Improving and Measuring the Impact of Training: Strategies and Methods

Training Impact Task Force

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Improving and Measuring the Impact of Training:
Strategies and Methods

Introduction
High-quality continuing education is vital to the maintenance of a competent public health workforce. In today's rapidly changing environment, public health professionals are continually developing their knowledge and skills in order to meet the public health needs of their communities. Maximizing the impact of public health training opportunities facilitates the greatest return on the limited time and other resources available for professional development activities, and measuring the effectiveness of training efforts can both demonstrate the value of those resource investments and improve the quality of future training.

The Council on Linkages Between Academia and Public Health Practice (Council on Linkages), a collaborative of 19 national public health organizations, has long recognized the importance of high-quality continuing education. To support the ongoing training of public health professionals, the Council on Linkages launched the Public Health Training Impact initiative in the fall of 2011 to identify strategies, methods, and tools to improve and measure the impact of training. The Training Impact Task Force (Task Force) was established to guide this initiative and consists of 11 professionals with expertise in training, evaluation, and public health. Task Force members were drawn from academia, government, and the private sector, and work both inside and outside of the field of public health.

Improving and Measuring the Impact of Training: Strategies and Methods offers training institutions and programs, trainers, public health organizations, and sponsors of training a guide to navigating the training and evaluation process. This report focuses on techniques to improve training activities and determine whether those activities have the desired effects in order to assist organizations and individuals in developing and delivering effective training efforts.

Approach
Between September 2011 and February 2012, the Task Force met regularly to draft this set of strategies and methods to guide organizations and individuals through the training and evaluation process. Strategies and methods are based on expert opinion and published literature. The Task Force focused primarily on identifying strategies to improve the impact of training, taking the position that designing high-quality training is the most effective way to enhance the potential impact of that training. The resources an organization has to thoroughly evaluate training may be limited, and evaluation following training, while helpful and necessary for improving future efforts, has little effect on the impact of the training activity being evaluated. To have the greatest impact, the groundwork for effective training and evaluation must be in place from the start of the training development process and efforts must be monitored as the development and delivery of training progresses.
Using This Report

This report is intended for training institutions and programs, trainers, public health organizations, and sponsors of training interested in improving and measuring the impact of their training efforts. Strategies and methods aimed at enhancing training activities are provided. Literature on training and evaluation that supports the strategies and methods detailed in this report and offers examples of the application of training and evaluation techniques is contained in the companion document, Improving and Measuring the Impact of Training: Selected References. Tools for implementing the approaches have also been collected. Ultimately, references to specific citations and tools will be integrated into an interactive online resource.

Strategies and Methods

Within this report the training process is described as five main stages or activities:

- Assess
- Motivate
- Design
- Deliver
- Evaluate

Within each of these categories, strategies with the potential to enhance training efforts, and methods for achieving those strategies, are provided. Each section builds on the previous sections, reflecting the process by which trainers would move through the steps of developing, delivering, and evaluating training. References to other sections are included where appropriate.

Guiding Principles

While specific techniques can be applied to improve and measure the impact of training, each technique and activity exists within the larger context of training for the organizations and individuals involved. The value placed on training greatly impacts the potential benefits derived from engaging in such efforts. All of the strategies and methods contained with this report are built on a belief in several foundational principles:

- Training is an investment for all involved: the learner and his/her organization, the course developer, the trainer, and the organization sponsoring the training.
- The audiences and resources available for training should be considered at every step in the training development, delivery, and evaluation process.
- When appropriate, make use of existing training resources and activities. Don’t reinvent the wheel.
- Providing high-quality training requires time and effort. The quality of the product depends on the quality of the resources devoted to producing it.
- No one can, nor should, apply every strategy for enhancing training in every training effort. Appropriate strategies will vary depending on the circumstances.
- Training efforts can be very effective without being textbook perfect. Don’t let the perfect be the enemy of the good, or the good enough.
- Evaluation is critical. There is a need to demonstrate that training is being done well and that there is a true value in the training effort.
Effective evaluation begins when the training process is initiated, not completed. Evaluation cannot be an afterthought.

