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CAPACITY STRENGTHENING MEASUREMENT BRIEF

Effectively Measuring Training: Building Knowledge and Skills for Nutrition Programs



Credit: Karen Kasmauski/MCSP

INTRODUCTION

Achieving optimal nutrition outcomes requires dedicated resources, adequate local capacity to use those resources effectively, and an evidence base that informs best practice. Support for local leadership and opportunities for implementers to strengthen skills at all levels is also essential to sustaining nutrition and population development outcomes (Levinger 2021) (See figure 1).

Improving the skills and competencies of the global nutrition workforce (e.g., nutrition program managers and technical staff) to design, plan, implement, monitor, and evaluate nutrition services is one of the key capacity gaps that the nutrition sector needs to address to improve the coverage and effectiveness of nutrition service provision and ultimately health and nutrition outcomes (Shrimpton et al. 2014).

Training, an evidence-based action to improve skills and competencies, is a key way to address capacity gaps. However, to create, monitor, and evaluate training programs, practitioners need to implement effective measurement approaches. Improving training measurement allows supervisors and those who seek to improve nutrition skills to—

- Monitor and measure knowledge and skills gained effectively.
- Determine whether staff can apply newly developed competencies on the job.
- Provide evidence that training results met expectations.
- Provide a strong return on investment.

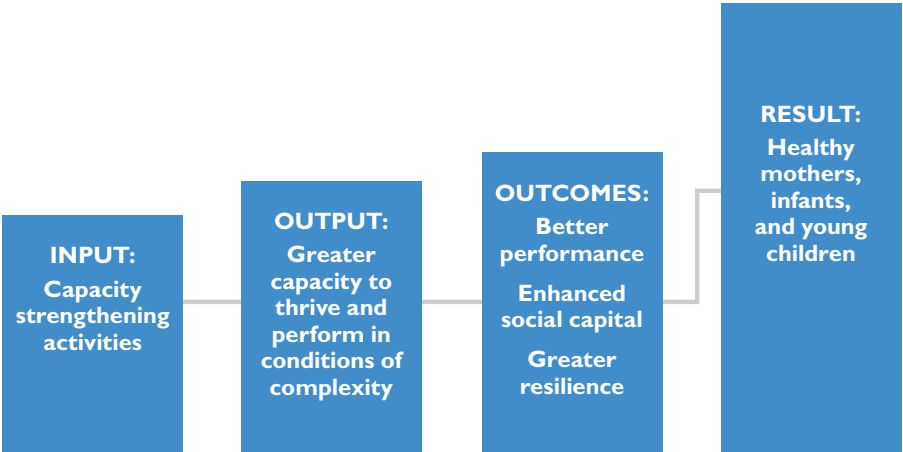
By measuring the impact of training, nutrition program implementers can ensure it reaches the desired outcomes and objectives. **Increased attention to learners’ needs, the design, content, and purpose of training programs is critical to improving nutrition programming.**

Purpose

This brief provides practical information about how to assess nutrition training programs, utilizing best practices from the capacity strengthening field to create more effective and efficient programs.

See the **Capacity Strengthening to Improve Nutrition Brief** for additional information on the challenges of measuring capacity strengthening activities while outlining the four main capacity dimensions within a nutrition context.

Figure 1. Capacity Strengthening Pathway



Adapted from Levinger 2021, fig 1

WHY DOES TRAINING MEASUREMENT MATTER FOR NUTRITION?

Achieving optimal nutrition outcomes often requires a comprehensive set of interventions. Quality delivery requires knowledgeable and skilled frontline workers (e.g., nurses, dietitians, and facility and community-based health workers or volunteers) who can assess, counsel on, teach about, treat conditions, and monitor a client's progress. These staff need skilled and knowledgeable support systems, including supervisors, monitoring and evaluation experts, and program managers to design, implement, and monitor quality nutrition services (Sunguya et al. 2013; Sanghvi et al. 2016). However, insufficient competencies and capacity (i.e., number, skills, and coverage of trained frontline workers) impede the scale-up and sustainability of nutrition programs (Fanzo et al. 2015; Bryce et al. 2008).

Training is only useful for nutrition capacity strengthening if practitioners need to improve or gain knowledge and skills. For training to sustainably change behavior and skills, participants must want to change their behavior and the new skills and behaviors taught must be socially acceptable and feasible in the given context (Rosenstiel 2015, 56f). Training will not improve nutrition outcomes or performance if the **root causes** are structural or related to processes, resources, or incentives.

