOGIES

These tools include video cameras and video editing software that can be used to create training content and/or participant-generated videos or video tutorials.

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Creating video using a smartphone, camera, or tablet.		
Uploading and sharing video (e.g., via Vimeo, Facebook, or YouTube).		

PROFESSIONAL DEVELOPMENT

Keeping up with and integrating technology into training requires continuous learning and exploring. You may do this by reading about technology, subscribing to email lists, using social networking sites, talking to colleagues, and attending conferences.

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Participating in professional development courses or workshops related to integrating technology into training.		
Using listservs (email discussion lists), blogs, social media, online courses, and other web-based resources.		

EVALUATING AND USING NEW TECHNOLOGIES

One of the most challenging tasks you may face is keeping up with current technologies and choosing what is best for your training program.

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Being knowledgeable about and using technology tools to design and develop digital learning experiences and assessments.		
Using features of a mobile device or phone, such as text messaging, web access, and downloading and logging onto apps.		
Selecting technology appropriate for specific tasks; understanding how subject matter and technology are integrated in the training/learning process.		

SOCIAL AND LEGAL ISSUES

As training instructor, you can serve as a role model when it comes to knowing and obeying copyright, privacy, and other computer and internet use laws; modeling healthy habits while using computers; and mitigating online risks.

	My skill level integrating these tools/skills into training activities. *(Fill in a number 1-4)*	My interest in professional development on this topic. *(Fill in a number 1-4)*
Knowing what to do about internet safety, privacy, and security, digital footprints, and online reputation.		
Knowing and using strategies and techniques for information literacy.		

APPENDIX C: TECHNOLOGY ASSESSMENT QUESTIONS FOR TRAINERS

This tool is a simpler, alternate tool to the tool in Appendix B. It is meant for organizations to use in assessing their trainers' technology-related access and capacities. You can adapt this assessment for your training program.

Name: _____

Gender: ☐Male ☐Female ☐Other

	BASIC FEATURE PHONE	SMARTPHONE	TABLET	LAPTOP OR COMPUTER
I use: *(Select Yes or No for each device)*	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
I use this device at: *(Select all that apply)*	☐ Home ☐ Office ☐ Other (please describe):	☐ Home ☐ Office ☐ Other (please describe):	☐ Home ☐ Office ☐ Other (please describe):	☐ Home ☐ Office ☐ Other (please describe):
How often do you use each type of device?	☐ Daily ☐ Weekly ☐ Monthly ☐ Never	☐ Daily ☐ Weekly ☐ Monthly ☐ Never	☐ Daily ☐ Weekly ☐ Monthly ☐ Never	☐ Daily ☐ Weekly ☐ Monthly ☐ Never
I use this device for: *(Check all that apply)*	☐ Texting ☐ Voice calls ☐ Email ☐ Messaging apps (e.g., WhatsApp, Remind, Microsoft Teams) ☐ Accessing the internet	☐ Texting ☐ Voice calls ☐ Email ☐ Messaging apps (e.g., WhatsApp, Remind, Microsoft Teams) ☐ Accessing the internet	☐ Texting ☐ Voice calls ☐ Email ☐ Messaging apps (e.g., WhatsApp, Remind, Microsoft Teams) ☐ Accessing the internet	☐ Texting ☐ Voice calls ☐ Email ☐ Messaging apps (e.g., WhatsApp, Remind, Microsoft Teams) ☐ Accessing the internet

	BASIC FEATURE PHONE	SMARTPHONE	TABLET	LAPTOP OR COMPUTER
Do you share it with anyone?	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
If you share, with whom do you share it?	☐ Adult(s). How many? Enter #_____ ☐ Child(ren). How many? Enter #_____	☐ Adult(s). How many? Enter #_____ ☐ Child(ren). How many? Enter #_____	☐ Adult(s). How many? Enter #_____ ☐ Child(ren). How many? Enter #_____	☐ Adult(s). How many? Enter #_____ ☐ Child(ren). How many? Enter #_____

Do you use the internet on your phone? ☐ Yes ☐ No

If yes, how do you access the internet?

☐ Mobile data plan

☐ Wi-Fi (Home)

☐ Wi-Fi___33 (Public)

☐ Phone Hotspots i.e., Wi-Fi tethering

Do you have a cell phone subscription? ☐ Yes ☐ No

If yes, what type of plan do you have?