Each training activity offers a learning opportunity for the trainer, as well as the trainees. Trainers can use the knowledge gained each time they conduct a training session to improve future training efforts.

Considering each of these principles as training is developed, delivered, and evaluated will help ensure training that is focused, oriented toward the learners, and appropriate to the environment in which it is occurring.
Stages of the Training Process

Assess
Assessing training needs and the resources available to meet those needs forms the first step in the development and delivery of effective training. Strategies and methods in this section address factors related to learners, their organizations, trainers and facilitators, and the environment that may impact training efforts.

Assessment Strategies and Methods
➢ Determine organizational needs and mandates that can be met through training
   o Conduct gap analysis
➢ Identify existing assessments
   o Factors of potential learners that may impact training (see Assess-Factors Related to Learners)
   o Organizational factors that may impact training (see Assess-Organizational Factors)
   o Factors of potential trainers/facilitators that may impact training (see Assess-Factors Related to Trainers/Facilitators)
   o Environmental factors that may impact training (see Assess-Environmental Factors)
➢ If necessary assessments do not exist, conduct assessments

Factors Related to Learners
➢ Conduct assessment to identify factors of potential learners that may impact training
   o Determine relevant characteristics of potential learners
     ▪ Current skill levels, knowledge, and abilities
     ▪ Preferred modes of training
     ▪ Learning styles
     ▪ Culture
     ▪ Language
   o Determine job functions of potential learners
   o Determine training/competency needs of potential learners
   o Assess motivation of learners
     ▪ Determine whether training:
       • Supports an immediate need or has immediate application
       • Helps with career advancement or long-term career goals
       • Meets continuing education requirements
       • Is being taken for professional interest or for practical use
       • Is mandatory or voluntary
     ▪ Include questions on motivation if potential learners are being surveyed to assess training needs
   o Assess likely time potential learners have available for training and other possible constraints
Organizational Factors
➢ Conduct assessment to identify factors of the learners’ organization(s) that may impact training
  o Describe organization(s) in which learners work
    ▪ Mission/strategic goals
    ▪ Policies
    ▪ Culture
    ▪ Structure
    ▪ Peers
    ▪ Supervisors
  o Determine competency-based training needs and goals of organization(s) in which learners work
  o Determine organizational readiness for new knowledge/skills of learners
  o Assess available resources
    ▪ Human
    ▪ Financial
    ▪ Environmental
    ▪ Technological

Factors Related to Trainers/Facilitators
➢ Identify factors of potential trainers/facilitators that may impact training
  o Determine skills/knowledge/competence of trainers/facilitators
  o Assess credentials/qualifications and relevant experience of trainers/facilitators
    ▪ Review curriculum vita
    ▪ Contact references

Environmental Factors
➢ Identify factors of the learners’ environment that may impact training
  o Describe external environment in which learners work
    ▪ Political factors
    ▪ Economic factors
    ▪ Social factors
    ▪ Health and public health systems
  o Assess environment in which learners will learn
    ▪ Temperature of room
    ▪ Noise level
    ▪ Electricity
    ▪ Lighting
    ▪ AV/technological capabilities
    ▪ Room setup
    ▪ Number of training participants
Motivate

Motivation to participate in training is key to the success of training efforts. Motivation is not limited to the learners who attend training; trainers must be motivated to deliver high-quality training and learner’s supervisors must be motivated to support the learners in their training activities. Strategies and methods in this section address motivating these three groups to engage in training.