The following factors impact the provision of quality nutrition services:

- There is a lack of high-quality training for frontline nutrition workers; service providers have insufficient knowledge, competencies, motivation, or time to provide quality counseling, often due to gaps in their numbers, distribution, training, and supervision (UNICEF 2021).
- Many low- and middle-income countries have outdated training and assessment materials; a lack of practical, hands-on training; and inadequate academic focus on public health nutrition (Fanzo et al. 2015).
- Staff turnover, varying skill levels, and roles and responsibilities of workers for nutrition necessitate a closer look at training efficacy; ensure training meets the needs to support the expected nutrition outcomes.
- External factors such as weather, war, politics, pandemics, and supply chain issues influence the training organizations' ability to respond to changing nutrition situations. Providing good nutrition services requires understanding and responding to changing local contexts.

Improving the quality of nutrition training cannot address all the capacity gaps mentioned above. However, increased attention and thoughtfulness when identifying skill gaps related to the local environment, and gaining a deeper understanding of motives, interests, and potential reward mechanisms when designing, measuring, and supporting nutrition training can potentially help to alleviate barriers.

PHASES TO MEASURE NUTRITION TRAINING PROGRAMS

There are two key phases for measuring nutrition training programs:

1. **Training Preparation and Design:** During this phase, identify the goals of the training program to determine what specific skills, behaviors, and knowledge need to measure—and among whom.
2. **Monitoring and Evaluation Design and Implementation:** Focus on developing training measurement indicators based on a clear monitoring plan to understand how training efforts contributed to the training goals and affected capacity. This phase also includes identifying if the learning from the training led to behavior change, and ultimately, improved nutrition outcomes.

Typically, training preparation and design occur first, but practitioners often alter their plans throughout the program cycle to adjust for implementation challenges or re-defined monitoring, evaluation, and learning outcomes.

EXAMPLE: FAO (n.d.) developed a set of needs assessment tools for analyzing nutrition education capacity for low- and middle-income countries.

Phase I: Training Preparation and Design

What are the Goals and Desired Outcomes of the Nutrition Training Program?

How will the training program support the overarching nutrition outcomes? Specifying the overall nutrition goals helps to identify whether training is the right approach to use or whether other forms of individual capacity strengthening (mentorship, peer learning, or coaching), might be better.

For example, to conduct the C-IYCF Counseling training, understand what the current community-based IYCF system looks like and staff competencies and constraints:

- Have staff already received IYCF training and if, so, how recently were they trained?
- Have staff participated in other similar/relevant trainings? Is the system currently functioning well?
- What are the current barriers to implementation? What changes could improve the system?

Answering questions like these can help determine how to tailor the generic package to context and current needs. UNICEF's Planning Guide outlines the eight steps required to prepare for a C-IYCF Counseling training (UNICEF 2013). (See [box 1](#)).

Identify the Purpose for Monitoring and Evaluating the Training Program

Articulate why the nutrition-training program is being monitored and evaluated. Reasons for measurement include—

- Determine whether trainers met the key learning objective.
- Assess whether learners improved their competencies and confidence to utilize new skill sets from the training program.
- Determine whether the learner applied knowledge and skills gained in their job.

- Assess the impact of the training program on specific nutrition outcomes.
- Identify strengths and weaknesses in the training program.
- Identify inputs on how to improve future training.
- Assess whether the training program was cost effective.
- Decide who should participate in future training.

Identify Information Required to Better Understand Training Needs

With identified goals in mind, use the New World Kirkpatrick Evaluation model (Kirkpatrick and Kirkpatrick 2021) to understand training needs and better measure, monitor, and evaluate training programs. This model assesses the effectiveness of training programs on four levels:

1. **Reaction:** the response of the learner to the training experience (Did they enjoy the training? What was the learners' training experience?)
2. **Learning:** knowledge and skills, and learners' perception of the training (How much did attendees learn from the content after training?)
3. **Behavior:** the learners' change in behavior and improvement (Did the learning transfer into practice in the workplace?)
4. **Results:** the ultimate impact of the training. (Did the behavior change supported by the training lead to intended outcomes?)