☐ Contract or postpaid (limited minutes and data)

☐ Prepaid (load minutes and data as you go)

☐ Other (please specify): _____

Do you have access to a printer? ☐ Yes ☐ No

Do you have access to a scanner? ☐ Yes ☐ No

How comfortable are you with… each of the items in this column?	Very confident	A bit nervous	Not comfortable	Don't know or N/A
Basic computer knowledge	☐	☐	☐	☐
Using email	☐	☐	☐	☐
Setting browser favorites/bookmarks	☐	☐	☐	☐

How comfortable are you with… each of the items in this column?	Very confident	A bit nervous	Not comfortable	Don't know or N/A
Using search engines	☐	☐	☐	☐
Uploading and downloading files	☐	☐	☐	☐
• **Google Drive**	☐	☐	☐	☐
• **Google Classroom**	☐	☐	☐	☐
• **Google Docs**	☐	☐	☐	☐
• **Microsoft OneDrive**	☐	☐	☐	☐
• **Microsoft OneNote Class Notebook**	☐	☐	☐	☐
• **Moodle**	☐	☐	☐	☐
• **Other Learning Management System**	☐	☐	☐	☐
Microsoft Word	☐	☐	☐	☐
Microsoft Excel	☐	☐	☐	☐
Microsoft PowerPoint	☐	☐	☐	☐
Online instruction	☐	☐	☐	☐
Khan Academy	☐	☐	☐	☐

How comfortable are you with… each of the items in this column?	Very confident	A bit nervous	Not comfortable	Don't know or N/A
Weebly	☐	☐	☐	☐
WhatsApp	☐	☐	☐	☐
YouTube	☐	☐	☐	☐
Microsoft Teams	☐	☐	☐	☐
Zoom	☐	☐	☐	☐

APPENDIX D: TECHNOLOGY USE SURVEY FOR TRAINING PARTICIPANTS

This short survey is meant to be used by trainers and those who oversee trainings. It helps to assess training participants' technology access, skills, and comfort levels, as well as the technology support participants may need.

Name: _____

Gender: ☐ Male   ☐ Female   ☐ Other

1. **Circle the devices that are available to you.**

Desktop Computer   **Laptop Computer**   **Feature Phone**   **Smartphone**   **Tablet**

2. **How comfortable are you using a computer to learn?**

1	2	3
Not comfortable. I need help.	I might need a little help.	I usually don't need help.

3. **How comfortable are you using a smartphone or handheld device to learn?**

1	2	3
Not comfortable. I need help.	I might need a little help.	I usually don't need help.

4. **Which of the following things do you do when you are on a desktop computer/laptop, smartphone, or tablet? Check all that apply.**

Activity	Desktop or laptop computer	Smartphone	Tablet
Search the internet.	☐	☐	☐
Send or receive email.	☐	☐	☐
Use social media (for example, Facebook, Twitter, WhatsApp, Instagram).	☐	☐	☐
Participate in online courses.	☐	☐	☐
Create or review documents (for example, Microsoft Word or Google Docs).	☐	☐	☐
Create or review presentations (for example, PowerPoint or Google Slides).	☐	☐	☐
Create or review spreadsheets (for example, Excel or Google Sheets).	☐	☐	☐
Other (please describe): _____	☐	☐	☐

5. **Do you have a reliable, stable internet connection in your home?**

☐ Yes

☐ No

6. **Apart from your home, what other places do you visit to use the internet or other technology devices?**

☐ Workplace

☐ Local business such as cafe or store

☐ Local school or university

☐ Other (please describe): _____

APPENDIX E: TRAINING PARTICIPANT SURVEY

This survey is adapted with permission from the JSI Rapid Immunization Skill Enhancement program in India. It uses open-ended questions to assess training participants' technology access and use. It is meant to be used by trainers to help determine how to structure distance and blended learning training.

1. Your name:

2. Gender: ☐ Male   ☐ Female   ☐ Other

3. What is your preferred language for reading and writing?

4. What is your preferred language for speaking?

5. What is the highest level of education you have completed?

6. Do you have your own cell phone?   ☐ Yes   ☐ No

    –   If yes, is it a smartphone or a basic feature phone?

7. What do you most often do on your phone (for example, make and receive calls, text, browse the web, use social media, other apps)?

8. Where do you access the internet?

9. Do you pay to access the internet?

10. At home, approximately how many hours per day do you have access to the internet?

11. How often do you stream videos?

12. If you were to participate in virtual (remote) training, would you access the training material on the go (for example, via a smartphone) or sit down and review the material on a computer?

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