Motivation Strategies and Methods

Motivating Learners

- Implement strategies to motivate learners to attend training
  - Provide explicit and realistic expectations for training
    - Subject matter
    - Objectives
    - Methods
  - Provide continuing education or academic credits applicable to learners
  - Make training part of overall professional development for learners
  - Target training toward meeting external benchmarks or organizational objectives
  - Link training topics to public health or other professional competencies or standards
  - Recognize training completion
    - Certificates
    - Diplomas
    - Ceremonies
  - Offer opportunities for networking with other learners
    - Social media prior to or following training
    - Interaction during training sessions
  - Offer opportunities for collaborative learning with other learners
  - Offer opportunities for applied learning
  - Promote training as fun
  - Make training accessible (easy to identify, affordable) and convenient (close in proximity, distance learning, asynchronous learning, reasonable timing and amount of time involved)

Motivating Trainers

- Implement strategies to motivate trainers
  - Provide explicit and realistic expectations for training
    - Subject matter
    - Objectives
    - Methods
  - Provide assessment information (see Assess)
  - Provide tips for training success
  - Provide logistical and promotional support
  - Involve trainers in decisions affecting training
    - Subject matter
▪ Target audience
▪ Class size
  o Base evaluation on more than number of participants/popularity of course
    (performance-based evaluation)
  o Offer feedback on performance
  o Recognize training excellence

**Motivating Supervisors**
➢ Employ strategies to motivate learners’ supervisors to provide support for implementing the outcomes of training
  o Provide opportunities for supervisors to develop similar skills and competence
  o Recognize supervisors for the learners’ attainment of new skills and competence through training
  o Demonstrate the value of implementing outcomes of training
    ▪ Align training to strategic goals of the organization or to employees’ roles
    ▪ Target training toward meeting external benchmarks or organizational objectives
  o Incorporate new skills into performance metrics and reviews
Design

Well-designed training is planned, appropriate to the target audience, and able to be delivered within the resources available. Strategies and methods in this section address planning for training, developing the materials used to provide the training, and crafting a strategy for evaluating the training.

Design Strategies and Methods

Planning for Training

➢ Develop training plan
  o Determine desired outcomes of training
    ▪ Use results of assessments (see Assess)
  o Link topics/content to desired outcomes
  o Link desired outcomes to competencies
    ▪ Identify appropriate competencies
    ▪ Map competencies to desired outcomes
  o Develop learning goals and observable and measurable objectives
    ▪ Represent the desired outcomes/needs
  o Align training to desired outcomes
  o Align training to organization’s business needs, if appropriate
  o Seek consultation or technical assistance on training plan, if appropriate

➢ Tailor training to the audience and resources available
  o Tailor training to identified characteristics of potential learners (see Assess)
  o Incorporate adult learning principles into training
    ▪ Incorporate problem-based learning methods
  o Select appropriate training formats/learning strategies/technologies for learners’ needs
    ▪ Self-directed learning
    ▪ Webinars
    ▪ Mobile delivery
  o Determine appropriate length of training
    ▪ Number of sessions
    ▪ Length of sessions
    ▪ Time commitment required outside of formal training sessions
  o Determine desired numbers and types of individuals to reach

➢ Develop marketing plan specific to the training program(s) being designed
➢ Implement marketing plan

Developing Training Materials

➢ Use a variety of methods/techniques in training to enhance retention of learning
  o Case studies
  o Teach back method
  o Job aids
  o Action plans
Mixed techniques

Consider existing educational resources for executing training plan
  - Use a learning management system to see if similar training exists
  - Identify existing and available learning materials

Develop learning materials, if necessary
  - Slides
  - Exercises/activities
  - Tests/quizzes

Planning for Evaluation

Design evaluation strategy (see Evaluate)
  - Match to competencies/outcomes
Deliver

The preparation for training described in the sections on assessment, motivation, and design culminates in the delivery of a training session. Strategies and methods in this section address interacting with learners effectively to increase the likelihood that the knowledge and skills provided through training will be retained and applied.