TIP: Combine training with coaching, mentorship, or peer-to-peer learning initiatives to ensure greater effectiveness.

Jhpiego's (2016) Help Mothers Survive program designed a low-dose, high-frequency training model to improve training results. Trainers conduct a 15-minute training with application and observation once a week with follow up the next week to observe if learners' changed their behaviors and skills. This effective training/coaching approach designs short weekly trainings based on the learner's ability to develop micro-steps towards new larger skills and behaviors.

BOX I. EXAMPLES OF NUTRITION-PROGRAM TRAINING GOALS

- **Training Guide for Community-Based Management of Acute Malnutrition (CMAM)**: Increase participants' knowledge of and build practical skills to implement CMAM in emergency and non-emergency settings (FANTA 2018).
- **The Community Infant and Young Child Feeding Counseling Package (C-IYCF) Training**: Prepare community health workers with technical knowledge on the recommended breastfeeding and complementary feeding practices for children from birth up to 24 months, enhance their counseling, problem solving and reaching-an-agreement (negotiation) skills, and prepare them to effectively use the related counseling tools and job aids (UNICEF 2013).
- **Measurement and Promoting Child Growth Tool: A Module of the Nutrition Toolkit**: Train field-level staff and volunteers to measure children accurately and understand the data for improving child growth and nutrition (World Vision International 2011).
- **The Essential Nutrition Actions and Essential Hygiene Actions Training Guide**: Introduce health professionals to how to deliver hygiene and nutrition information to clients during visits. Participants will learn which nutrition services to deliver when, so they can act as resource persons for adolescents, women, pregnant and breastfeeding women, and caregivers of young children. Conduct this training with nutrition managers to equip them to provide supportive supervision to health and community workers (Guyon et al. 2015).
- **Uganda Health Management Information System for Nutrition (HMIS) Training Package**: Strengthen the knowledge and skills of health workers to collect, compile, and report timely, complete, and quality nutrition data (FANTA 2017).

This model seeks to address some of the challenges of measuring training programs by **encouraging trainers and organizations to incorporate evaluation as part of the training design process** and monitoring and adjusting to attain the behavior and performance goal or desired outcomes.

How to Use the New World Kirkpatrick Model

During the **preparation and design phase**, identify what specifically to evaluate based on each level of the New World Kirkpatrick model. Ensure stakeholders involved in the process agree with the intended purpose and methods for monitoring and evaluating the training program, as well as the benefits of gaining additional data on training effectiveness. For example, training evaluation tools such as observational checklists require local commitment, participation, and compliance. [Table 1](#) shows examples of questions to ask.

When USAID Advancing Nutrition pilot tested a new training on Responsive Care and Early Learning in the Kyrgyz Republic, the budget included—

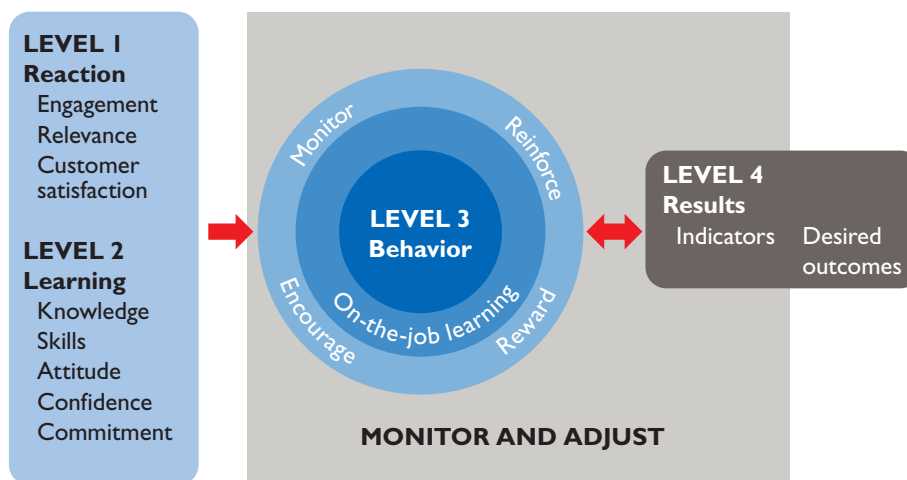
- funding to adapt the materials to the local context
- training of key staff (including program managers, health workers, community activists, and supervisors)
- training measurement (assessing the feasibility and efficacy)
- supportive supervision to support quality implementation
- documentation of project and training learning.