Delivery Strategies and Methods

- Clearly communicate learning goals, objectives, and outcomes to learners
- Help learners see how training relates to them
  - Relate training to job and job functions, if appropriate
  - Relate training to career development, if appropriate
  - Relate training to previous or real-life experiences of learners
- Implement active learning opportunities
  - Opportunities for learners to practice
  - Opportunities for learners to apply the training on the job
    - Have learners develop action plans for applying training to their jobs
  - Opportunities for learner interaction
  - Opportunities for learner reflection
  - Timely and informative feedback to learners
- Deliver motivating strategies throughout training
  - Use technology/social media during and between classes to keep learners engaged
- Solicit and be receptive to learner feedback throughout training
  - Modify original design for training, if indicated
- Monitor technology being used to deliver training
- Implement continuous process evaluation (see Evaluate)
Evaluate
Evaluation considers the success of training and is necessary for identifying elements of training processes and training programs themselves that were beneficial and areas for improvement. The most effective evaluation is not initiated following the conclusion of the training session, but occurs throughout the training process. A plan for evaluation should be built into the plan for training from the beginning and the results of evaluation should be communicated in order to inform future efforts. Strategies and methods in this section address planning for evaluation, conducting evaluation, and reporting the results of evaluation. Two types of evaluation are highlighted: process evaluation and outcome evaluation. Process evaluation focuses on how well the elements involved in the training were conducted, while outcome evaluation focuses on whether the training elicited the desired results.

Evaluation Strategies and Methods

Evaluation Planning
It is important to determine up front the type(s) of evaluation that will be conducted. This section contains a brief summary of the types of evaluation to consider. More detail follows this summary section.

➢ Plan for type(s) of evaluation to conduct
  o Process
    ▪ Identify key measures and indicators to evaluate
    ▪ Choose data analysis technique(s) appropriate to the target audience for evaluation (see Evaluation-Reporting Evaluation Results)
  o Outcome
    ▪ Base evaluation on learning objectives
    ▪ Determine level(s) at which to evaluate
      • Levels of evaluation (Kirkpatrick/Phillips) to consider:
        o Level 1: Reaction
          ▪ Degree to which learners reacted favorably to the training
        o Level 2: Learning
          ▪ Degree to which learners acquired the intended knowledge, skills, attitudes, and confidence
        o Level 3: Behavior/Application
          ▪ Degree to which learners applied their new knowledge and skills on the job
        o Level 4: Results/Organizational Impact
          ▪ Degree to which learners’ application of their new knowledge and skills produced the desired outcomes and impact
        o Level 5: Return on Investment (ROI)
          ▪ Degree to which the benefits of the training (internal and external) outweighed the costs
• Consider available resources, time, data, expertise, and appropriateness of evaluating at a given level
  ▪ Identify key measures and indicators to evaluate
  ▪ Choose data analysis technique(s) appropriate to the evaluation level and target audience for evaluation (see Evaluation-Reporting Evaluation Results)
  ▪ Collect baseline data based on evaluation level(s) chosen

➤ Assign individual responsibilities for evaluation
  o Establish evaluation team, if appropriate

**Process Evaluation**

Process evaluation is concerned with determining whether the elements involved in the training development and delivery process were adequately conducted. Considering whether each of the necessary elements of training was performed, and the quality with which it was conducted, falls within the scope of process evaluation.

➤ Collect qualitative and quantitative data on how well the items in the previous sections of this report were addressed and the methods used
  o Use a checklist for data collection
  o Determine if the target audience was reached
    ▪ Numbers
    ▪ Professional roles
    ▪ Experience levels
    ▪ Diversity
  o Determine if all elements of training were delivered as intended
    ▪ Establish a protocol for trainers
    ▪ Have a trainers’ manual/guide
    ▪ Observe the trainer
  o Determine costs to develop and deliver training
    ▪ Trainer/facilitator fees
    ▪ Facility/AV costs
    ▪ Costs of training materials

➤ Analyze data collected
  o Determine which items/processes were implemented well
  o Identify areas for improvement
  o Suggest actions that can be taken to improve items/processes

**Outcome Evaluation**

Outcome evaluation is concerned with the effect the training had on learners. Determining the results received from training and whether the desired effects were obtained are elements of outcome evaluation.