Based on stakeholder feedback, clarify strategies to incorporate assessments throughout the training program.

Phase 2: Monitoring and Evaluation Design and Implementation

Create a Training Monitoring and Evaluation Plan
Based on critical feedback from stakeholders and identified evaluation strategies, develop a training monitoring and evaluation plan that outlines the results the training program plans to achieve, the measurement processes for both monitoring and

Figure 2. New World Kirkpatrick Model



Adapted from Kirkpatrick and Kirkpatrick 2021, 3

evaluation and any indicators needed to measure training program progress and success. This will help identify when and how to evaluate each evaluation level. Develop any data collection tools and processes needed before implementation. [Box 2](#) defines the differences between training monitoring versus training evaluation.

Select the appropriate evaluation method and tools, which could include—

- questionnaires
- interviews
- focus groups
- observation (i.e., hands-on demonstration, simulation).

[Annex 1](#) documents clear objectives that indicate success for each level, evaluation methods to use, the timeframe for each evaluation method, and who is responsible for each part (level) of the training plan.

Compile the List of Required Data, Key Performance Indicators, and Build the Processes and Tools to Collect Data

Using the constructed training monitoring and evaluation plan, build the tools and processes for data collection while developing the training content.

[Table 2](#) provides tool examples, potential indicators, timeframes for when to conduct evaluations, and key considerations according to each level of the New World Kirkpatrick Model.

There are currently no standard indicators established, so design indicators individually based on the context and situation.

Find additional illustrative examples of key performance indicators from the individual/health personnel, organization, and system levels in [table 2](#) and in Brown, LaFond, and Macintyre (2003).

TIP: Only conduct assessments based on the level of available resources (i.e., time, human, and financial) dedicated to the training program. Think about the resource requirements for each level:

- **Level 1:** Low level of effort, limited resources required
- **Level 2:** Medium level of effort, small-to-medium resources required
- **Level 3:** High level of effort, medium-to-high level of resources required
- **Level 4:** High level of effort, high level of resources required

BOX 2. TRAINING MONITORING VS. TRAINING EVALUATION

Training Monitoring: Use monitoring to measure progress towards the training intervention achieving its goal of behavior, skill, or knowledge change. Monitoring progress helps ensure that the intervention will achieve its goals. In the New World Kirkpatrick Model, monitoring will mostly occur in levels 1, 2, and 3.

Training Evaluation: Measure the training intervention's outcomes, impact, and or overall achievement of its intended behavior, skill, or knowledge change. Evaluations provide greater evidence that can determine changes in behavior or impact from training interventions. However, they can take greater time, budget, and human resources to conduct.

Note: See [annex 2](#) for examples of tools to support monitoring and evaluating of training (Kirkpatrick and Kirkpatrick 2021, 1).

Table 1. Questions to Ask Stakeholders

Evaluation Level	Questions to Ask
<p>4: Results Start at level 4. What results are we trying to obtain? Help the training team clarify what to hold themselves accountable on and what they are trying to achieve.</p>	<ul style="list-style-type: none"> • What outcome do you wish to see after this training? • What would make this training a success in your eyes? • What problem can this training help solve? Are there key metrics in this program you are trying to improve? If, so what are they?
<p>3: Behavior Examine level 3. What behaviors do nutrition practitioners need to demonstrate in order to contribute to the intended outcomes? Analyze behavior changes with observational and interview surveys before training as a baseline assessment and then in identified intervals after training to determine if learning has translated into behavior change.</p>	<ul style="list-style-type: none"> • What do you expect learners to do on the job because of this training? • What do you consider good performance? • What indicators do you need to measure your success? <ul style="list-style-type: none"> – How do you expect the learner's behavior to influence your organization's success? • What support and accountability resources are available after training? • What do we need to do to ensure training graduates do what they should after training? (Ask trusted managers and supervisors the same questions.)
<p>2: Learning Move down to level 2. What knowledge and skills do frontline workers need to learn to perform as desired on the job? Assess their current knowledge and skills with surveys and pre-tests to identify the learning objectives.</p>	<ul style="list-style-type: none"> • Do you want test scores and/or other types of data related to the learning accomplished during the program? • Do you want to know if clients' opinions of the services they received changed following interactions with trained health providers?
<p>1: Reaction Finally, consider level 1. How should we design and deliver training to ensure participants enjoy it, find it relevant to their jobs, and feel confident to complete required tasks once the training is complete? Conduct frequent pulse checks throughout training and identify participant expectations before and after training to determine if expectations are met.</p>	<ul style="list-style-type: none"> • To what degree are you interested in knowing what participants thought about the training? • Did participants like and enjoy the training? • Did they consider the training relevant to their own needs and/or the needs of the organization? • How did participants perceive the practicability and potential for application of the learning? • Did they consider it an effective use of their time? • Were the style, pace, content, delivery methods, and materials appropriate? • Has the training motivated further learning? • Would participants recommend the training to their colleagues?