➤ Collect data at the level(s) of evaluation selected
  o Choose appropriate methods for data collection based on the level at which training is being evaluated
    ▪ Learners’ course ratings/evaluations
• Pre-tests/post-tests
• Questionnaires
• Tests/quizzes
• Exercises/case studies
• Demonstrations
• Observation checklists
• Simulations/drills/tabletop exercises
• Final/capstone projects
• Evaluation of work products
• Documentation of improved processes
• Customer satisfaction surveys
• Interviews/focus groups

o Choose appropriate timing for data collection based on the level at which training is being evaluated
  ▪ During training
  ▪ After training
    • Immediately
    • Longer term

o Choose appropriate sources for data collection based on the level at which training is being evaluated
  ▪ Learners
  ▪ Learners’ supervisors
  ▪ Learners’ subordinates
  ▪ Learners’ colleagues
  ▪ Learners’ organizations
  ▪ Clients/customers
  ▪ Trainers/facilitators
  ▪ Sponsors of training

➤ Analyze data collected
  o Levels 1 and 2
    ▪ Descriptive statistics – sums, averages, rankings
    ▪ Comments from learners, trainers, sponsors
  o Level 3
    ▪ Descriptive statistics – sums, averages, rankings, changes over time
    ▪ Performance reviews
    ▪ Comments from learners, trainers, sponsors, supervisors, subordinates, colleagues, clients/customers, organizations
  o Level 4
    ▪ Isolate the effects of the training on the desired outcomes
    ▪ Determine non-monetary tangible benefits/costs
      ▪ Clients served
      ▪ Customer satisfaction
      ▪ Employee retention
    ▪ Determine intangible benefits/costs
• Employee morale
• Reputation of organization

o Level 5
  ▪ Complete Level 4 evaluation
  ▪ Convert data/impact measures (Level 4) to monetary value
  ▪ Calculate training costs
    ▪ Costs to develop and deliver training
    ▪ Learner time
    ▪ Staff coordinator time
    ▪ Lost revenue
  ▪ Calculate ROI

o Review outcome evaluation results
  ▪ Determine which desired outcomes were achieved
  ▪ Identify areas for improvement
  ▪ Suggest actions that can be taken to better achieve desired outcomes

Reporting Evaluation Results
➤ Report the results of evaluation conducted
  o Tailor presentation of evaluation results to the appropriate audience(s)
    ▪ Summaries of results
    ▪ Fact sheets
    ▪ Reports from learning management systems
    ▪ ROI impact studies
    ▪ Scorecards
    ▪ Dashboards
  o Communicate evaluation results to the appropriate audience(s)
Improving Future Training

Engaging in training is a learning experience for trainers, sponsors of training, and individuals being trained. Evaluating the success, or failure, of training offers insight into the elements of training that were successful and those that could be improved. Even a highly successful training has room for improvement. Training and evaluation should be approached as a continuous process, in which the knowledge gained from evaluating training is applied to improve future training efforts.

Process evaluation provides insight on how well the steps leading to training were performed and how well the training was delivered; looking back at the process by which training was developed and delivered enables trainers to consider what could have been done to improve the training. Outcome evaluation allows trainers and sponsors of training to determine the impact of the training on learners’ knowledge, skills, and/or performance. Although the results of either process or outcome evaluation are beneficial alone, when taken together these results can be even more informative. If evaluation indicates that all steps in the training process were performed well, but the training did not deliver the desired outcomes, trainers and sponsors of training can use that information to consider whether the training conducted was appropriate for achieving the desired results. Did the design of the training suit the subject matter? Did the trainer and the training meet the sponsors’ expectations? Was training the most effective way of building the required knowledge and skills in the learners? The answers to these and other questions can inform the design and delivery of future training.

*Improving and Measuring the Impact of Training: Strategies and Methods* is intended to guide training institutions and programs, trainers, public health organizations, and sponsors of training through the training and evaluation process in order to improve the impact of public health training. Following the guidance offered in this report may improve individual training activities, but long-term success depends on learning from the experience of applying these concepts in training efforts. After every training session, consider the lessons that have been learned and how the knowledge gained can be used to enhance future training sessions. Establishing a desire and a process for continuously evaluating and improving will help sustain success in public health training.