Table 2. Example Indicators*

New World Kirkpatrick Evaluation Level	Indicator Examples	Key Considerations
1: Reaction	<ul style="list-style-type: none"> • % of learners that found training relevant • % of learners that enjoyed the training program • % of learners that would recommend the training to colleagues • % of trainees who reported feeling confident to apply the knowledge and skills they learned 	<p>Before and during training course:</p> <ul style="list-style-type: none"> • Develop feedback mechanisms during the design stage to understand how learners are responding to the training. Examples include daily pulse checks and questions at transitions between modules such as— <ul style="list-style-type: none"> – “How do you feel the training is going thus far?” – “Can one person recap the main points of what we just learned?” • Design learner-centered survey questions such as— <ul style="list-style-type: none"> – “How relevant was what you learned today to your role and responsibility?” – “Do you anticipate any barriers in using what you learned in your role? If so, how might you mitigate them?” – “What do you think the impact of what you learned today will be when you return to work?” – “Rate your confidence in applying the new process from a 1 (least) through a 5 (most).”
2: Learning	<ul style="list-style-type: none"> • Average percent change in test scores • % of trainees that improved from their pre to post test scores 	<p>While pre/post tests are a popular form of measuring learning, they only provide a quick snap shot of the overall effectiveness of certain training techniques in imparting knowledge and skills. Pair them with other measurement tools to assess a learner’s capacity to apply the knowledge and skills gained in training to their daily job performance in level 3.</p>
3: Behavior	<ul style="list-style-type: none"> • #/% of skills performed correctly by trainee based on observation checklist • #/% of skills self-reported to be conducted correctly by trainee 	<p>Pairing checklists with post-observation discussions can serve two purposes:</p> <ol style="list-style-type: none"> 1. Observe whether the trainee is performing the skill correctly to assess efficacy of the training. 2. Support improvements in service provision through supportive discussion and problem solving between the supervisor and the trainee.
4: Results	<ul style="list-style-type: none"> • % of facilities offering infant and young child feeding (IYCF)** counseling • % of caregivers of children 0–23 months who received IYCF counseling • % of IYCF counseling sessions considered high quality*** • % of facilities with appropriate staff to support quality IYCF counseling services*** • % of recipients of IYCF counseling that were satisfied 	<p>External factors may influence some indicators. These include caregiver knowledge, behaviors, and beliefs; community accessibility; and demand for services.</p>

* See [annex I](#) for descriptions of example tools to use to support monitoring and evaluation of training at each level.

** We use IYCF counseling as a nutrition program example.

*** How “high quality” or “appropriate staff” are defined depends on the context. The Community IYCF (UNICEF 2013) and Baby-Friendly Hospital Initiative Guidance ([UNICEF and the World Health Organization](#)) provide specific guidance about the quality of counseling that may be useful.

Implement the Training Monitoring and Evaluation Plan

During this phase, identify if the training resulted in improvements in knowledge and skills leading to behavior change that contributes to achieving larger nutrition outcomes and goals. Training monitoring and evaluation should focus on real-world application. What happens when learners are attempting to apply what they learned in their work (level 3)?

For example, UNICEF's [C-IYCF Supportive Supervision/Mentoring and Monitoring Guidance](#) trains supervisors to monitor and supervise health workers to provide quality IYCF counseling. This monitoring not only supports health workers as they provide the services, but also offers insights to supervisors and program staff on whether staff are adhering to their training (UNICEF 2013).

Another example comes from the World Health Organization's guidance on how to monitor and follow up on participants after conducting their infant and young child feeding counseling training course. The [training guide](#) identifies when follow up should happen (1–3 months later), provides guidance on how to assess the efficacy of the training course, and reinforce the skills learned during the training (WHO 2021).

Additionally, in the Kyrgyz Republic, USAID's Strengthening Partnerships, Results, and Innovations in Nutrition Globally project (SPRING n.d.) project worked with the government to create supervision checklists and guidelines for line supervisors to assess health workers' on-the-job performance following clinical trainings on IYCF and anemia. These tools helped SPRING and the government assess how well health workers provided services, retained skills, and address gaps in a timely manner.

Monitor training on an ongoing basis with available time and resources to determine how learners are adapting to new behaviors and utilizing new skills and knowledge. For example, a training program could utilize observation checklists at quarterly intervals and a performance assessment at the six-month or one-year mark to determine skill development.

EXAMPLE: The USAID SPRING project (2015) developed the [Improving Nutrition Program Assessment](#) tool, which includes components such as assessing whether training contributed to reaching the intended results.

Measure changes at level 4 by conducting a program evaluation. Focus on the degree to which targeted outcomes and changes in performance are attributable to the application of knowledge and skills gained because of the training; evaluation occurs less frequently than monitoring, especially with level 1 or 2. At the individual level, performance measurement tools, such as those described in [annex 1](#), are fairly straightforward. Determining if outcome and impact level change occurred due to training makes measuring results at the organizational dimension or higher challenging. Document observed changes by measuring results that directly contribute to the overarching goals and outcomes. Control for other factors that might account for the observed change.

TIP: To ensure training programs meet their objectives, implement key performance drivers such as reinforcement, encouragement, and rewards to attain the intended outcomes.

See [annex 4](#) for more information and relevant examples of performance drivers to support learners post training.

KEY CONSIDERATIONS AND RECOMMENDATIONS

To support effective nutrition training programs, consider the following recommendations:

Preparation and Design Phase

- Conduct a training needs assessment to identify what level of knowledge and skills learners are at, which training sessions they previously participated in, and what worked and did not. Learn from experiences to develop content that meets learners where they are.

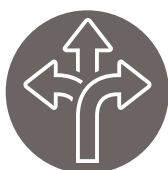
BOX 3. ON-THE-JOB PERFORMANCE EVALUATION TOOLS AND APPROACHES

Multiple ways exist to measure and monitor on-the-job performance:

- **training-evaluation performance exam:** evaluate performance after training
- **performance rubric:** give a learner and the organization better insight into the individual's ability to take on new behaviors and/or skills
- **observational checklists or regularly scheduled interviews with relevant individuals:** identify if behavior or skill changes are occurring
- **peer-to-peer or self-monitoring and reporting system:** dashboards can track and support information sharing.

Annex 3 reviews a two-phase process with tools on how to effectively capture an individual's performance while participating in an on-the-job learning or training program.

- When budgeting for training, include needs assessments, measurement, and monitoring activities, as well as any additional activities that reinforce and support the learning.
- Budget time and resources based on the levels to evaluate and monitor. Increase budget and resources when moving up from Kirkpatrick level 1 to level 4. Evaluate reaction to the training (level 1) and/or the learning (level 2) if there isn't budget and time to evaluate behavior change (level 3). The higher the level, the more insight and knowledge gained about the type of change that leads to outcome and impact levels.



Make sure to adequately budget resources for this level of assessment for multi-year activities, as time is required to observe behavior change.

– **Level 4 (Results) for training programs with large budget and time-frame:** This is the most challenging and costly level.

Based on the five-year USAID project cycle, implementing partners should allow for ample time to gather data on the impact in the final year of programming. This level is best suited for large-scale program evaluations for completed projects.



For instance, use—

- **Level 1 (Reaction) for all training programs:** This is the least expensive and requires the least amount of effort in preparation. It provides basic information on the participants' experience of the training event.
- **Level 2 (Learning) for technical skills training programs:** If resources are limited, prioritize measuring more technical training programs to identify learning and knowledge retention.
- **Level 3 (Behavior) for strategic training programs:** Choose this option if there are multiple years to monitor and evaluate whether training goals have been achieved.

Monitoring and Evaluation Phase

- Evaluating individual behavior changes over time requires following trainees from the training environment to the field setting. Develop protocols, tools, and training evaluation plans in advance. Consider any potential disruptions or pivots in the pilot.
- For the investment to be worthwhile, learners should demonstrate a certain level of competence. If a large proportion of the learners score poorly at the end of training, consider the following before longer-term follow-up is undertaken:



- what baseline the learners were at
 - how the training was marketed and who the training targeted
 - the validity of the indicators for the target population.
 - factors related to the training content or training delivery to achieve the intended behavioral outcome(s), which could include revising the training format, ensuring instructor competency, and relevant course resources.
- Carefully consider what measures to use to assess behavior over time:



- Align measures to assess individual achievement of particular competencies with the training objectives.
 - Base time and resources required on the measurement requirements.
 - Metrics should be specific, valid, and reliable, and have sufficient sensitivity to detect changes in behavior prior to and following training.
- Include qualitative approaches to augment quantitative measures and enrich interpretation of findings.



REFERENCES

- Banfield, James and Brad Wilkerson. 2014. “Increasing Student Intrinsic Motivation and Self-Efficacy through Gamification Pedagogy.” *Contemporary Issues in Education Research*, 7(4):291–298. <https://doi.org/10.19030/cier.v7i4.8843>
- Brown, L., A. LaFond, and K. Macintyre, 2001. “Measuring Capacity Building.” MEASURE Evaluation, Carolina Population Center University of North Carolina at Chapel Hill. Accessed May 4, 2022. https://pdf.usaid.gov/pdf_docs/Pnacm119.pdf
- Bryce J, D. Coitinho, I. Darnton-Hill, D. Pelletier, P. Pinstrup-Anderson for the Maternal and Child Undernutrition Study Group. 2008. “Maternal and Child Undernutrition: Effective Action and the National Level.” *Lancet* 371: 510–526. [doi.org/10.1016/S0140-6736\(07\)61694-8](https://doi.org/10.1016/S0140-6736(07)61694-8)
- Fanzo, Jessica C., Matthew M. Graziose, Klaus Kraemer, Stuart Gillespie, Jessica L. Johnston, Saskia de Pee, Eva Monterrosa, et al. 2015. “Educating and Training a Workforce for Nutrition in a Post-2015 World.” *Advances in Nutrition*. 6(6) 639–47. doi.org/10.3945/an.115.010041
- FANTA (Food and Nutrition Technical Assistance III Project). 2017. “Health Management Information System for Nutrition (HMIS) Training Package: A Facilitator’s Guide.” Accessed July 19, 2022. <https://www.advancingnutrition.org/resources/uganda-health-management-information-system-nutrition-hmis-training-package>
- FANTA (Food and Nutrition Technical Assistance III Project). 2018. *Training Guide for Community-Based Management of Acute Malnutrition (CMAM)*. Washington, DC: FHI 360/FANTA.
- FAO (Food and Agriculture Organization). n.d. “Nutrition Education Needs and Capacity Analysis Package”. Accessed May 19, 2022. <https://www.fao.org/nutrition/education/professional-training/needs-assessment/en/>
- Guyon A., V. Quinn, J. Nielsen, M. Stone-Jimenez, 2015. “Essential Nutrition Actions and Essential Hygiene Actions Training Guide: Health Workers and Nutrition Managers.” Accessed July 19, 2022. https://coregroup.org/wp-content/uploads/media-backup/documents/Resources/Tools/ENA_EHA/ENA_EHA_Reference_Manual_Health_Workers_Nutrition.pdf
- Jhpiego. 2016. “Helping Mothers Survive”. Accessed May 19, 2022. <https://hms.jhpiego.org/wp-content/uploads/2016/08/hms-implementation-guide.pdf>
- Kirkpatrick, J. and W.K. Kirkpatrick. 2021. “Introduction to the New World Kirkpatrick Model.” Accessed May 4, 2022. <https://www.kirkpatrickpartners.com/wp-content/uploads/2021/11/Introduction-to-the-Kirkpatrick-New-World-Model.pdf>
- Levering, Beryl. 2021. *Measuring and Assessing Capacity: A Landscape Review*. Washington, DC: USAID MOMENTUM.
- Murre, J.M.J., J. Dros, 2015. “Replication and Analysis of Ebbinghaus’ Forgetting Curve.” *PLoS ONE* 10(7): e0120644. <https://doi.org/10.1371/journal.pone.0120644>
- PMO (Prime Minister’s Office), Tanzania. 2016. “Tanzania National Multi-Sectoral Nutrition Action Plan (NMNAP) 2016–2021: From Evidence to Policy to Action.” Accessed May 4, 2022. <https://www.advancingnutrition.org/resources/adolescent-resource-bank/tanzania-national-multisectoral-nutrition-action-plan-nmnap-2016>
- Rosenstiel, L. v., 2015. *Grundlagen der Organisationspsychologie* (6th edition). Stuttgart: Schäffer-Poeschel.
- Sanghvi, T., R. Haque, S. Roy, K. Afsana, R. Seidel, S. Islam, A. Jimerson, and J. Baker. 2016. “Achieving Behaviour Change at Scale: Alive & Thrive’s Infant and Young Child Feeding Programme in Bangladesh.” *Maternal & Child Nutrition*, 12: 141–154. doi.org/10.1111/mcn.12277
- Shrimpton, R., R. Hughes, E. Recine, J. Mason, D. Sanders, G. Marks, & B. Margetts. 2014. “Nutrition Capacity Development: A Practice Framework.” *Public Health Nutrition*, 17(3): 682–688. doi.org/10.1017/S1368980013001213
- Sunguya, B.F., K.C. Poudel, L.B. Mlunde, D.P. Urassa, J. Yasuoka, M. Jimba. 2013. “Nutrition Training Improves Health Workers’ Nutrition Knowledge and Competence to Manage Child Undernutrition: A Systematic Review.” *Frontiers in Public Health*. 1(37): 1–21. <https://doi.org/10.3389/fpubh.2013.00037>
- SPRING (Strengthening Partnership, Results, and Innovations in Nutrition Globally). n.d. “Increasing Access to Quality Nutrition Services Through Trainings.” Accessed May 4, 2022. <https://www.spring-nutrition.org/about-us/activities/increasing-access-quality-nutrition-services-through-trainings>

- SPRING (Strengthening Partnership, Results, and Innovations in Nutrition Globally). 2015. “Improving Nutrition Programs: An Assessment Tool for Action.” Accessed May 19, 2022. <https://www.spring-nutrition.org/publications/tool-summaries/improving-nutrition-programs-assessment-tool-action>
- SPRING (Strengthening Partnership, Results, and Innovations in Nutrition Globally). 2017. *Training Supervisors to Mentor Health Workers Who Provide Counselling on Infant and Young Child Feeding*. Accessed May 4, 2022. <https://www.advancingnutrition.org/resources/training-supervisors-mentor-health-workers-who-provide-counselling-in-fant-and-young-child>
- SPRING (Strengthening Partnerships, Results, and Innovations in Nutrition Globally). 2018. *Kyrgyz Republic: Training Community Volunteers on Nutrition and Hygiene Module Toolkit*. Arlington, VA: SPRING project.
- UNICEF (United Nations Children’s Fund). 2012. “The Community Infant and Young Child Feeding Counselling Package, Planning Guide.” Accessed July 22, 2022. <https://www.unicef.org/media/108381/file/Planning%20Guide.pdf>
- UNICEF (United Nations Children’s Fund). 2013. “The Community Infant and Young Child Feeding Counselling Package, Participant Materials.” Accessed May 4, 2022. <https://www.unicef.org/media/108401/file/Participant%20Materials.pdf>
- UNICEF (United Nations Children’s Fund). 2021. “Counselling to Improve Maternal Nutrition: Considerations for Programming with Quality, Equity, and Scale.” Accessed May 4, 2022. <https://www.unicef.org/media/114566/file/Maternal%20Nutrition%20Counselling%20Brief.pdf>
- USAID Advancing Nutrition. 2023. *Responsive Care and Early Learning Addendum*. Arlington, VA: USAID Advancing Nutrition.
- USAID Advancing Nutrition. 2022. *Designing Effective Nutrition-Sensitive Agriculture Programs: Facilitator’s Guide*. Arlington, VA: USAID Advancing Nutrition. <https://www.advancingnutrition.org/resources/designing-effective-nutrition-sensitive-agriculture-activities-workshop-facilitators>
- World Vision International. 2011. *Measuring and Promoting Child Growth: Facilitator’s Manual*. Uxbridge, UK: World Vision International. https://www.wvi.org/sites/default/files/MPCG_FacilitatorManual_V2.pdf



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